

SIGNIFICANT AND SUBSTANTIAL: THE HISTORY AND CONTINUING EVOLUTION OF ONE OF THE MINE SAFETY AND HEALTH ADMINISTRATION'S PRINCIPAL ENFORCEMENT TOOLS

*Maxwell Multer**

ABSTRACT

The cornerstone of the graduated enforcement scheme enacted to ensure safety in America's mines, significant and substantial has long been one of the Mine Safety and Health Administration's principal enforcement tools. In the 1969 Federal Coal Mine Health and Safety Act, Congress mandated that when a federal mine inspector issues a citation for a violation of a mandatory health or safety standard, the inspector must indicate whether the violation is one that "could significantly and substantially contribute to the cause and effect of a mine safety or health hazard." While Congress provided minimal guidance as to what it intended and what types of violations it was referring to with the quoted language, "significant and substantial" was ultimately implemented as a substantive designation used to denote conditions and practices that were more serious in nature than a mere violation. Repeated issuance of significant and substantial violations can lead to increasingly severe sanctions and penalties for a mine operator. The analytical framework used to determine whether a given violation is significant and substantial, although being refined a number of times, has remained largely constant over the last forty years. However, the Federal Mine Safety and Health Review Commission ("Commission") recently issued a series of decisions which purport to apply the traditional framework but at the same time appear to have broadened the scope of what violations might be considered significant and substantial. This Article serves the dual purpose of (1) filling a longstanding void in legal scholarship on this subject by

* Maxwell K. Multer is an attorney with Dinsmore & Shohl, LLP's Natural Resources practice group. He helps clients in the energy industry manage the enforcement relationships with their various regulating agencies, including the Mine Safety and Health Administration. Mr. Multer also gained experience with issues touching the commodity, natural gas and electricity markets during his time in the Office of Enforcement at the Federal Energy Regulatory Commission. He earned his B.S. in Economics from North Carolina State University, with high honors, and his J.D. from the University of North Carolina at Chapel Hill, with honors. He is a frequent writer and presenter on topics in mine safety litigation.

providing a comprehensive discussion of the origins and evolution of the concept of significant and substantial and (2) discussing and analyzing several recent Commission decisions that raise questions regarding the appropriate analysis used to determine what violations are significant and substantial.

I.	INTRODUCTION.....	1052
II.	SIGNIFICANT AND SUBSTANTIAL—THE RELEVANT STATUTORY LANGUAGE OF THE 1969 COAL ACT AND THE 1977 MINE ACT.....	1055
III.	<i>PBS COALS</i> AND <i>CUMBERLAND COAL RESOURCES</i> —“NOT CHANGING <i>MATHIES</i> ”.....	1056
	A. Musser Engineering, Inc. & PBS Coals, Inc.....	1057
	B. Cumberland Coal Resources, LP.....	1060
	C. Black Beauty Coal Co.....	1065
IV.	DEFINING SIGNIFICANT AND SUBSTANTIAL—CASES UNDER THE INTERIOR BOARD OF MINE OPERATIONS APPEALS.....	1068
	A. 1974—Eastern Associated Coal Corp.....	1069
	B. 1975—Zeigler Coal Co.....	1071
	C. 1976—Alabama By-Products Corp.....	1073
V.	THE DEFINING CONTINUES—CASES THAT SHAPED SIGNIFICANT AND SUBSTANTIAL UNDER THE FEDERAL MINE SAFETY AND HEALTH REVIEW COMMISSION: <i>NATIONAL GYPSUM</i> , <i>MATHIES COAL CO.</i> , AND MORE.....	1075
	A. Cement Division, National Gypsum Co.....	1075
	B. Mathies Coal Co.....	1077
	C. U.S. Steel I.....	1079
	D. U.S. Steel II.....	1081
	E. Texasgulf, Inc.....	1083
VI.	THE ANALYSIS IN <i>PBS COALS</i> AND <i>CUMBERLAND COAL RESOURCES</i> SHOULD BE REVISITED AND CLARIFIED.....	1086
VII.	THE “EVACUATION STANDARDS” OF <i>CUMBERLAND COAL RESOURCES</i> —MAYBE THEY <i>SHOULD</i> BE TREATED DIFFERENTLY.....	1091
VIII.	CONCLUSION.....	1094

I. INTRODUCTION

The phrase “significant and substantial” first appeared in the 1969 Federal Coal Mine Health and Safety Act (“Coal Act” or “1969 Coal Act”).¹ Congress mandated that when a federal mine inspector issues a citation for a violation of a mandatory health or safety standard, the inspector must indicate whether the violation is one that “could significantly and substantially

¹ Federal Coal Mine Health and Safety Act of 1969, Pub. L. No. 91-173, 83 Stat. 742 (codified as amended at 30 U.S.C. §§ 801–964 (1977)).

contribute to the cause and effect of a mine safety or health hazard.”² This mandate was carried over when Congress later amended the Coal Act through the passage of the Federal Mine Safety and Health Act of 1977 (“Mine Act” or “1977 Mine Act”).³ However, in choosing that statutory language, Congress conspicuously omitted any binding definition or even meaningful guidance as to what “significantly and substantially” actually meant. Without such guidance, it was left to the courts to construe the language and to determine to what type of violations Congress intended it to apply. In turn, the idea of significant and substantial would be interpreted by the courts to refer to a particular class of violations which were in some way more serious than a simple violation of the letter of the regulation. As a designation of such violations, significant and substantial has evolved to become one of the cornerstones of the graduated enforcement scheme implemented by the Mine Safety and Health Administration (“MSHA”) to police America’s mines. With repeated issuances, these more serious violations give rise to progressively more sanctions and penalties.⁴

Each day, an army of federal mine inspectors around the country travel into the mines to examine various areas and equipment for compliance with the mandatory safety and health standards promulgated by the Secretary of Labor (“Secretary”). When an inspector identifies conditions which he or she believes to be a violation of one of the Secretary’s mandatory safety or health standards, he issues a citation in which he is required to make a series of substantive designations to communicate both the seriousness of the violation and the level of negligence attributable to the mine operator (“operator”).⁵ One of the designations to be made by the inspector is whether a given violation is significant and substantial.

While the inspector issuing a citation makes an initial judgment on whether the violation is significant and substantial, his decision is subject to review by an Administrative Law Judge (“ALJ”). The ALJ’s decision is also subject to review by the Federal Mine Safety and Health Review Commission (“FMSHRC” or “Commission”), then to the Court of Appeals for the Federal Circuit, and finally to the Supreme Court of the United States.⁶ The analysis applied in the courts to determine whether a violation qualifies as significant and substantial has been largely the same for the last forty years. The enduring construction of significant and substantial was established by the FMSHRC in

² *Id.*

³ Federal Mine Safety and Health Act of 1977, Pub. L. No. 95-164, 91 Stat. 1290 (codified at 30 U.S.C. §§ 801–964).

⁴ *See, e.g.*, Pattern of Violations, 30 C.F.R. § 104(e) (2012).

⁵ *See* DEP’T OF LABOR, MINE SAFETY AND HEALTH ADMIN., CITATION AND ORDER WRITING HANDBOOK FOR COAL MINES AND METAL AND NONMETAL MINES 75–78 (Mar. 2008), available at <http://www.msha.gov/READROOM/HANDBOOK/PH08-I-1.pdf>.

⁶ *See* 30 U.S.C. § 816(a)(1) (2006).

Cement Division, National Gypsum Co. (“*National Gypsum*”).⁷ Three years later, in the Commission’s 1984 *Mathies Coal Co.* (“*Mathies*”) decision, it distilled that construction to four required elements necessary for a given violation to qualify as significant and substantial.⁸ This test came to be known as the *Mathies* significant and substantial test and, although it may have undergone some adjustments, continues to be the legal framework applied today.

Once the Commission established that framework in the early 1980s, the analysis, although refined several times over the following ten years or so, remained, for the most part, constant over the following forty years. However, when the Commission issued its 2010 opinion in *Musser Engineering, Inc. & PBS Coals, Inc.*,⁹ its analysis of the significant and substantial issue, which it discussed *very* briefly, seemed to be not only a significant departure from prior jurisprudence but also wholly inconsistent with a great deal of long relied-upon and firmly established precedent. What started as an apparent anomaly in *PBS Coals* was revisited in the Commission’s subsequent decision in *Cumberland Coal Resources, LP* (“*Cumberland*”), in which there was significantly more discussion and analysis.¹⁰ Although the Commission majority maintained in *Cumberland* that they were not changing the *Mathies* test, the language and analysis appeared to constitute a marked departure, and one that would greatly expand the scope of what violations would be considered significant and substantial. Curiously, the Commission reached its holding in *Cumberland* by interpreting its own holdings from *National Gypsum* and *Mathies* in a way that is fundamentally and demonstrably inconsistent with the vast majority of precedent between 1984 and 2010, as discussed below.

This Article is intended to serve two purposes. First, it is intended to fill a void in legal scholarship on this subject by making available to practitioners a comprehensive discussion of the origins, evolution, and current state of the significant and substantial analysis in mine safety litigation. This will be accomplished through a discussion of the important decisions that shaped it over the years. The second purpose is to discuss several recent Commission decisions that are worded and applied in a way that could potentially increase the scope of what violations would be considered significant and substantial. That portion of this Article argues that such an analytical shift is, if not completely inappropriate, severely excessive in scope.

Part II of this Article briefly discusses the relevant provisions containing the significant and substantial language in the 1969 Coal Act and the 1977 Mine Act. Part III analyzes the circumstances involved and the

⁷ *Cement Div., Nat’l Gypsum Co.*, 3 FMSHRC 822 (1981).

⁸ *Mathies Coal Co.*, 6 FMSHRC 1 (1984).

⁹ *Musser Eng’g, Inc. & PBS Coals, Inc.*, 32 FMSHRC 1257 (2010).

¹⁰ *Cumberland Coal Res., LP*, 33 FMSHRC 2357 (2011).

Commission's decisions in *PBS Coals* and *Cumberland*. Part IV discusses the cases heard by the Interior Board of Mine Operations Appeals ("IBMA"), the predecessor to the Commission that shaped the IBMA's construction and application of the Coal Act's significant and substantial language. Part V will include a similar discussion of the Commission case law, including *National Gypsum* and *Mathies*, that shaped the definition and legal analysis for the identical significant and substantial language contained in the 1977 Mine Act. The final Part concludes with the argument that the language used by the Commission in *PBS Coals* and *Cumberland* is problematic, not supported by Commission precedent, and should, if it is to remain in effect at all in the future, be limited to alleged violations of "evacuation standards."

II. SIGNIFICANT AND SUBSTANTIAL—THE RELEVANT STATUTORY LANGUAGE OF THE 1969 COAL ACT AND THE 1977 MINE ACT

The significant and substantial language at issue first appeared in the 1969 Coal Act.¹¹ While the statute and legislative history made clear Congress's intention that certain more serious violations be designated as such by an inspector issuing a citation, it provided minimal guidance as to the precise scope of what violations should be included, much less any kind of analytical framework to apply to different factual scenarios in order to determine if a given situation qualifies as one of those more serious violations. Indeed, the near totality of Congress's guidance came from the language which became the statutory language itself.

Section 104(c)(1) of the 1969 Coal Act reads as follows:

If, upon any inspection of a coal mine, an authorized representative of the Secretary finds that there has been a violation of any mandatory health or safety standard, and if he also finds that, while the conditions created by such violation do not cause imminent danger, such violation is of such nature as could significantly and substantially contribute to the cause and effect of a mine safety or health hazard, and if he finds such violation to be caused by an unwarrantable failure of such operator to comply with such mandatory health or safety standards, he shall include such finding in any notice given to the operator under this Act.¹²

With the enactment of the Coal Act, containing the above language, it was left to the Secretary of the Interior and the courts to determine both the bounds of

¹¹ Federal Coal Mine Health and Safety Act of 1969, Pub. L. No. 91-173, 83 Stat. 742 (codified as amended at 30 U.S.C. §§ 801–964 (1977)).

¹² Federal Coal Mine Health and Safety Act of 1969, Pub. L. No. 91-173, § 104(c)(1), 83 Stat. 742, 751.

the authority bestowed by Congress, and what type of enforcement tools were intended. As may be clear from a review of the above quoted language from section 104(c)(1), the statutory language was somewhat less than a model of clarity. As a result, it would take a number of years to establish an enduring interpretation, and the scope of the significant and substantial clause would broaden and narrow a number of times over that period.¹³ That process of interpretation would continue after the passage of the 1977 Mine Act and the replacement of the IBMA with the Commission. The Mine Act, in section 104(d)(1), contained language identical to the significant and substantial language from the Coal Act, quoted above.¹⁴ The Mine Act's legislative history was similarly lacking in guidance as to what Congress intended by it.¹⁵

This being the case, it was left to the courts to preside over the dispute between the enforcement agency and the mining industry as to what Congress meant by "significantly and substantially contribute to the cause and effect of a mine safety or health hazard." However, before discussing the evolution of the significant and substantial language in depth, we will consider three recent decisions that have dealt with how significant and substantial is to be applied, and the rationale applied by the Commission in reaching its conclusions.

III. *PBS COALS* AND *CUMBERLAND COAL RESOURCES*— "NOT CHANGING *MATHIES*"

While the Commission purports to be applying the longstanding *Mathies* significant and substantial test, the application of its recent "clarification" of the analysis suggests otherwise. Indeed, its three most recent discussions of significant and substantial seem to be inconsistent with the cases that were the most important in defining the analysis, including *Mathies* itself. Notably, in *Cumberland*, the Commission elected to affirmatively argue that it was not changing the analysis that had long been applied under *Mathies*, which established the four requirements that must be present for a violation to be significant and substantial over forty years ago.¹⁶ The first of these recent cases, *Musser Engineering, Inc. & PBS Coals, Inc.* ("*PBS Coals*"),¹⁷ arose as a result of the mine inundation that occurred in 2002 at PBS's Quecreek No. 1 Mine.¹⁸ However, the events that constituted the violation in *PBS Coals* occurred long

¹³ See discussion *infra* Part IV.

¹⁴ Federal Coal Mine Health and Safety Act of 1977, Pub. L. No. 95-164, § 104(d), 91 Stat. 1290, 1300 (codified as amended at 30 U.S.C. § 814(d)).

¹⁵ See S. Rep. No. 95-181 (1977), reprinted in 1978 U.S.C.C.A.N. 3401; H.R. Rep. No. 91-563 (1969), reprinted in 1969 U.S.C.C.A.N. 2503.

¹⁶ *Cumberland Coal Res.*, LP, 33 FMSHRC at 2368.

¹⁷ 32 FMSHRC 1257 (2010).

¹⁸ *Id.* at 1257-58.

before the breakthrough into the nearby abandoned mine which resulted in the inundation.

A. Musser Engineering, Inc. & PBS Coals, Inc.

There were several abandoned mines in the vicinity of the Quecreek No. 1 Mine.¹⁹ One of these abandoned mines was the Harrison No. 2 Mine.²⁰ In the 1990s, another company had begun the permitting process to open the Quecreek Mine, prior to the mine being purchased by PBS Coals, Inc. (“PBS”). Then PBS acquired the mine prior to the completion of the permitting process, and contracted with Musser Engineering, Inc. (“Musser”), to prepare the necessary permit application.²¹ Both PBS and Musser made diligent efforts over a multi-year period to locate final maps of the nearby abandoned Harrison No. 2 mine to use during the process.²² While they were able to procure maps from multiple sources, including the Pennsylvania Department of Environmental Protection and Consolidated Coal Company,²³ depicting different stages of development, they were unable to locate any maps purporting to be final.²⁴ As a result, Musser and PBS simply adopted the map which had the most development depicted as representing the final map.²⁵ However, despite never locating a map marked as “final,” and thus having reason to suspect that the map used may not have been completely accurate, neither PBS nor Musser made any notations or disclaimers of any sort on any Quecreek No. 1 maps which would reveal that the location of the Harrison No. 2 Mine was uncertain.²⁶ In July 2002, the miners at Quecreek No. 1 broke into the old works of the Harrison No. 2 mine, which the official Quecreek No. 1 map reflected as being an additional 450 feet away at the time.²⁷ It was through a combination of luck and the perseverance of mine rescuers that all nine miners who had been trapped were able to come out alive.²⁸

MSHA conducted an investigation into the events that occurred at Quecreek No. 1 and determined that the mine inundation was a result of using

¹⁹ *Id.* at 1259.

²⁰ *Id.*

²¹ *Id.*

²² *Id.* The Double C Coal Company had “initiated the application process with the Pennsylvania Department of Environmental Protection” in 1994 but sold the mine to PBS before it was completed. *Id.*

²³ *Id.* Consol owned the mineral rights to the Harrison No. 2 Mine and, as it was ultimately discovered, was in possession of a final map as well. *Id.* at 1260.

²⁴ *Id.* at 1260.

²⁵ *See id.* at 1260–61.

²⁶ *Id.* at 1264.

²⁷ *Id.* at 1258, 1263.

²⁸ *See id.* at 1259.

the inaccurate map, which allowed the Quecreek miners to accidentally mine into the adjacent and flooded Harrison No. 2 Mine.²⁹ Accordingly, MSHA issued citations to PBS, Musser, and Black Wolf Coal Company³⁰ under 30 C.F.R. § 75.1200, which requires the maintenance of an up-to-date map and mandates the inclusion on that map of, among other things, “adjacent mine workings within 1,000 feet.”³¹ The citation was for the ongoing failure to maintain a map which accurately reflected the adjacent Harrison No. 2 Mine.³² The citations for each entity were designated significant and substantial.³³ In its decision, the Commission determined that while Musser was subject to its jurisdiction under the Mine Act, Musser’s activities in preparing the map used in the permit application some years earlier were too attenuated to sustain the violation of section 75.1200.³⁴ It held that PBS, on the other hand, had clearly failed to fulfill the requirements of section 75.1200 by using a map which proved to be inaccurate, and thus had violated the regulation.³⁵ PBS argued, among other things, that the violation was not significant and substantial.³⁶

In considering whether the violation was significant and substantial, the Commission began by briefly discussing its construction of the significant and substantial analysis established in *Cement Division, National Gypsum Co.*³⁷ and *Mathies Coal Co.*³⁸ It cited *National Gypsum* for the proposition that a violation is significant and substantial “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.”³⁹ It continued by reciting, with approval, the *Mathies* significant and substantial test, that

the Secretary of Labor must prove: (1) the underlying violation of a mandatory safety standard; (2) a discrete safety hazard—

²⁹ *Id.* at 1263.

³⁰ *Id.* at 1262–63.

³¹ 30 C.F.R. § 75.1200 (2012). This regulation provides:

“The operator of a coal mine shall have in a fireproof repository located in an area on the surface of the mine chosen by the mine operator to minimize the danger of destruction by fire or other hazard, an accurate and up-to-date map of such mine drawn on scale. Such map shall show: (a) The active workings . . . (h) Adjacent mine workings within 1,000 feet”

Id.

³² *See Musser Eng’g, Inc. & PBS Coals*, 32 FMSHRC at 1263.

³³ *Id.*

³⁴ *Id.* at 1269–70, 1276.

³⁵ *Id.* at 1274–75.

³⁶ *Id.* at 1265.

³⁷ *Cement Div., Nat’l Gypsum Co.*, 3 FMSHRC 822, 825 (1981).

³⁸ *Mathies Coal Co.*, 6 FMSHRC 1, 2–3 (1984).

³⁹ *Musser Eng’g, Inc. & PBS Coals*, 32 FMSHRC at 1279–80.

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.⁴⁰

In the initial decision in *PBS Coals*, the ALJ had considered and upheld MSHA's significant and substantial designation based on his application of the *Mathies* test to the circumstances at issue. The Commission agreed with the judge's findings with regard to the first two *Mathies* requirements, that the regulation had been violated when an inaccurate mine map was produced, and that the violation contributed to the discrete safety hazard that ultimately resulted in an accident, the danger of a breakthrough to an adjacent mine.⁴¹

PBS's principal arguments related to the third *Mathies* requirement: whether there was a reasonable likelihood that the hazard contributed to would result in an injury. PBS argued that substantial evidence did not support the judge's decision because the Secretary failed to produce "an analysis . . . of situations where mining was conducted without a final map . . . and the number of times that resulted in a breakthrough and the number of times that resulted in injuries."⁴² It was in dispensing with PBS's arguments regarding the third *Mathies* requirement that the Commission used the language that seems to have brought the longstanding analysis into question.

The Commission began its discussion on this issue by stating that PBS had confused the words "violation" and "hazard" in the *Mathies* test.⁴³ It elaborated:

The test under the third element is whether there is a reasonable likelihood that the hazard contributed to by the violation, i.e., the danger of breakthrough and resulting inundation, will cause injury. The Secretary need not prove a reasonable likelihood that the violation itself will cause injury, as PBS argues.⁴⁴

In finding that the third *Mathies* requirement had been met, it noted the testimony of the Secretary's expert witness that "miners who broke through into a flooded adjacent mine would face numerous dangers of injury: drowning, blocked escapeways, disrupted ventilation, [etc.]."⁴⁵

⁴⁰ *Mathies Coal Co.*, 6 FMSHRC at 3–4.

⁴¹ *Musser Eng'g, Inc. & PBS Coals*, 32 FMSHRC at 1280–81.

⁴² *Id.* at 1281 (internal quotations omitted).

⁴³ *Id.* at 1280–81.

⁴⁴ *Id.* at 1281.

⁴⁵ *Id.*

The Commission's discussion of the third *Mathies* requirement in *PBS Coals*, though brief and neglecting to make any citations to supporting legal authority, seems to have taken the position that the inquiry under the third *Mathies* requirement should consider whether an injury is reasonably likely to occur, *assuming that the contemplated hazardous event has occurred*.⁴⁶ In *PBS Coals*, that event was a breakthrough into an adjacent and flooded mine.⁴⁷

The third *Mathies* element requires the Secretary to prove that the hazard contributed to was reasonably likely to result in an injury. The analysis in *PBS Coals* made that consideration assuming that the contemplated inundation had actually occurred.⁴⁸ Applying a similar analysis in other cases would likely prove problematic. Rather than looking at the circumstances at the time of the violation and asking, "is an accident reasonably likely to occur going forward assuming continued normal mining operations," a fact-finder would have to start from a situation in which the hazardous event has already occurred, then ask "now that the contemplated accident has occurred, is an injury reasonably likely to result?" The Commission's discussion on this issue did not contain any limiting language. Rather, the majority's discussion was framed as though it were simply correcting PBS's misinterpretation of the existing significant and substantial test under *Mathies*.⁴⁹ *PBS Coals* was the first time the Commission performed the analysis this way; however, the following year, it would apply the significant and substantial test in a very similar way in *Cumberland Coal Resources, LP*.

B. Cumberland Coal Resources, LP

Cumberland Coal Resources, LP ("Cumberland")⁵⁰ was just the right set of circumstances to revisit the analysis that was briefly introduced in *PBS Coals*. In *Cumberland*, MSHA had issued four citations for alleged violations of a mandatory safety standard relating to escapeways.⁵¹ The particular standard at issue requires such escapeways to be provided with a durable, continuous lifeline that "shall be . . . [l]ocated in such a manner for miners to use effectively to escape."⁵² On an inspection in late 2007, an MSHA inspector examined the primary and secondary escapeways in several locations at

⁴⁶ See *id.*

⁴⁷ *Id.* at 1280.

⁴⁸ *Id.*

⁴⁹ See *id.* at 1280–81.

⁵⁰ 33 FMSHRC 2357 (2011).

⁵¹ *Id.* at 2358–59.

⁵² 30 C.F.R. § 75.380(d)(7)(iv) (2012). The lifeline is a continuous, directional cord with reflective tape and reflectors which extends all the way to the portal of the mine through both the primary and secondary escapeways. *Id.* § 75.380(d)(7).

Cumberland's Cumberland Mine.⁵³ In all of the areas, the lifeline was suspended from the roof at an approximate average height of a bit over seven and a half feet.⁵⁴ It was suspended at that height with J-hooks, which were not all turned the same way.⁵⁵ The inspector issued four violations of the regulation over a period of several days.⁵⁶ On the first day, he examined the secondary escapeway for a distance of approximately 6,500 feet.⁵⁷ He alleged that in addition to the height of the lifeline and placement of the J-hooks, there were several additional cables hung from the roof just under the lifeline, which would prevent a miner from flipping the lifeline off of the J-hooks and would hinder miners' use of the lifeline.⁵⁸ The next day, the inspector examined the primary escapeway, finding that for a distance of approximately 450 feet, the lifeline was routed over "various pieces of track equipment," all of which were "at least seven feet wide, and between three and five feet high."⁵⁹ A few days later, during a spot inspection, the inspector examined the primary escapeway in a different area of the mine, finding that the lifeline was run over track equipment in several places, similar to the previous citation.⁶⁰ The next day, he issued the fourth citation, having observed similar conditions in the primary escapeway in yet another area of the mine.⁶¹

In the initial litigation before the ALJ, the Secretary argued that the third element of the *Mathies* test "must be viewed in the context of continuing mining operations and of an emergency necessitating use of the escapeway, and by extension, the lifeline."⁶² At the hearing on the merits, the ALJ disagreed, characterizing the third element of the *Mathies* test as inquiring whether there was a reasonable likelihood of an injury-producing event, and concluding that the Secretary had failed to carry her burden in proving that such a reasonable likelihood existed.⁶³ In so finding, the judge noted that the "Secretary has failed to adduce the existence of facts that, in normal mining operations, would have tended to establish that there was a reasonable likelihood of a fire or

⁵³ *Cumberland Coal Res., LP*, 33 FMSHRC at 2358–59.

⁵⁴ *See id.* at 2358–60.

⁵⁵ *Id.* at 2358–61. The hooks used were four-inch long hooks shaped like the letter "J." These hooks "were attached to the mine roof at the top, were open-sided, and curved upward at the bottom to hold the lifeline." *Id.* at 2358.

⁵⁶ *Id.* at 2361.

⁵⁷ *Id.* at 2358.

⁵⁸ *Id.*

⁵⁹ *Id.* at 2359.

⁶⁰ *Id.* at 2360.

⁶¹ *Id.*

⁶² *Id.* at 2361 (citing *Cumberland Coal Res., LP*, 31 FMSHRC 1147, 1163–64 n.6 (2009)) (internal quotations omitted).

⁶³ *Id.*

explosion[,]” and thus had failed to establish the reasonable likelihood of an injury-producing event.⁶⁴

The Secretary appealed the judge’s findings that the four violations were not significant and substantial.⁶⁵ She argued that in evaluating whether the violations at issue were significant and substantial, the judge “should have assumed the occurrence of the sort of emergency contemplated by the standard.”⁶⁶ In addition, she argued that the judge’s approach would lead to the absurd situation that violations of emergency standards⁶⁷ alleged by MSHA would rarely, if ever, be found to be significant and substantial, and would be “effectively immunized from the Mine Act’s graduated enforcement scheme,” in spite of their “especially high capacity for producing catastrophic injuries.”⁶⁸ The operator’s position was that the judge had correctly applied the significant and substantial analysis as set forth in *Mathies*, that the *Mathies* criteria must be viewed based on the particular facts surrounding the violation and, thus, that it was improper to assume the existence of an emergency situation.⁶⁹

Before turning to conduct its analysis regarding whether the violations were significant and substantial, the Commission engaged in a brief discussion of the legislative and regulatory history of the mandatory safety standard at issue, section 75.380.⁷⁰ The primary emphasis of the Commission’s two paragraph discussion was on the grave dangers faced by miners in emergency situations, and on the Mine Improvement and New Emergency Response Act of 2006’s (“MINER Act”) stated principal aim of increasing the safety of miners in such emergency situations.⁷¹

The Commission began its analysis with a brief discussion of the established meaning of significant and substantial under *National Gypsum*, *Mathies*, *U.S. Steel I*, and *U.S. Steel II*.⁷² It is of note that although it cited *U.S. Steel II* in its discussion, the Commission did not refer to the long-accepted language therein, that the third *Mathies* element “requires that the Secretary establish a reasonable likelihood that the hazard contributed to will result in an

⁶⁴ *Id.*

⁶⁵ *Id.* at 2362.

⁶⁶ *Id.*

⁶⁷ *Id.* Regulatory standards setting forth requirements relating to escapeways, lifelines, and other emergency preparedness obligations required under the Mine Improvement and New Emergency Response Act of 2006. MINER Act of 2006, Pub. L. No. 109-236, 120 Stat. 493 (codified in scattered sections of 30 U.S.C.).

⁶⁸ *Cumberland Coal Res., LP*, 33 FMSHRC at 2362 (internal quotations omitted).

⁶⁹ *See id.*

⁷⁰ 30 C.F.R. § 75.380(d)(7)(iv) (2012) (providing that “escapeway[s] shall be . . . [p]rovided with a continuous, durable directional lifeline or equivalent device that shall be . . . [l]ocated in such a manner for miners to use effectively to escape”).

⁷¹ *See Cumberland Coal Res., LP*, 33 FMSHRC at 2362–63.

⁷² *See* discussion *infra* Part V.

event in which there is an injury.”⁷³ Rather, it cited *U.S. Steel II* for another oft-cited proposition that “it is the contribution of the violation to the cause and effect of a hazard that must be significant and substantial.”⁷⁴ It noted with approval the ALJ’s findings regarding the first two *Mathies* elements.⁷⁵ The ALJ had concluded that the first element was satisfied by his determination of the four violations of section 75.380(d)(7)(iv), and that the second element, the discrete safety hazard contributed to by the violations, was “miners not escaping quickly in an emergency with attendant increased risk of injuries due to a delay in escape.”⁷⁶ The Commission further noted that “[t]he hazard contributed to by defectively placed lifelines necessarily involved consideration of an emergency situation.”⁷⁷

As stated above, the central disagreement between Cumberland and the Secretary was whether it was proper to assume the existence of an emergency situation in the context of the third *Mathies* requirement in the significant and substantial analysis. The Commission made several references in support of its agreement with the Secretary’s position. First, the Commission discussed its recent decision in *PBS Coals*, stating that “importantly, we clarified that the ‘Secretary need not prove a reasonable likelihood that the violation itself will cause injury.’”⁷⁸ The Commission also noted a proposition that it had adopted on several occasions, that “the absence of an injury-producing event when a cited practice has occurred does not preclude a determination of [significant and substantial].”⁷⁹

Interestingly, the Commission proceeded to characterize Cumberland’s and the judge’s position as requiring the imposition of an additional test not set forth in *Mathies*, “a test of whether emergency conditions would likely occur at the mine.”⁸⁰ It explained, “[we have] never required the establishment of the reasonable likelihood of a fire, explosion, or other emergency event when considering whether violations of evacuation standards are [significant and substantial].”⁸¹

The majority placed great emphasis on the concept of “evacuation standards” and explained that “[e]vacuation standards are different from other

⁷³ *U.S. Steel Mining Co.*, 6 FMSHRC 1834, 1836 (1984).

⁷⁴ *Cumberland Coal Res., LP*, 33 FMSHRC at 2364 (citing *U.S. Steel Mining Co.*, 6 FMSHRC at 1836).

⁷⁵ *Id.*

⁷⁶ *Id.* at 2364 (quoting *Cumberland Coal Res., LP*, 31 FMSHRC at 1163 (2009)).

⁷⁷ *See id.*

⁷⁸ *Id.* at 2365 (quoting *Musser Eng’g, Inc. & PBS Coals, Inc.*, 32 FMSHRC 1257, 1281 (2010)).

⁷⁹ *Id.* (citing *Musser Eng’g, Inc. & PBS Coals, Inc.*, 32 FMSHRC at 1281).

⁸⁰ *Id.* at 2366.

⁸¹ *Id.*

mine safety standards. They are intended to apply meaningfully only when an emergency actually occurs.”⁸² The passage and purpose of the MINER Act also played a role in the Commission’s adoption of the Secretary’s rationale.⁸³ The Commission noted that Congress’s principal rationale in passing the MINER Act was to ensure “safe and effective mine evacuations in emergency situations,” arguing that “it would be incongruous for *major violations* of evacuation standards not to be [significant and substantial] unless an inspector also happens to observe conditions that are reasonably likely to cause a fire or explosion.”⁸⁴ Although the Commission did not define, discuss in depth, or purport to limit its holding to “evacuation standards,” it is clear that the analysis and holding in *Cumberland* were significantly influenced by, if not compelled by, the fact that the particular regulations at issue were evacuation standards. The Commission further argued that adopting the operator’s position “would lead to the absurd result of defeating the purpose of the standard.”⁸⁵

It is worth noting the magnitude and variety of justifications put forth by the Commission in reaching its holding regarding the third *Mathies* requirement in *Cumberland*. It referenced its prior holding in *PBS Coals*, the legislative and regulatory history of the 2006 MINER Act and section 75.380(d)(7)(iv), and argued that evacuation standards are special and different from other standards.⁸⁶ Yet, at the same time, it argued that “the Commission is not changing *Mathies*.”⁸⁷ Rather, it continued, it was simply “focusing on the specific ‘discrete safety hazard’ at issue here, as required by the second element of the *Mathies* test.”⁸⁸

With that issue settled, the Commission handily dispensed with *Cumberland*’s remaining arguments that, even assuming an emergency, an injury would not be reasonably likely to occur.⁸⁹ On this point, the Commission referenced the judge’s agreement with the inspector’s testimony regarding the hazards which would be encountered in an emergency situation with poor visibility.⁹⁰

⁸² *Id.*

⁸³ MINER Act of 2006, Pub. L. No. 109-236, 120 Stat. 493 (codified in scattered sections of 30 U.S.C.). In fact, the Commission took several paragraphs of its opinion to discuss the legislative history and purpose of the MINER Act and § 75.380(d)(7)(iv). *See Cumberland Coal Res., LP*, 33 FMSHRC at 2362–64.

⁸⁴ *Cumberland Coal Res., LP*, 33 FMSHRC at 2367 (emphasis added).

⁸⁵ *Id.* (citing *Central Sand & Gravel Co.*, 23 FMSHRC 250, 254 (2001)).

⁸⁶ *Id.* at 2367–68.

⁸⁷ *Id.* at 2368.

⁸⁸ *Id.*

⁸⁹ *Id.* at 2369.

⁹⁰ *Id.*

As a preface to its endorsement of the clarification put forth in *PBS Coals*, the Commission noted the well-established precedent that “the absence of an injury-producing event when a cited practice has occurred does not preclude a determination of significant and substantial.”⁹¹ This innocuous proposition is a far cry from the sea change represented by the Secretary’s reading of *PBS Coals* and *Cumberland*. The central holding of these two cases cited by the Commission on this point is simply that the lack of prior accidents or injuries resulting from situations similar to the alleged conditions *do not preclude* a finding of significant and substantial.⁹² This proposition is uncontroversial and completely consistent with the forty years of significant and substantial precedent discussed below. The Commission also cited *Maple Creek Mining, Inc.* in support of its position that an emergency should be assumed when considering whether violations of evacuation standards are significant and substantial.⁹³ However, the *only* decision which truly supports the treatment of the third *Mathies* element in *Cumberland* is *PBS Coals*, in which the Commission “clarified” the forty-year-old significant and substantial analysis out of whole-cloth.

C. Black Beauty Coal Co.

While the Commission has not had the opportunity to analyze this issue further since *Cumberland*, in August 2012, it reaffirmed its position in *Black Beauty Coal Co.* (“*Black Beauty*”).⁹⁴ In *Black Beauty*, MSHA alleged that the operator had violated 30 C.F.R. § 77.1605(k), which provides that “berms or guards shall be provided on the outer bank of elevated roadways,” by failing to construct a berm on a road built to transport a drill rig.⁹⁵ The operator contended that the alleged conditions did not constitute a violation.⁹⁶ At the hearing, the judge held that this was a significant and substantial violation of the regulation.⁹⁷ On appeal, the operator argued that the judge erred in her

⁹¹ *Id.* (citing *Musser Eng’g, Inc. & PBS Coals, Inc.*, 32 FMSHRC 1257, 1281 (2010)).

⁹² *Elk Run Coal Co.*, 27 FMSHRC 899, 907 (2005); *Blue Bayou Sand & Gravel, Inc.*, 18 FMSHRC 853, 857 (1996). An argument made in the past by operators was that it was the Secretary’s burden to put on evidence of prior accidents at the same mine or at similar mines in order to prove that a given violation was reasonably likely to result in an injury-producing event. This argument has been advanced and rejected a number of times. In fact, it was advanced and rejected in *PBS Coals. Musser Eng’g, Inc. & PBS Coals*, 32 FMSHRC at 1281.

⁹³ *See Cumberland*, 33 FMSHRC at 2366 (citing *Maple Creek Mining, Inc.*, 27 FMSHRC 555, 563–64 (2005)); *see also* discussion *infra* Part VII.

⁹⁴ *Black Beauty Coal Co.*, No. LAKE 2008-477 (Fed. Mine Safety and Health Rev. Comm’n Aug. 2, 2012), *available at* <http://www.fmsihrc.gov/decisions/commission/COMM.08022012.LAKE21008-477d.htm>.

⁹⁵ *Id.*

⁹⁶ *Id.*

⁹⁷ *Id.*

findings both on the fact of the violation and with respect to the significant and substantial designation.⁹⁸ The Commission first upheld the judge's finding of the violation, primarily crediting the judge's evaluation of the photograph of the cited area that had been submitted into evidence.⁹⁹ Upon affirming the violation, the Commission proceeded to analyze each *Mathies* element. It first expressed agreement with the judge's definition of the hazard contributed to: "the danger of a vehicle veering off the elevated roadway and rolling, or falling, down the spoil incline."¹⁰⁰ The operator contended that an injury was unlikely because it was unlikely that an incident of overtravel would occur during continued normal mining operations.¹⁰¹ In dispensing with that argument, the Commission relied on *PBS Coals* and *Cumberland*, stating that "[the relevant inquiry] is whether the hazard in question—a vehicle veering off the road because of a lack of berms—would be reasonably likely to cause injury."¹⁰²

Also notable is the Commission's correction of the Secretary's analysis at oral argument on this issue. Perhaps sensing that the analysis established by the Commission in *PBS Coals* and *Cumberland* was not quite set in stone, MSHA attempted to analogize the standard requiring berms as a type of emergency standard, like the lifeline regulations at issue in *Cumberland*.¹⁰³ This was unnecessary and inappropriate, according to the Commission, because "the correct inquiry under the third element of *Mathies* is whether the hazard identified under element two is reasonably likely to cause injury."¹⁰⁴ Its discussion of how this particular standard was not an emergency standard makes clear again that this analytical framework is intended to be applied to all safety and health standards.¹⁰⁵

It is reasonable to wonder how what appears to be a significant analytical change could be made while the Commission could, at the same time, put forth the argument that it was simply correcting the operator's misinterpretation of the analysis established long ago in *Mathies*. It was able to do that by overlooking the substance of *Mathies* and the other cases discussed *infra*, and instead focusing on a small linguistic ambiguity in the Commission's original construction of the *Mathies* test. In *Mathies*, and all the cases that cited it thereafter, the third significant and substantial criterion was defined as "a

⁹⁸ *Id.*

⁹⁹ *Id.*

¹⁰⁰ *Id.*

¹⁰¹ *Id.*

¹⁰² *Id.*

¹⁰³ *Id.*

¹⁰⁴ *Id.*

¹⁰⁵ *Id.*

reasonable likelihood that the hazard contributed to will result in an injury.”¹⁰⁶ Because of the verbiage used, it is possible to superimpose two different meanings onto the stated requirement. One possible meaning is the one advanced by the Commission in *PBS Coals* and *Cumberland*.¹⁰⁷ This question—whether the identified hazard contributed to by the particular violation at issue would be reasonably likely to result in an injury if that hazard were to actually culminate in an injury-producing event—is consistent with the language quoted above from the third element of the *Mathies* significant and substantial test. However, there is an alternate construction that is also consistent with that language. This other interpretation of the language requires us to frame the question in the context of whether this identified hazard is of the type that we would actually expect to result in an injury in absolute, real-life terms, looking forward from the present. This alternate construction has been applied almost uniformly over the past forty years, as discussed in the case analyses below.

The clarification of the *Mathies* analysis offered by the Commission in *PBS Coals* appears to create a layer of assumption that did not exist prior to that case: that, somehow, circumstances have aligned such that the violation has already resulted in the contemplated injury-producing event. The Commission explained this as simply “focusing on the specific ‘discrete safety hazard’ at issue.”¹⁰⁸ The disconnect, however, is that the purpose of the third *Mathies* requirement was to require the Secretary to establish a certain threshold of likelihood. That purpose is lost when the third element requires consideration of a situation where the hazard has already occurred. Adding such an assumption into the analysis renders the third *Mathies* requirement almost meaningless, an effect which itself is inconsistent with the fact that since *Mathies* was decided, most disputes in mine safety litigation regarding whether a violation is significant and substantial have revolved around the third *Mathies* requirement. It also renders meaningless the established contour that circumstances are to be considered in the context of “continued normal mining operations.”¹⁰⁹ Continued normal mining operations are hardly relevant if we are considering a situation in which the contemplated event has already occurred. However, none of this discussion is relevant if the Commission has, in fact, “not changed *Mathies*.”¹¹⁰ However, if it has, the practical effect of the *Cumberland* significant and substantial analysis will be the creation of the presumption of significant and substantial that the Commission has so many

¹⁰⁶ *Mathies Coal Co.*, 6 FMSHRC 1, 3 (1984).

¹⁰⁷ See *Cumberland Coal Res., LP*, 33 FMSHRC 2357, 2366 (2011); *Musser Eng’g, Inc. & PBS Coals, Inc.*, 32 FMSHRC 1257, 1280–81 (2010).

¹⁰⁸ *Cumberland Coal Res., LP*, 33 FMSHRC at 2368.

¹⁰⁹ For a discussion of Commission case law, see *infra* Part IV.

¹¹⁰ *Cumberland Coal Res., LP*, 33 FMSHRC at 2368.

times rejected. It also suggests that mine safety lawyers, including nearly all current and former ALJs and Commissioners, have simply been getting it wrong for forty years.

At the same time, there are some decisions that lend some support to the argument that violations of evacuation standards could be considered in the context of an emergency event. Although that proposition has never been explicitly addressed or adopted by the Commission, it is at least not facially inconsistent with the bulk of Commission precedent and moreover has some level of intuitive appeal. However, the Commission did not advance this proposition in *PBS Coals* or *Cumberland*. The discussion regarding the third *Mathies* element in both of these was not limited to violations of evacuation standards or any other class of regulations. What is equally notable is that the language of both opinions characterizes the discussion as a “clarification” and suggests that this is the way the *Mathies* test was constructed all along.¹¹¹ But is that really the case?

The next two parts of this Article discuss the IBMA and Commission decisions that defined the contours of the significant and substantial analysis, and how they have continued to refine it over the last forty years. With the benefit of this discussion, one may be in a position to make their own judgment as to whether the Commission was indeed just applying *Mathies*.

IV. DEFINING SIGNIFICANT AND SUBSTANTIAL—CASES UNDER THE INTERIOR BOARD OF MINE OPERATIONS APPEALS

With a convoluted statute and a conspicuous lack of any congressional guidance after the passage of the 1969 Coal Act, it was left to the courts to flesh out what Congress intended the federal enforcement scheme applicable to American mines to be. At this point, significant and substantial was not even a designation, and the questions that arose in litigation principally dealt with the factors necessary for the Mining Enforcement and Safety Administration’s (“MESA,” MSHA’s precursor agency) issuance of withdrawal orders under section 104(c)(1) of the Coal Act. Indeed, at this early stage, the issues in mine safety litigation bore little resemblance to the neat and orderly series of designations and relatively clear analytical framework we deal with today. It is at this point that long and dramatic defining process of significant and substantial begins.

Under the 1969 Coal Act, the judicial body charged with adjudicating disputes between mine operators and MESA was the IBMA; similar to the way the review process is structured today, ALJs functioned as the initial fact-finder and trial court with the IBMA providing an avenue for appeal.

¹¹¹ See *id.* at 2367–69; *Musser Eng’g, Inc. & PBS Coals, Inc.*, 32 FMSHRC at 1280–81.

A. 1974—Eastern Associated Coal Corp.

The IBMA was first called upon to interpret the significant and substantial language in section 104(c) of the Coal Act in *Eastern Associated Coal Corp.* (“*Eastern Associated*”), a mine operator’s appeal of an ALJ decision upholding a withdrawal order, decided in 1974.¹¹² In *Eastern Associated*, MESA alleged that the operator violated the Secretary’s roof control regulations by failing to follow its approved roof control plan.¹¹³ The inspector determined that the operator had failed to limit the width of the roadway to the required maximum of sixteen feet in the cited location, as required under the operator’s approved roof control plan.¹¹⁴ The operator presented a number of arguments, among them that the condition identified did not constitute a violation of the regulation, and that the closure order was improper.¹¹⁵ Because the inspector had issued a closure order under section 104(c) of the Coal Act, he had implicitly represented that the alleged conditions significantly and substantially contributed to the cause and effect of a mine safety hazard, as this much is required by the statutory language.¹¹⁶ The operator did not raise a specific challenge to that implicit finding by the inspector, but the IBMA’s opinion in *Eastern Associated* would represent the first attempt at interpreting the significant and substantial language which appeared in the Coal Act, and which would again appear in the Mine Act in 1977.

Notably, in beginning its attempt at interpreting section 104(c)(1) of the Coal Act, the IBMA stated that:

[w]hile we must stay within the confines of the actual language of the [Coal] Act, we acknowledge that it is something less than self-defining. Accordingly, we have decided, in addition to the literal language, to be guided by our understanding of the precise purposes of the 104(c) sanctions relative to the other [enforcement powers granted to the Secretary].¹¹⁷

This assessment, that Congress provided little guidance, would be echoed later by the Commission in its subsequent attempts at interpretation of

¹¹² *E. Assoc’d Coal Corp.*, 81 Interior Dec. 567 (IBMA 1974).

¹¹³ *Id.* at 572.

¹¹⁴ *Id.*

¹¹⁵ *See id.*

¹¹⁶ Federal Coal Mine Health and Safety Act of 1969, Pub. L. No. 91-173, § 104(c), 83 Stat. 742, 751.

¹¹⁷ *E. Assoc’d Coal Corp.*, 81 Interior Dec. at 574. The IBMA’s observation regarding this section of the Coal Act’s convoluted and undefined language would be echoed later by the Commission in the context of its attempts at construing the identical language in Section 104(d) of the Mine Act.

the same language. The IBMA further noted that “section 104 as a whole was designed and intended to provide the Secretary with a range of sharper enforcement tools than previously existed, to deal with various classes of health or safety hazards. The first three subsections of section 104 are concerned with each of these distinct classes.”¹¹⁸ It is section 104(c)(1) of the Coal Act that contains the significant and substantial language we are concerned with, and regarding which the IBMA’s discussion is relevant. The IBMA first observed that, as opposed to those falling under sections 104(a) and 104(b), conditions or practices falling under section 104(c) treatment are subject to citation, closure, and then continuing liability to closure, and, consequently, contain a degree of seriousness beyond that required for mere citation under section 104(b).¹¹⁹

Upon concluding that one of the prerequisites for validity of a withdrawal order issued under section 104(c)(2) was that the violation “could significantly and substantially contribute to the cause and effect of a mine safety or health hazard,” the IBMA proceeded to make its findings.¹²⁰ The operator had argued that the requirement was not met because the deviation from the approved roof control plan was merely technical in nature, while the inspector had testified that the lack of sufficient timbers presented a significant hazard due to the operator’s history of rock fall problems.¹²¹ Finding for the Secretary on the issue, the IBMA concluded that the alleged conditions were significant and substantial because “the instant violation posed a probable risk of serious bodily harm or death in the form of a roof collapse.”¹²² It went on to state in a footnote that “[if] we thought that the hazard in question had only a *speculative possibility* of occurring, we would of course conclude otherwise.”¹²³ This initial construction of the significant and substantial language would come to be referred to as the “probable risk test” and would later be discarded in favor of a broader and more inclusive test.¹²⁴

¹¹⁸ *Id.* Section 104(a) provided the Secretary authority to issue withdrawal orders on a finding of an “imminent danger” and is analogous to Section 107(a) of the Mine Act. Section 104(b) granted the Secretary authority to issue a notice of violation for alleged infractions of mandatory safety or health standards, regardless of seriousness or fault. Section 104(c)(2) provides a means for subjecting operators to repeated withdrawal orders after certain conditions are met, and is analogous to Section 104(d)(2) of the Mine Act.

¹¹⁹ *Id.* at 574–76.

¹²⁰ *Id.* at 576–77. A withdrawal order requires the operator to remove all miners from the affected area except those necessary to correct the cited condition. One of the most severe enforcement tools, a withdrawal order may only properly issue in circumstances which are very dangerous, or which illustrate an extreme lack of care on the part of the mine operator.

¹²¹ *Id.* at 578.

¹²² *Id.*

¹²³ *Id.* at 578 n.7.

¹²⁴ *See* Ala. By-Prod. Corp., 83 Interior Dec. 574, 577 (IBMA 1976).

B. 1975—Zeigler Coal Co.

While the IBMA was struggling to discern the meaning of the Coal Act's section 104(c), among other provisions, and the enforcement framework intended with their enactment, the particular meaning of the significant and substantial language in section 104(c)(1) had already become a point of contention. As was the case in *Zeigler Coal Co.*, which involved a petition for reconsideration of an IBMA reversal of the ALJ's initial upholding of the validity of a withdrawal order.¹²⁵ In the initial decision, the ALJ determined that he need not find that the violation significantly and substantially contributed to the cause and effect of a mine safety or health hazard in order to uphold the issuance of the withdrawal order issued under Coal Act section 104(c)(1).¹²⁶ The withdrawal order giving rise to the litigation was issued under 30 C.F.R. § 75.400, which, as it does now, proscribed accumulations of combustible material.¹²⁷ On the initial appeal to the IBMA, Zeigler had contended that the withdrawal order was invalid on several grounds, the one with which we are concerned being that the judge had erroneously concluded that he need not find that the subject order could significantly and substantially contribute to a mine safety or health hazard.¹²⁸ In its disposition of the initial appeal, the IBMA agreed with Zeigler on this point.¹²⁹ MESA filed a petition for reconsideration of the IBMA's reversal, giving rise to the subject opinion.¹³⁰ In its petition, MESA, with support from the United Mineworkers of America ("UMWA"), argued for a literal interpretation of the significant and substantial language, with emphasis on the word "could," from "could significantly and substantially contribute."¹³¹ This, of course, would result in a much broader application of the language, as opposed to the IBMA's existing interpretation, which was based on its contextual interpretation in light of the language's placement in the overall enforcement scheme.¹³²

In rejecting these arguments, and maintaining its non-literal interpretation of section 104(c)(1), the IBMA made the poignant observation that "if we were to give each of the words of that clause an ordinary meaning, it would become a superfluous truism; by definition, the violation of any mandatory standard could significantly and substantially contribute to the cause and effect of a mine

¹²⁵ 82 Interior Dec. 221, 221 (IBMA 1975).

¹²⁶ *Id.* at 222.

¹²⁷ *Id.*

¹²⁸ *Id.*

¹²⁹ *Id.* at 222–23.

¹³⁰ *Id.* at 221.

¹³¹ *Id.* at 226–27; *see also* Federal Coal Mine Health and Safety Act of 1969, Pub. L. No. 91-173, § 104(c)(1), 83 Stat. 742, 751.

¹³² *Zeigler Coal Co.*, 82 Interior Dec. at 228.

safety or health hazard.¹³³ The IBMA also discussed several peculiarities of the legislation, noting that neither “significant and substantial” nor “unwarrantable failure” had been given binding definitions and further that there existed a number of additional ambiguities in the language of sections 104(c)(1) and 104(c)(2).¹³⁴ In noting these circumstances, the IBMA concluded that “the literal words are inconclusive on key points as to what Congress intended.”¹³⁵ Returning to the central issue regarding the proper construction and role of the significant and substantial language, it determined that these questions could best be resolved “by looking to the purposes of section 104(c) in the overall enforcement policy mandated by the Congress,” an approach that would later be rejected by the IBMA and later still reinstated by the Commission.¹³⁶

As the IBMA viewed the overall nature and policy of the Coal Act’s enforcement scheme, it was “a blend of measured deterrence and protective reaction for the safety of affected miners, with each enforcement tool directed toward a particular class of conditions or practices.”¹³⁷ The IBMA, with great foresight, determined that the phrase “could significantly and substantially contribute to the cause and effect of a mine safety or health hazard” was a phrase of art.¹³⁸ In construing the phrase, it noted the presence of the word “hazard,” which it believed to connote the language’s intended application “not to just any violation, but rather to violations posing a risk of serious bodily harm or death.”¹³⁹ It further opined that the presence of the words “significantly and substantially” connoted a probability requirement, “designed in [the IBMA’s] opinion, to prevent application of section 104(c) to largely speculative hazards.”¹⁴⁰ This assessment concluded the IBMA’s decision regarding the significant and substantial language, with the remaining discussion dedicated to issues regarding the relation of the same to MESA’s ability to issue imminent danger and unwarrantable failure withdrawal orders.¹⁴¹

¹³³ *Id.* at 229.

¹³⁴ *Id.* at 229–30.

¹³⁵ *Id.* at 230.

¹³⁶ *Id.* at 231.

¹³⁷ *Id.*

¹³⁸ *Id.*

¹³⁹ *Id.*

¹⁴⁰ *Id.* (internal quotations omitted).

¹⁴¹ *See id.*

C. 1976—Alabama By-Products Corp.

It was the IBMA’s decision in *Alabama By-Products Corp.* (“*Alabama By-Products*”) that would be its final meaningful discussion of the significant and substantial language before the passage of the 1977 Mine Act and the IBMA’s replacement by the FMSHRC.¹⁴² Unlike in *Eastern Associated*, the construction of the significant and substantial language in section 104(c) was one of the central issues in *Alabama By-Products*.¹⁴³ In this case, the operator sought to challenge two withdrawal orders issued to it under section 104(c)(1) of the 1969 Coal Act on the basis that the conditions alleged were not of such a nature as could significantly and substantially contribute to the cause and effect of a mine safety or health hazard.¹⁴⁴

On initial consideration, the ALJ had applied the *Eastern Associated* “probable risk” test and had determined that the cited violation “did not pose a probable risk of serious bodily harm short of imminent danger” and thus did not fulfill the requirements of the significant and substantial clause in section 104(c)(1). While the IBMA had initially affirmed the ALJ’s ruling, it stayed the effect of its decision pending the resolution of the District of Columbia Circuit’s decision in *International Union, United Mine Workers of America v. Kleppe* (“*UMWA v. Kleppe*”).¹⁴⁵ The issue in *UMWA v. Kleppe*¹⁴⁶ related to the proper interpretation of the statutory requirements necessary for the issuance of subsequent unwarrantable failure withdrawal orders, after the first one, under section 104(c)(1) of the Coal Act.¹⁴⁷ The particular question at issue was whether Congress intended to apply the significant and substantial gravity criterion to the second sentence of section 104(c)(1), and therefore require an additional gravity prerequisite to be met before a withdrawal order could properly issue.¹⁴⁸ The D.C. Circuit did not interpret the significant and substantial language in *UMWA v. Kleppe*. Rather, it only considered whether the language in section 104(c)(1) created an implied gravity prerequisite for proper issuance of a withdrawal order under section 104(c)(1).¹⁴⁹ While the IBMA agreed with the operator that the D.C. Circuit’s holding was narrow and did not address the meaning of the significant and substantial language in

¹⁴² Ala. By-Prod. Corp., 83 Interior Dec. 574 (IBMA 1976).

¹⁴³ *Id.* at 578 (“There remains, however, the question of how the ‘significant and substantial’ language should now be interpreted.”).

¹⁴⁴ *Id.* at 574–75.

¹⁴⁵ *Id.* at 575.

¹⁴⁶ *Int’l Union, United Mine Workers of Am. v. Kleppe*, 532 F.2d 1403 (D.C. Cir. 1976).

¹⁴⁷ *Id.* at 1404. This related to the application of the Coal Act version of what we now refer to as the “d-chain” or “d-sequence” under Section 104(d) of the Mine Act.

¹⁴⁸ *Id.* at 1405.

¹⁴⁹ *See id.*; Ala. By-Prod. Corp., 83 Interior Dec. at 576.

section 104(c)(1), it opined that the D.C. Circuit's opinion had broader implications such that a change in the interpretation of the significant and substantial language was necessary in any event.¹⁵⁰

Where the IBMA had previously taken into consideration both the overall enforcement scheme and the relation of section 104(c) to the other statutory enforcement tools after concluding that the language of section 104(c) was unclear, the D.C. Circuit, while not commenting on the IBMA's contextual approach, applied a strictly literal interpretation of the statutory language.¹⁵¹ In light of the D.C. Circuit's reliance on the text alone in construing Congress's intent regarding the application of withdrawal orders, the IBMA concluded that the D.C. Circuit's rejection of the IBMA's contextual approach necessarily implied a corresponding rejection of that same reasoning which was used by the IBMA in interpreting the significant and substantial language.¹⁵² Accordingly, it proceeded to re-interpret the significant and substantial language in the literal and broader fashion employed by the D.C. Circuit, as urged by MESA and the UMWA.¹⁵³

The practical consequence of this decision was the rejection of the IBMA's previously established "probable risk" formulation of significant and substantial.¹⁵⁴ It is important to note that none of the various parties, in advancing their own preferred meanings, referenced any legislative history directly addressing the meaning of the phrase "significant and substantial."¹⁵⁵ MESA and the UMWA argued that the type of violations referred to by Congress were those which "pose a reasonable possibility of danger to the health and safety of miners."¹⁵⁶ Framing its adopted definition in the negative, the IBMA went even further, holding that significant and substantial meant all violations *except* those which pose no risk at all, that is, "purely technical violations," and those "posing a source of injury which has only a remote or speculative chance of coming to fruition."¹⁵⁷

The IBMA's decision in *Alabama By-Products* represented a significant broadening of what violations were considered significant and substantial under section 104(c)(1) of the Coal Act. It explicitly rejected *Eastern Associated's* "probable risk" formulation and represented the IBMA's final word on the significant and substantial language before the IBMA was replaced by the FMSHRC. While the scope of what violations would be

¹⁵⁰ *Ala. By-Products Corp.*, 83 Interior Dec. at 576.

¹⁵¹ *Id.* at 577.

¹⁵² *Id.*

¹⁵³ *Id.* at 578.

¹⁵⁴ *Id.* at 577.

¹⁵⁵ *Id.* at 578 n.5.

¹⁵⁶ *Id.* at 578 (internal quotations omitted).

¹⁵⁷ *Id.*

considered significant and substantial would broaden and narrow over its forty plus years of life, *Alabama By-Products* represented significant and substantial at its very broadest. With the passage of the 1977 Mine Act, MSHA replaced MESA, and the FMSHRC replaced the IBMA. Shortly after this transition occurred, the Commission was called upon to consider the nearly identical issue of what Congress intended by the significant and substantial language contained in what was now section 104(d) of the 1977 Mine Act.

V. THE DEFINING CONTINUES—CASES THAT SHAPED SIGNIFICANT AND SUBSTANTIAL UNDER THE FEDERAL MINE SAFETY AND HEALTH REVIEW COMMISSION: *NATIONAL GYPSUM, MATHIES COAL CO., AND MORE*

A. Cement Division, National Gypsum Co.

In *Cement Division, National Gypsum Co.*,¹⁵⁸ decided in 1981, the Commission laid the foundation of what would remain the significant and substantial test for over forty years. Indeed, the question of what constitutes a significant and substantial violation under the Mine Act was the central issue in *National Gypsum*. The case was an appeal by a mine operator from an ALJ ruling upholding the inspector's significant and substantial designations for nine out of eleven citations at issue.¹⁵⁹ In the ALJ decision, the judge "reluctantly agreed with the Secretary's position that a violation is of a significant and substantial nature if it presents more than a remote or speculative possibility that any injury or illness may occur"¹⁶⁰ The operator argued that the Secretary's definition was overly inclusive, appealing the ALJ ruling on the same basis, and thus the issue was before the Commission.¹⁶¹

In reversing the judge's test as being overly inclusive and erroneous, the Commission concluded that a violation is

of such a nature as could significantly and substantially contribute to the cause and effect of a mine safety or health hazard if, based upon the particular facts surrounding that violation, there exists a reasonable likelihood that the hazard contributed to will result in an injury or illness of a reasonably serious nature.¹⁶²

This analysis has remained the core of the significant and substantial test since *National Gypsum* was rendered. Though the Commission's intent would be

¹⁵⁸ 3 FMSHRC 822 (1981).

¹⁵⁹ *Id.* at 824.

¹⁶⁰ *Id.*

¹⁶¹ *Id.*

¹⁶² *Id.* at 825.

clear from the decisions that followed, it was an ambiguity in that verbiage that would result in the confusion we are encountering today.

The first task of the Commission in *National Gypsum* was to explain why the definition of significant and substantial advanced by the Secretary was wrong and over-inclusive. In doing so, it noted that the Secretary's proffered definition¹⁶³ would result in nearly all violations qualifying as significant and substantial and thus would render the significant and substantial language in section 104(d)(1) superfluous.¹⁶⁴ The Commission also emphasized the deleterious effect on mine operators such a broad definition would have when implemented in concert with the pattern of violations provisions of section 104(e).¹⁶⁵ This point remains valid today, more so than ever. The economic and reputational harm that results from being placed on a pattern of violations treatment remains undisputable.

Resolving a great deal of statutory ambiguity, the Commission set forth a specific definition for the term "hazard" in section 104(d) of the Mine Act, and further explained what type of violation "significantly and substantially contributes to the cause and effect of a . . . hazard."¹⁶⁶ It opined that a hazard was "a measure of danger to safety or health, and that a violation 'significantly and substantially' contributes to the cause and effect of a hazard if the violation could be a major cause of a danger to safety or health."¹⁶⁷ The language used here is important, as evident from the above discussion of *PBS Coals* and *Cumberland*. The Commission continued, stating "the contribution to cause and effect must be significant and substantial."¹⁶⁸

In settling on the definition above, the Commission reasoned that its definition was consistent with the reasonable proposition that a significant and substantial violation was intended to fall on the spectrum between the mere fact of a violation and a violation which would constitute an imminent danger.¹⁶⁹ It also heavily emphasized the Mine Act's graduated enforcement scheme, which provides for increasingly harsh sanctions for more serious and continued violations.¹⁷⁰

¹⁶³ *Id.* "[A] violation is of a significant and substantial nature, so long as it poses more than a remote or speculative chance that an injury or illness will result, no matter how slight that injury or illness . . ." *Id.*

¹⁶⁴ *Id.* at 826.

¹⁶⁵ *Id.* at 827. A mine operator placed on a "pattern of violations" treatment ("POV") is subject to significantly increased civil penalties and the risk of repeated closures and loss of production. *Id.*

¹⁶⁶ *Id.* at 825.

¹⁶⁷ *Id.* at 827.

¹⁶⁸ *Id.*

¹⁶⁹ *Id.* at 828.

¹⁷⁰ *Id.*

One may be wondering how the Commission formulated the above-described test and definitions. After reviewing the Mine Act and its legislative history and finding the references to significant and substantial “contradictory” and “at times directly at odds with the Act’s language,” the Commission concluded that these sources were not helpful in resolving the issue.¹⁷¹ It proceeded essentially to craft the above test and definitions out of whole-cloth based on what it perceived the goals and framework of the Act to be.¹⁷² Nonetheless, the framework set forth in *National Gypsum* continues to endure, despite its re-crafting in *PBS Coals* and *Cumberland*.

B. Mathies Coal Co.

While *National Gypsum* established the foundation for the significant and substantial test under Commission practice, it was *Mathies Coal Co.* that set forth a clear analytical framework, along with what would come to be referred to as “the *Mathies* significant and substantial test.”¹⁷³ Moreover, *Mathies* is more informative with regard to this Article’s discussion of the third *Mathies* requirement because it involves the application of the significant and substantial test to a specific violation rather than the abstract discussion in *National Gypsum*. In *Mathies*, the operator appealed the ALJ’s determination that the single violation at issue was significant and substantial under the framework set forth in *National Gypsum*.

In *Mathies*, an MSHA inspector cited the mine operator for having defective sanders on a self-propelled personnel carrier (“mantrip”).¹⁷⁴ The mantrip was used by the operator to transport miners to and from the working section in groups of eight to ten men at a time.¹⁷⁵ While it was equipped with primary and secondary braking systems, the mantrip was also equipped with a sander above each of its four wheels. When necessary, the sanders could be activated to supplement the other braking systems by dispensing sand in order to increase the friction between the wheels and the haulage track.¹⁷⁶ One of the sanders on the mantrip in question had a valve stuck and ran out of sand.¹⁷⁷ This is the condition that was cited and was alleged to be significant and substantial.¹⁷⁸ The mantrip would be used twice a day to transport eight to ten

¹⁷¹ *Id.* at 829.

¹⁷² *Id.* at 829–30.

¹⁷³ *Mathies Coal Co.*, 6 FMSHRC 1 (1984).

¹⁷⁴ *Id.* at 2.

¹⁷⁵ *Id.*

¹⁷⁶ *Id.*

¹⁷⁷ *Id.*

¹⁷⁸ *Id.*

miners on a twenty minute, 6,500 foot trip.¹⁷⁹ It was noted that the mine was generally wet, and that over the journey on the day in question the mantrip's route contained curves, blind curves, an S-curve, and hills with as great as a 3.4% grade.¹⁸⁰

Applying the *National Gypsum* formulation, the ALJ concluded that the hazard associated with the violation was a sliding derailment or a collision with an object on the tracks and that the wetness of the haulageway, along with the curves and downgrades in the mine, made a reasonably serious injury reasonably likely to occur.¹⁸¹ In reviewing the judge's findings, the Commission reformatted the *National Gypsum* requirements into the four-part *Mathies* test.¹⁸² It stated that in order to establish that a violation of a mandatory safety standard is significant and substantial, the Secretary 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.¹⁸³

The dispute in *Mathies*, like most subsequent disputes regarding significant and substantial, largely focused on the third required element, whether there existed a reasonable likelihood that the hazard contributed to would result in an injury.¹⁸⁴ The analysis applied in *Mathies* is informative in considering the propriety of the significant and substantial analysis in *PBS Coals* and *Cumberland*. The hazard identified by the ALJ and affirmed by the Commission was “a sliding derailment or collision with some object on the tracks.”¹⁸⁵ Given that it was established that the mantrip in question transported miners,¹⁸⁶ an analysis under the test contemplated in *Cumberland* would likely end there. It is difficult to imagine a scenario involving a derailment or collision of a mantrip transporting miners that would not engender a reasonable likelihood of reasonably serious injuries. Of course, the Commission's analysis

¹⁷⁹ *Id.*

¹⁸⁰ *Id.*

¹⁸¹ *Id.* at 4.

¹⁸² *Id.* at 3–4.

¹⁸³ *Id.*

¹⁸⁴ *See id.* at 4.

¹⁸⁵ *Id.*

¹⁸⁶ *Id.* at 2.

in *Mathies* did not end upon its determination that the hazard contributed to was a sliding derailment or collision. Indeed, the factors it went on to discuss all related to the issue of *whether such a sliding derailment or collision was reasonably likely to occur* given the conditions present and which could be reasonably expected.¹⁸⁷ In concluding that such an incident *was* reasonably likely to occur, the Commission again emphasized the presence of curves, grades, and the exceptional wetness present on the day the violation was issued.¹⁸⁸

While *National Gypsum* and *Mathies* are the seminal cases in the line interpreting the Mine Act's significant and substantial language, the Commission issued several other important decisions in the years that followed, which served to clarify and add further contours to the analysis.

C. U.S. Steel I

Several months later, in *U.S. Steel Mining Co., Inc. ("U.S. Steel I")*,¹⁸⁹ the Commission established the proposition that the significant and substantial analysis is to be considered in terms of "continued normal mining operations," rather than simply taking into consideration the circumstances as they existed at the precise moment the inspector observed the alleged violation.¹⁹⁰ Although a rather concise opinion, *U.S. Steel I* was quite important and continues to guide the significant and substantial analysis today.

In *U.S. Steel I*, MSHA argued that a six-inch cut in a continuous miner cable observed by an inspector constituted a significant and substantial violation of 30 C.F.R. § 75.517.¹⁹¹ It was established during the proceedings that approximately two inches of the cut had been covered by electrical tape, leaving exposed approximately four inches of ground wire.¹⁹² The cited cable also contained three live power wires carrying 480 volts, which were all covered by a separate, inner layer of insulation, undamaged at the time of inspection.¹⁹³ MSHA argued that these circumstances constituted a significant and substantial violation while U.S. Steel argued that the scope of consideration for determining whether a significant and substantial violation exists should be limited to the conditions as they existed when inspected.¹⁹⁴

¹⁸⁷ *Id.* at 4.

¹⁸⁸ *Id.*

¹⁸⁹ 6 FMSHRC 1573 (1984).

¹⁹⁰ *Id.* at 1574.

¹⁹¹ *Id.* at 1573.

¹⁹² *Id.*

¹⁹³ *Id.*

¹⁹⁴ *Id.* at 1574.

Rejecting U.S. Steel's proposed construction of the significant and substantial test, the Commission opined that "such a measurement cannot ignore the relevant dynamics of the mining environment or processes[.]" further stating that "this cable was in normal use at the time it was observed by the inspector."¹⁹⁵ It went on to explicitly endorse the ALJ's consideration of "those mining conditions to which the damaged cable predictably would be exposed."¹⁹⁶

The consideration of events that would be expected to occur under continued normal mining operations is reasonable in the context of the significant and substantial analysis. Under the line of reasoning urged by U.S. Steel, a similar violation could not be cited as significant and substantial until both the outer and inner layers of insulation were damaged *and* the cable was in active use.¹⁹⁷ It is unclear how the Commission sitting at that time would have resolved the issue had the continuous mining machine been idle and the cable de-energized. Nonetheless, with *U.S. Steel I*, it was established that the significant and substantial analysis was to be conducted assuming "continued normal mining operations."¹⁹⁸

While neither the ALJ nor the Commission explicitly stated as much, it is reasonable to posit that the discrete safety hazard at issue in *U.S. Steel I* was a miner accidentally handling an inadequately protected 480 volt trailing cable and sustaining electrical shock injuries.¹⁹⁹ Like with the sliding derailment hazard in *Mathies*, under the *Cumberland* formulation, the significant and substantial analysis could easily be concluded once the discrete safety hazard was determined to be a shock from a 480 volt cable. But again, the Commission continued the analysis and discussed the third *Mathies* element.²⁰⁰ Indeed, it is not unreasonable to argue that the very concept of continued normal mining operations which arose from *U.S. Steel I* came about because the Commission was considering whether such a shock injury was reasonably likely to actually occur. Consider the distinction between that question and the question that would be relevant under the *Cumberland* formulation—whether an incident involving an electrical shock would be reasonably likely to result in a reasonably serious injury.

¹⁹⁵ *Id.*

¹⁹⁶ *Id.* at 1575.

¹⁹⁷ *See id.*

¹⁹⁸ *Id.* at 1574.

¹⁹⁹ *See id.* at 1573.

²⁰⁰ *Id.* at 1574.

D. U.S. Steel II

An additional facet of the significant and substantial analysis, and indeed the one that is directly in support of the thesis of this Article, was established later the same year in *U.S. Steel Mining Co., Inc. (“U.S. Steel II”)*.²⁰¹ In *U.S. Steel II*, the issue of what violations are properly designated significant and substantial was again before the Commission, this time in regard to two contested enforcement actions, which had been found by the ALJ to be significant and substantial.²⁰² It was in *U.S. Steel II* that the Commission precisely addressed the issue later “clarified” in *PBS Coals* and *Cumberland*, stating that “[w]e . . . note that our reference to hazard in the third element in *Mathies* contemplates the possibility of a subsequent event. This requires that the Secretary establish a reasonable likelihood that the hazard contributed to will result in an event in which there is an injury.”²⁰³

As stated above, *U.S. Steel II* involved the application of the *Mathies* significant and substantial test to two alleged violations. The first violation alleged was that three electrical plugs connected to a section power center “were not properly tagged, or otherwise identified, to correspond with the receptacles” on the power center.²⁰⁴ The three plugs belonged to two shuttle car cables and one continuous miner cable.²⁰⁵ The ALJ found that the continuous miner cable was visually very different from the two shuttle car cables and thus could not be confused with the shuttle car cables.²⁰⁶ The Commission agreed that the particular hazard presented was an electrical shock resulting from a miner having mistaken the unmarked shuttle car trailing cable for a similar looking plug and handled the cable while energized.²⁰⁷ U.S. Steel argued that the record did not support the ALJ’s implicit holding that such an incident was reasonably likely to occur.²⁰⁸

The only requirement under the *Mathies* test at issue in *U.S. Steel II* was the third element, whether the hazard was reasonably likely to result in an injury. In determining that such an event was reasonably likely to occur, the Commission discussed the circumstances present, also noting that a fatal electrocution accident had occurred at the same mine a few years earlier as a result of a similar scenario.²⁰⁹ Notably, for the purposes of this Article, the

²⁰¹ 6 FMSHRC 1834 (1984).

²⁰² *Id.* at 1834.

²⁰³ *Id.* at 1836.

²⁰⁴ *Id.*

²⁰⁵ *Id.*

²⁰⁶ *Id.* (citing *U.S. Steel Mining Co., Inc.*, 5 FMSHRC 1728, 1731 (1983)).

²⁰⁷ *Id.* at 1837.

²⁰⁸ *Id.*

²⁰⁹ *Id.*

Commission's discussion focused on why an electrocution accident was reasonably likely to occur, not why a reasonably serious injury was reasonably likely to occur assuming that an electrical accident happened. In addition to emphasizing the fact that similar circumstances had fairly recently resulted in a fatality, the Commission credited several contentions made by the MSHA inspector, including that there were multiple plugs that were the same size as the shuttle car plug and that it would not be unusual for two shuttle cars on the same section to be down for repairs at the same time.²¹⁰ In contrast, it found unpersuasive the testimony of U.S. Steel's safety engineer that it was "a simple process of elimination" to determine the identity of the cables.²¹¹ Agreeing with the inspector, the Commission concluded that "[t]his argument ignores the reality, demonstrated by the accident in 1979, that miners in a hurry may easily fail to verify which cable is which unless all cables are 'plainly marked.'"²¹² Note that the above arguments all relate to the issue of whether the identified hazard contributed to was reasonably likely to culminate in the injury-producing event that was determined to have been contributed to by the violation in the second *Mathies* requirement.

The second citation at issue in *U.S. Steel II* was based upon the inspector's observation of an unsecured oxygen cylinder and an unsecured acetylene cylinder leaning against the rib in a shuttle car roadway.²¹³ As with the first violation, the ALJ found this citation to be significant and substantial.²¹⁴ In so finding, the judge noted that the section was preparing to begin a new shift and thus that mobile equipment would be traveling past the cited cylinders in the near future.²¹⁵ While the ALJ's opinion only discussed this second citation briefly, the Commission found that the record supported the ALJ's conclusion.²¹⁶ While the operator argued that the shuttle cars were not running at the time of the inspection and that the cylinders were in plastic bags awaiting shipment off of the section, the Commission noted that the section foreman had testified that he could not say with certainty when the cylinders would have in fact been transported.²¹⁷ In its further discussion of why the evidence was insufficient to disturb the ALJ's conclusion that the violation was significant and substantial, the Commission acknowledged that "[d]riving habits and mining conditions are too variable," noting as relevant the fact there was only five feet of clearance beyond the width of the shuttle car in the area

²¹⁰ *Id.* at 1837–38.

²¹¹ *Id.* at 1838.

²¹² *Id.*

²¹³ *Id.*

²¹⁴ *Id.* at 1839.

²¹⁵ *Id.*

²¹⁶ *Id.*

²¹⁷ *Id.* at 1840.

the cylinders were located.²¹⁸ It went on to conclude “that substantial evidence of record supports the judge’s holding that *an incident involving* the unsecured, compressed gas cylinders was reasonably likely to occur.”²¹⁹

The Commission’s opinion in *U.S. Steel II* makes quite clear that the third element of the *Mathies* significant and substantial test inquired into whether the contemplated injury-producing event is reasonably likely to occur based on the existing circumstances, in the context of continued normal mining operations. Although this assessment is supported by a review of the particular factors discussed in *U.S. Steel II* and the Commission’s other decisions in which the *National Gypsum* and *Mathies* formulations are applied, it is made undeniably clear by the Commission’s proclamation above that the Secretary is required to prove that an injury-producing event is reasonably likely to occur.

E. Texasgulf, Inc.

Another important and frequently cited decision on significant and substantial is *Texasgulf, Inc.*²²⁰ *Texasgulf* involved a dispute regarding whether three similar permissibility violations were significant and substantial and is frequently cited for the proposition that for a violation to be significant and substantial, there must exist a “confluence of factors” which establish that the hazard in question is reasonably likely to culminate in an event in which there would be injury.²²¹ In concluding that the alleged violations were not significant and substantial, the ALJ reasoned that “there was no reasonable likelihood that all of the various catalysts needed to produce an ignition or explosion would coincide.”²²² The Secretary challenged both the judge’s conclusion and reasoning, arguing that the judge had “erroneously concluded that a violation must constitute an imminent danger in order to be designated significant and substantial.”²²³

The three violations at issue in *Texasgulf* were all written under the same mandatory safety standard setting forth permissibility requirements for electric face equipment.²²⁴ The inspector, on three separate continuous mining

²¹⁸ *Id.*

²¹⁹ *Id.* (emphasis added).

²²⁰ 10 FMSHRC 498 (1988).

²²¹ *Id.* at 500.

²²² *Id.* at 499 (citing *Texasgulf, Inc.*, 9 FMSHRC 748, 764–65 (1987)).

²²³ *Id.*

²²⁴ *Id.* Section 57.21078 of Title 30 of the Code of Federal Regulations stated, in pertinent part: “Only permissible equipment maintained in permissible condition shall be used beyond the last open crosscut or in places where dangerous quantities of flammable gases are present or may enter the air current.” 30 C.F.R. § 57.21078 (1986). The relevant standard defining the parameters necessary for permissibility at the time these citations were issued was 30 C.F.R. §

machines, identified gaps in flange joints for various components in excess of the maximum permissible clearance for such joints.²²⁵ In his testimony regarding why he designated the three violations significant and substantial, the inspector argued that methane could get into the cited components through the impermissible gaps and that arcing or sparking could then ignite the methane and set off larger explosions of methane in the atmosphere.²²⁶ The record evidence established that there was no methane present at the time of the violations and that none of the machines were malfunctioning or sparking when they were observed by the inspector.²²⁷

While recognizing that permissibility violations have the potential to create serious danger, the Commission agreed with and upheld the Judge's determination that the three violations at issue were not significant and substantial.²²⁸ In so doing, the Commission essentially conducted a *de novo* significant and substantial analysis according to the principles set forth in *National Gypsum, Mathies*, and *U.S. Steel I and II*.²²⁹ The first step in its analysis was the identification of the discrete safety hazard contributed to by the alleged violations; consistent with the inspector's concerns, the Commission determined that the relevant hazard was "that methane will enter the subject enclosures . . . through the impermissibly wide gaps in the flange joints, be ignited by arcing or sparking of electrical components and trigger a larger methane ignition or explosion."²³⁰ Notably, the Commission stated that "[t]he key question here is whether there was a reasonable likelihood that this hazard would result in an ignition or an explosion."²³¹ With the violation established and the discrete safety hazard identified, the Commission proceeded to consider step three in the *Mathies* test, whether an injury was reasonably likely to occur.

The discussion in *Texasgulf* regarding whether an injury was reasonably likely to occur centered on the question of whether the conditions that were present, and which could be expected under continued normal mining operations, made the occurrence of an explosion reasonably likely.²³² In finding that such an explosion was not reasonably likely to occur, the Commission noted that there had never before been a methane ignition or explosion at the

18.31(a)(6) (1986), which provided that the maximum permissible clearance for the flange joints in permissible face equipment is 0.004 inches.

²²⁵ *Texasgulf, Inc.*, 10 FMSHRC at 499.

²²⁶ *Id.*

²²⁷ *Id.*

²²⁸ *Id.* at 500.

²²⁹ *Id.* at 499–503.

²³⁰ *Id.* at 501.

²³¹ *Id.*

²³² *Id.*

mine and indeed that in the preceding eight years methane had never been detected in an ignitable concentration.²³³ It also identified as being relevant the facts that the geological characteristics of the particular mine at issue supported the operator's contention that a methane accumulation in the ignitable range was unlikely and that these characteristics were not conducive to methane liberation.²³⁴ While the Secretary argued at the hearing that "sudden liberations of methane cannot be ruled out," the Commission dismissed that contention, stating that "the appropriate question is whether there is a reasonable likelihood of such a sudden liberation of methane."²³⁵ Consequently, it concluded that "substantial evidence supports the judge's holding that for each violation at issue there was not a reasonable likelihood that the hazard contributed to would result in a mine ignition or explosion."²³⁶

There are critical observations to be made about the Commission's analysis and language in *Texasgulf*. First, the Commission's analysis clearly focuses on whether the injury producing event contemplated is reasonably likely to occur, not whether the hazard of a methane ignition is reasonably likely to result in an injury, as is suggested under the analysis of *PBS Coals* and *Cumberland*. If the analysis was consistent with *Cumberland*, the violations in *Texasgulf* would undeniably have been significant and substantial. The Commission agreed that the violation did contribute to the hazard of a methane ignition and that the second *Mathies* element was satisfied.²³⁷ The identified hazard contributed to being a methane explosion, it can hardly be argued that such an event would not be reasonably likely to result in reasonably serious injuries. Moreover, setting aside its direct reference to *U.S. Steel II*, the language used by the Commission in *Texasgulf* simply does not support the *Cumberland* interpretation of the significant and substantial analysis. In addition to the Commission's construction of the relevant hazard, the incompatibility of *Texasgulf* with *Cumberland* is further exemplified through the Commission's language choices such as: "[t]he key question here is whether there was a reasonable likelihood that this hazard would result in an ignition or an explosion"; "[regarding significant and substantial,] the appropriate question is whether there is a reasonable likelihood of such a sudden liberation of methane"; and of course, its conclusion that the violations were not significant and substantial because "there was not a reasonable

²³³ *Id.* The commission opined that one to two percent methane concentration is the ignitable range, while five to fifteen percent is the explosive range. *Id.*

²³⁴ *Id.* at 501–02.

²³⁵ *Id.* at 503.

²³⁶ *Id.*

²³⁷ *See id.* at 501.

likelihood that the hazard contributed to would result in a mine ignition or explosion.”²³⁸

Having discussed these cases that shaped what significant and substantial means, it should be clear that if the Commission is saying in *PBS Coal* and *Cumberland* that the relevant question under the third *Mathies* element is whether the hazard, if it occurred, would be reasonably likely to result in an injury, this would represent a significant departure from precedent. It remained largely unnoticed between *PBS Coals* and *Cumberland*, which may have been due to the transient way in which it was presented in *PBS Coals*. However, with the Commission’s language in *Cumberland*, the Secretary appears to believe it has found Excalibur; indeed, MSHA and the Secretary have already begun relying on *PBS Coals* and *Cumberland* to justify the issuance of, and refusal to modify, significant and substantial violations across a broad range of safety and health standards. Consequently, by framing its discussion in *Cumberland* as a “clarification” of the existing significant and substantial analysis rather than a method for analyzing significant and substantial for the “evacuation standards” it emphasized, the Commission has sown confusion and uncertainty. The next section of this Article will further discuss the potential impact of *PBS Coals* and *Cumberland*, why these cases are inconsistent with the precedent discussed above, and why the Commission may have chosen the language it did.

VI. THE ANALYSIS IN *PBS COALS* AND *CUMBERLAND* SHOULD BE REVISITED AND CLARIFIED

For all the discussion in *Cumberland* about evacuation standards, the discussion in *PBS Coals* and *Cumberland* does not appear to be restricted to situations involving alleged violations of this sub-class of mandatory safety standards. Rather, the Commission’s framing of the issue as a “clarification” of the existing significant and substantial analysis under *Mathies* suggests that the analysis represents proper analytical framework for determining whether an alleged violation of any mandatory safety or health standard is significant and substantial.

It is interesting to note some of the language used by the Commission in *Cumberland*. When addressing *Cumberland*’s arguments that to adopt the Secretary’s position would be contrary to *Mathies*, the Commission explains that it is not changing *Mathies*. The verbiage it used in doing so is curious: “This method of analysis—focusing on the clear identification of the ‘discrete safety hazard’ in the second element of the *Mathies* test”²³⁹ One could argue that the Commission’s use of the phrase “this method of analysis” implies that the method being discussed is in some way new or different. While

²³⁸ *Id.* at 503.

²³⁹ *Cumberland Coal Res., LP*, 33 FMSHRC 2357, 2368 (2011).

the third *Mathies* element has long been the central point of contention in litigation regarding significant and substantial before the Commission, if the analysis were changed consistently with the decision in *Cumberland*, the second element, whether the alleged violation contributes to a discrete safety hazard, would likely become much more important.

If *PBS Coals* and *Cumberland* have changed *Mathies* from the analysis explored in Part V of this Article, it would serve to effectively eliminate the Secretary's burden in establishing the third *Mathies* element—that the hazard contributed to is reasonably likely to result in an injury. Central to this point is the fact that nearly every violation can be said to contribute to some kind of discrete safety hazard. The fact that a mandatory safety or health standard has been promulgated on a subject should be indicative of whether the violation of that standard contributes to some type of hazard. It is remarkable that both the IBMA and the Commission explicitly reached this conclusion. The IBMA recognized it in *Zeigler Coal Co.* when it acknowledged that “by definition, the violation of any mandatory standard could significantly and substantially contribute to the cause and effect of a mine safety or health hazard,”²⁴⁰ while the Commission stated the same in *National Gypsum* when it opined that “the violation of a standard presupposes the possibility, however remote, of contribution to an injury or illness.”²⁴¹ This simple recognition is likely why the Commission established the third *Mathies* requirement in the first place. It is the third element that serves to establish the probability criterion of the test.

It is difficult to imagine many violations aside from those relating to recordkeeping (and even many of those) where the hazard contributed to, if it occurred, would not be reasonably likely to result in an injury. This fact is what makes *PBS Coals* and *Cumberland* so clearly inconsistent with the last forty years of precedent regarding significant and substantial and the *Mathies* test. Take the example of a violation of 30 C.F.R. § 75.202(a), which provides in pertinent part that “[t]he roof, face and ribs of areas where persons work or travel shall be supported or otherwise controlled to protect persons from hazards related to [the same].”²⁴² Under *PBS Coals* and *Cumberland*, for any alleged violation of § 75.202(a), the finding of the violation is going to be synonymous with a finding of significant and substantial. The standard would not be violated if the conditions were not such that a roof, face, or rib hazard was contributed to. What is the discrete safety hazard then? The hazard would have to be “the danger of a miner being struck by roof material or a rib outburst.” From *PBS Coals* and *Cumberland*, we know that it is inappropriate to conflate the terms “violation” and “hazard”; so under that analysis, the next question would be whether that hazard, “a miner being struck by roof material

²⁴⁰ *Zeigler Coal Co.*, 82 Interior Dec. 221, 229 (IBMA 1975).

²⁴¹ *Cement Div., Nat'l Gypsum Co.*, 3 FMSHRC 822, 825 (1981).

²⁴² *Protection from Falls of Roof, Face and Ribs*, 30 C.F.R. § 75.202(a) (2012).

or a rib outburst,” is reasonably likely to result in an injury. This is an easy answer. It is practically beyond argument that such an event would cause injury. Of course, this effect is not limited to Section 75.202(a). An entire swath of mandatory safety and health standards will now be almost presumptively significant and substantial. Under the *PBS Coals* and *Cumberland* formulation, many violations, which before would have been almost certainly non-significant and substantial, will now be undeniably significant and substantial.

Consider, for example, the unsecured oxygen and acetylene tanks from *Mathies*. But instead of the tanks being present in a frequently traveled roadway with limited clearance for mobile equipment, imagine that the tanks are in a remote area where no persons or equipment travel. No one except for the maintenance person who placed the tanks there will ever be in the area. Under the pre-*PBS Coals-Mathies* test, there is a very high likelihood that most judges, and indeed the Commission, would determine that such a violation is non-significant and substantial because under these particular circumstances, an injury is not reasonably likely to occur. Is there a violation? Of course, because 30 C.F.R. § 75.1106-3 requires any such tanks to be secured to prevent tipping over.²⁴³ Does the violation contribute to a discrete safety hazard? It does; because the tanks are standing and not secured, there is now a possibility that they could either fall over on someone or get damaged and become projectiles. Now the third *Mathies* element: Is the hazard contributed to reasonably likely to result in an injury? Under *Mathies*, we would say probably not. There is very minimal exposure. The only person who would be in the area already knows that the tanks are there and are unsecured. The likelihood of an injury is negligible. But under the *Cumberland* style analysis, the answer is quite the opposite. What is the hazard? “The danger of the unsecured tanks falling onto a miner or striking a miner as projectiles.” Be careful not to conflate the terms “violation” and “hazard.” Is that *hazard* reasonably likely to result in an injury? The tanks are heavy; if one fell on a miner, it is reasonably likely to break his foot. Certainly, if a cylinder was launched and struck a miner as a projectile, injury is a near certainty. As for the fourth element, the broken bones and lacerations which could be expected from such an incident will always be considered to be reasonably serious.

The Commission explained in *PBS Coals* and *Cumberland* that the respondent in each case had conflated the terms “violation” and “hazard.”²⁴⁴ Although the words “violation” and “hazard” are indeed different, those terms

²⁴³ 30 C.F.R. § 75.1106-3 (2012) (providing that: “(a) Liquefied and nonliquefied compressed gas cylinders stored in an underground coal mine shall be: . . . (2) Placed securely in storage areas designated by the operator for such purpose, and . . . in an upright position, preferably in specially designated racks, or otherwise secured against being accidentally tipped over”).

²⁴⁴ See *Cumberland Coal Res., LP*, 33 FMSHRC at 2366; *Musser Eng’g, Inc. & PBS Coal, Inc.*, 32 FMSHRC 1257, 1280–81 (2010).

have been used interchangeably in the context of the significant and substantial analysis under *Mathies* and *National Gypsum*, as should be evident from the discussion of the cases above. Yet, in its analysis in *Cumberland*, it appears that the Commission may have confused one of the elements of the *Mathies* test. As discussed above, the second element of the *Mathies* test is whether the alleged conditions contribute to a discrete safety hazard.²⁴⁵ In rejecting *Cumberland*'s arguments that the Commission's new approach would result in nearly all violations of evacuation standards being significant and substantial, the Commission stated that "if the violations [in this case] had instead been relatively minor in nature and scope, a fact-finder may well not have found that the violations contributed to the hazard of miners being delayed in escaping from the mine in an emergency under element two of *Mathies*."²⁴⁶

While not three pages earlier in its opinion in *Cumberland* the Commission suggested that the respondent had imposed an additional burden on the Secretary not present in *Mathies*, the Commission itself imposed an additional burden with the preceding statement regarding the second *Mathies* element. In *Cumberland*, the Commission seems to have replaced the requirement of "contributing to a discrete safety hazard" with "*significantly* contributing to a discrete safety hazard."²⁴⁷ The latter, of course, is not a requirement under *Mathies*. Closer evaluation of the Commission's quoted statement above in the context of the alleged violations and particular regulatory standard cited in *Cumberland* quickly reveals this inconsistency.

The mandatory mine safety standard cited in the four violations at issue in *Cumberland* requires lifelines to be "[l]ocated in such a manner for miners to use effectively to escape."²⁴⁸ Accordingly, for there to be a violation, it is axiomatic that the lifeline must be located such that miners would not be able to use it effectively to escape. It is therefore not possible to have a violation of that standard which would not contribute in some increment to the hazard of "miners being delayed in the event of an emergency." Consequently, there can be no situation where Section 75.380(d)(7)(iv) is violated, but the conditions do not contribute to the discrete safety hazard identified earlier in this paragraph. Although that particular safety standard happens to be the one that was at issue in *Cumberland*, similar results will follow with respect to most standards in the way demonstrated through the examples above.

Also worthy of discussion is the fact that in the Commission's desire to justify its agreement with the Secretary that an emergency situation should be assumed when considering whether evacuation standards are significant and substantial, the Commission argued that to adopt the construction urged by

²⁴⁵ *Mathies Coal Co.*, 6 FMSHRC 1, 4 (1984).

²⁴⁶ *Cumberland Coal Res., LP*, 33 FMSHRC at 2368.

²⁴⁷ *See id.*

²⁴⁸ 30 C.F.R. § 75.380(d)(7)(iv) (2012).

Cumberland would lead to what it characterized as the absurd result that violations of evacuation standards would rarely be significant and substantial, and would thus defeat the purpose of the standard.²⁴⁹ This contention inherently takes the position that if a standard is unlikely to be designated significant and substantial, then it is somehow not fulfilling its purpose. It ignores several important characteristics of the Mine Act's enforcement scheme. First, once an inspector identifies a violation of an evacuation standard, or any standard, significant and substantial or not, the operator must correct the cited conditions within the abatement time set by the issuing inspector. If the operator does not abate the violation by correcting the identified condition within the prescribed time, the operator is subject to a section 104(b) withdrawal order for its failure to do so.²⁵⁰ Moreover, if a section 104(d)(1) predicate unwarrantable failure citation is in place, an inspector has the ability to issue unwarrantable failure withdrawal orders for non-significant and substantial violations if he believes that the operator is not taking its obligations regarding the evacuation standards seriously.²⁵¹ In the same vein, if an operator were not putting forth a good faith effort towards compliance, MSHA has the ability to levy significant penalties beyond the standard formulation under 30 C.F.R. § 100.5.²⁵² These special assessment powers provide MSHA with all the flexibility it needs to provide meaningful consequences for violations of evacuation standards.

Although it is unclear in exactly what way the Commission believed the standard would be rendered ineffective, its discussion of the issue implies that the significant and substantial designation is the only meaningful tool in MSHA's arsenal, which simply is not true. The only way this situation would affect the impact of violations of such evacuation standards is in their effect on the pattern of violations analysis, which is based on the incidence rates of significant and substantial violations, among other things. Even so, the pattern of violations screening takes other safety and compliance parameters into account that *would* be affected by severe non-significant and substantial violations of evacuation standards, such as the issuance of section 104(b) withdrawal orders and section 104(d) unwarrantable failure citations and orders.

²⁴⁹ *Cumberland Coal Res., LP*, 33 FMSHRC at 2366–67.

²⁵⁰ Federal Mine Safety and Health Act of 1977, Pub. L. No. 95-164, § 104(b), 91 Stat. 1290, 1300.

²⁵¹ *See id.* § 104(d).

²⁵² *Determination of Penalty Amount; Special Assessment*, 30 C.F.R. § 100.5 (2013) provides as follows:

- (a) MSHA may elect to waive the regular assessment under § 100.3 if it determines that conditions warrant a special assessment.
- (b) When MSHA determines that a special assessment is appropriate, the proposed penalty will be based on the six criteria set forth in § 100.3(a). All findings shall be in narrative form.

30 C.F.R. § 100.5.

In *Cumberland*, the Commission placed a great deal of emphasis on the fact that the violations at issue were “evacuation standards.”²⁵³ It devoted several paragraphs to discussing the legislative and regulatory history of these standards, explaining that “[e]vacuation standards are different from other mine safety standards” and are “intended to apply meaningfully only when an emergency actually occurs.”²⁵⁴ Yet, for all of its emphasis and discussion regarding the MINER Act and evacuation standards, the discussion in *Cumberland* regarding significant and substantial related to the analytical framework itself. While the potential implications of *PBS Coals* and *Cumberland* raise major concerns, it is possible to make an argument that evacuation standards should be given some kind of special consideration.

VII. THE “EVACUATION STANDARDS” OF *CUMBERLAND COAL RESOURCES*—
MAYBE THEY *SHOULD* BE TREATED DIFFERENTLY

It is not necessarily an unreasonable position to argue that for alleged violations of “evacuation standards,” the third element of the *Mathies* significant and substantial test should be evaluated in the context of an emergency. This is not the problem with *Cumberland*. As the Commission forcefully explains in *Cumberland*, “[e]vacuation standards *are* different than other mine safety standards.”²⁵⁵ Moreover, the fact that these obligations only came into existence after the passage of the 2006 MINER Act, a piece of legislation specifically enacted to increase miner safety in emergency situations, lends support to the idea that it may be appropriate to treat these obligations different in some way than other safety and health standards.

The Commission’s holding in *Cumberland* made some very reasonable and persuasive points in this regard. However, it is inaccurate to state that these standards are “intended to apply meaningfully only when an emergency actually occurs.”²⁵⁶ The existence of these standards creates an obligation for compliance at all times. Failure to achieve rapid compliance when cited by MSHA, or repeated failures to maintain compliance, can subject an operator to withdrawal orders and significant civil penalties at MSHA’s discretion. Thus, these standards apply meaningfully at all times. On the other hand, it is certainly correct to say that evacuation standards only *provide observable benefit to miners* in the event of an emergency. The Commission’s statement is akin to arguing that car insurance only protects you when you have an accident. The policy protects you as long as it is in effect; however, it only pays out when there is an accident.

²⁵³ See discussion *supra* Part III.B.

²⁵⁴ See *Cumberland Coal Res., LP*, 33 FMSHRC at 2367.

²⁵⁵ *Id.* (emphasis added).

²⁵⁶ *Id.*

Nonetheless, the two cases the Commission majority cited to support its position that it “never required the establishment of the reasonable likelihood of [an emergency] when considering whether violations of evacuation standards are [significant and substantial],” while not making the same kind of broad-based proclamation as *PBS Coals* or *Cumberland*, do give some support to this approach for evacuation standards.²⁵⁷ However, review of these cases, *Maple Creek Mining, Inc.*²⁵⁸ and *Rushton Mining Co.*,²⁵⁹ reveal that they do not stand for this proposition as clearly as the Commission suggests.

Maple Creek Mining, Inc. involved a fairly unique set of circumstances.²⁶⁰ The Maple Creek Mine had such a significant water percolation and seepage problem that the operator was pumping out between 1.2 and 2 million gallons of water *per day* to maintain production.²⁶¹ It was established that there existed in the cited escapeways a water accumulation of such a magnitude that miners would have to walk a narrow passageway along the right rib to avoid the six to seventeen inch mud and muck accumulation that existed in the remainder of the escapeway.²⁶² The judge concluded that the conditions created a hazard that would prevent miners, including those that might be carrying a stretcher, from swiftly negotiating the escapeway.²⁶³ Notably, the very shift before the subject order was issued, a miner had slipped and been injured while walking the narrow path; this was not in any sort of emergency situation.²⁶⁴ One very significant observation made by the Commission, which indeed makes the Commission’s reference in *Cumberland* to *Maple Creek* of questionable import, is that “the [j]udge found, and Maple Creek does not dispute, that the mine had been experiencing methane and ventilation problems when the withdrawal order issued.”²⁶⁵ Thus, it is quite possible that the Commission based its determination of reasonable likelihood on a combination of the pervasive nature of the conditions and the presence of circumstances which made the use of the escapeway reasonably likely. If nothing else, the reference to those circumstances suggests that the Commission felt it needed to make findings regarding whether an emergency situation was likely to occur. It is also interesting to note that the *Maple Creek* language referenced by the Commission in *Cumberland* was in relation to the

²⁵⁷ *Id.*

²⁵⁸ *Maple Creek Mining, Inc.*, 27 FMSHRC 555 (2005).

²⁵⁹ *Rushton Mining Co.*, 11 FMSHRC 1432 (1989).

²⁶⁰ *Maple Creek Mining, Inc.*, 27 FMSHRC at 556–57.

²⁶¹ *Id.* at 556.

²⁶² *Id.* at 560.

²⁶³ *Id.*

²⁶⁴ *Id.* at 563.

²⁶⁵ *Id.*

analysis of the fourth *Mathies* requirement regarding the severity of the injury, not whether an injury was reasonably likely to occur.²⁶⁶

Rushton Mining Co. involved a situation in which the operator had designated an escapeway route which MSHA alleged was not “the safest direct practical route to the nearest mine opening suitable for the safe evacuation of miners,” within the meaning of 30 C.F.R. § 75.1704-2(a).²⁶⁷ The judge agreed, finding that “the escapeway designated in order to abate the violation was [more] direct and less than one third the distance of the [operator’s] cited escapeway.”²⁶⁸ He also determined that the violation was not significant and substantial because the inspector had not been able to provide persuasive testimony regarding the hazardous nature of being forced to use the operator’s escapeway.²⁶⁹ The sole issue on appeal to the Commission was whether the judge erred in determining that the violation was not significant and substantial.²⁷⁰

The Secretary argued, much like she did in *Cumberland*, that “the seriousness of Rushton’s violation of the escapeway standard must be evaluated within the context of the occurrence of an emergency and in comparison to the escapeway subsequently designated.”²⁷¹ The Commission began by briefly summarizing its case law regarding significant and substantial.²⁷² However, not only did the Commission not directly address the Secretary’s very specific assertion that the significant and substantial analysis should be conducted assuming an emergency, but it also proceeded to find that the Secretary had failed to establish that the violation contributed to a discrete safety hazard as required to fulfill the second *Mathies* requirement.²⁷³ It explained that “the Secretary has failed to show that the distance, travel time, or any inherent qualities of the cited route posed a discrete safety hazard.”²⁷⁴ Accordingly, while the Commission did go on to *very briefly* discuss the third and fourth *Mathies* elements together at the same time, the remainder of the opinion is dicta. Even so, the language employed does actually suggest that the Commission may have looked upon the Secretary’s position regarding the assumption of an emergency favorably. In its brief discussion regarding the

²⁶⁶ *Id.* at 564 n.5. “The potential for slips and falls would therefore be even greater during a mine evacuation. Consequently, the miners’ everyday travel over the escapeway route is of little relevance to the fourth *Mathies* element.” *Id.*

²⁶⁷ *Rushton Mining Co.*, 11 FMSHRC 1432, 1433 (1989).

²⁶⁸ *Id.* at 1434.

²⁶⁹ *See id.*

²⁷⁰ *Id.* at 1435.

²⁷¹ *Id.*

²⁷² *Id.*

²⁷³ *Id.* at 1436.

²⁷⁴ *Id.*

third and fourth *Mathies* elements, the Commission did state that the Secretary failed to show that the new route posed a reasonable likelihood of injury “*in the event of an evacuation.*”²⁷⁵

Despite the above discussion of how these two cases do not completely support the Secretary’s position, the language used by the Commission therein does leave open the issue of whether an emergency situation could be assumed.

The movement to an assumption of an emergency situation for violations of evacuation standards has potential to create some significant problems for mine operators. Mines, particularly underground coal, are dynamic environments, where conditions can change very quickly. Many of the areas that are subject to these evacuation standards are only required to be examined on a weekly basis. When inspecting these areas, MSHA’s inspectors frequently accompany the examiner during his weekly examination. At that point, the examiner is traveling the area specifically to look for potential hazards in an area that has not been traveled for a week. Citations are frequently issued. As discussed above, significant and substantial violations play a central role in the application of MSHA’s pattern of violations authority.²⁷⁶ Under the *Cumberland* framework, nearly all violations of evacuation standards are going to be issued, and are likely to remain, designated as significant and substantial. What this means is that more operators are going to fulfill the pattern of violations screening criteria because of significant and substantial violations of evacuation standards.

Although there is thus some indirect support in forty years of precedent for the argument that one should assume the existence of an emergency when considering whether a violation of an evacuation standard is significant and substantial, it is crucial to note again that this is not what the Commission held in *PBS Coals* and *Cumberland*. These cases suggest that the third *Mathies* element should be considered assuming that the hazard has occurred, and were not limited to evacuation standards.

VIII. CONCLUSION

Significant and substantial is a multi-faceted legal construct with a long and varied history. All the same, it remains a central part of the Mine Act’s graduated enforcement scheme and an issue of major consequence to mine operators and practitioners in this area of the law. Although the scope of significant and substantial has stayed largely constant since the Commission’s decisions in *National Gypsum* and *Mathies*, the Commission’s recent decisions in *PBS Coals* and *Cumberland* raise questions regarding how the analysis will be conducted going forward.

²⁷⁵ *Id.* at 1437 (emphasis added).

²⁷⁶ *Id.* at 1435–38.

The test under the third *Mathies* requirement has long been interpreted to inquire as to whether an injury-producing event was reasonably likely to occur under continued normal mining operations. The Commission has explicitly stated that the test set forth in *Mathies* is still in force and that the Commission has not changed it. At the same time, the Commission has also “clarified” the distinction between the terms “hazard” and “violation,” cautioning us not to confuse the two with respect to the third *Mathies* element. This distinction suggests that rather than looking forward from the time of the violation, the question has essentially been changed to ask whether an injury is reasonably likely to occur *if the hazardous event identified in element two occurred*. Indeed, that appears to be the analysis that was conducted in the Commission’s recent decision in *Black Beauty*, which did not relate to an evacuation standard. This change represents a significant and largely unsupported departure from past jurisprudence.

Although the Commission placed a great deal of emphasis on the fact that the violations at issue in *Cumberland* related to “evacuation standards,” its discussion regarding the third *Mathies* requirement was not so limited. Rather, the language in *Cumberland*, consistent with that in *PBS Coals*, suggests general applicability. This is not to say that it would be unwarranted to apply a different analytical approach when determining whether violations of evacuation standards are significant and substantial. These standards are indeed different from other safety and health standards. Whether it might be appropriate to treat violations of evacuation standards differently from other violations, and exactly how to do so, are issues that could be discussed further.

Either the significant and substantial analysis under *Mathies* remains unchanged, or the distinction between the words violation and hazard has gained additional significance with regard to the third element. It is one or the other. If it turns out that the Commission has, in fact, changed the analysis in the way that *PBS Coals* and *Cumberland* suggest, it would effectively create a presumption of significant and substantial, *a la Alabama By-Products*. This would, in turn, result in increased civil penalties and more operators contending with the specter of the pattern of violations.