

FEDERAL MINE SAFETY AND HEALTH REVIEW COMMISSION

601 NEW JERSEY AVENUE, NW
SUITE 9500
WASHINGTON, DC 20001

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SECRETARY OF LABOR, :
MINE SAFETY AND HEALTH :
ADMINISTRATION (MSHA) :
 : Docket Nos. WEST 2002-207
v. : WEST 2002-278
 :
PLATEAU MINING CORPORATION :

BEFORE: Duffy, Chairman; Jordan, Suboleski, and Young, Commissioners

DECISION

BY THE COMMISSION:

These civil penalty proceedings, arising under the Federal Mine Safety and Health Act of 1977, 30 U.S.C. § 801 et seq. (2000) (“Mine Act”), concern two citations alleging safety violations involving the ventilation system of the Willow Creek Mine, operated by Plateau Mining Corporation (“Plateau”). 25 FMSHRC 738 (Dec. 2003) (ALJ). The Department of Labor’s Mine Safety and Health Administration (“MSHA”) issued the citations following an accident at the mine on July 31, 2000, which resulted in two fatalities and numerous injuries to miners. *Id.* at 739-40. Administrative Law Judge Richard Manning affirmed Citation No. 7143395 alleging that the ventilation system was not functioning as required by 30 C.F.R. § 75.334(b)(1),¹ and that the violation was significant and substantial (“S&S”). *Id.* at 743-57. In addition, the judge affirmed Citation No. 7143396 alleging that Plateau had failed to comply with

¹ 30 C.F.R. § 75.334(b)(1) provides:

During pillar recovery a bleeder system shall be used to control the air passing through the area and to continuously dilute and move methane-air mixtures and other gases, dusts, and fumes from the worked-out area away from active workings and into a return air course or to the surface of the mine.

its ventilation plan in violation of 30 C.F.R. § 75.370(a)(1)² but determined that the violation was not S&S. *Id.* at 757-60. Plateau filed a petition for discretionary review, challenging the judge's findings that it violated sections 75.334(b)(1) and 75.370(a)(1) and that its violation of section 75.334(b)(1) was S&S. The Commission granted the operator's petition. For the reasons that follow, the judge's determination that Plateau violated section 75.370(a)(1) is reversed, and the judge's determination that Plateau violated section 75.334(b)(1) stands as if affirmed.

I.

Factual and Procedural Background

Plateau, which was then a subsidiary of RAG American Coal, Inc., operated the Willow Creek Mine, an underground coal mine in Carbon County, Utah, until the mine was closed after the accident at issue in this case. 25 FMSHRC at 738. The mine had three operating sections: two continuous miner sections, and the D-3 longwall panel, which was the third longwall panel that had been developed at the mine. *Id.* A mine fire had occurred on the D-1 panel, the first panel mined, on November 25, 1998, after a roof fall in the worked-out area ignited methane. *Id.* at 740; Tr. 37-38. Unlike D-2, the D-3 panel would not be separated from the previous panel by a solid barrier of coal. 25 FMSHRC at 740-41. Rather, the D-3 panel immediately abutted the D-2 panel, which had been sealed off after it had been mined. *Id.* at 739. MSHA granted Plateau's petition for modification, allowing Plateau to use a two-entry system to develop the D-3 panel headgate entries.³ *Id.*; Tr. 139. The remaining one entry of the two headgate entries that had been driven to develop the D-2 panel served as the sole tailgate entry for the D-3 panel. Gov't Ex. 31, App. I.

Retreat longwall mining began on the D-3 longwall panel on July 17, 2000. 25 FMSHRC at 739; Jt. Ex. 1, Stip. 16. The face of the D-3 longwall panel was 815 feet wide and the panel

² 30 C.F.R. § 75.370(a)(1) provides in part:

The operator shall develop and follow a ventilation plan approved by the district manager. The plan shall be designed to control methane and respirable dust and shall be suitable to the conditions and mining system at the mine. The ventilation plan shall consist of two parts, the plan content as prescribed in § 75.371 and the ventilation map with information as prescribed in § 75.372.

³ The petition also allowed Plateau to use a two-entry system to mine the D-1 and D-2 panels. 25 FMSHRC at 739; Tr. 139. A two-entry system uses two entries for longwall headgate and tailgate development. Tr. 35-36. The two-entry system is used to minimize the hazards created by roof stresses. 25 FMSHRC at 741; Tr. 35, 140-41. However, this minimizes the availability of air passages provided by additional entries for the movement of air. Tr. 62, 608-09, 1207.

was projected to be about 4200 feet long. 25 FMSHRC at 739. Mining the D-3 panel presented a number of challenges because of the amount of methane liberated, the depth of the cover over the coal seam, and the resultant roof conditions, including the occurrence of roof and rib bounces. *Id.* at 740-41. In addition, mining released liquid hydrocarbons, which were roughly equivalent to 15% gasoline, 35% kerosene, and 50% light lubrication oil. *Id.* at 739, 741. The ventilation plan for the D-3 panel had been given particular attention by MSHA because of the difficult mining conditions at the mine and the D-1 panel fire in 1998. *Id.* at 740.

On the D-3 panel, behind the rubble zone of the “gob,” or the area that had been mined by the longwall, two entries ran parallel along the width of the longwall panel from headgate to tailgate. *Id.* at 741. These entries were referred to as “setup rooms” because they had been used to set up the longwall when the D-3 panel was being prepared for mining. *Id.* Once mining began, the setup room closest to the longwall shields (the “No. 1” or “outby” setup room) became part of the rubble zone.⁴ *Id.*; Tr. 45.

The panel was ventilated by a flow-through bleeder system with multiple bleeder entries at the rear of the panel. Tr. 46. In a flow-through bleeder system, air flows through the worked-out area into the bleeder system, and the bleeder entries are separate from the worked-out area. *Id.* A blowing fan installed on the surface forced approximately 850,000 cubic feet per minute (“CFM”) of air into the mine. Tr. 40.

Immediately behind the No. 2 setup room, the setup room farthest from the longwall shields, there were two L-shaped crosscuts (referred to as “doglegs”), one on the headgate side and one on the tailgate side. 25 FMSHRC at 741; Gov’t Ex. 31, App. I. The headgate dogleg connected the No. 1 headgate entry with the No. 2 setup room. 25 FMSHRC at 741; Tr. 45, 70. The tailgate dogleg connected the No. 2 tailgate entry with the No. 2 setup room. Gov’t Ex. 31, App. I. Behind the doglegs and setup rooms was a block of coal. 25 FMSHRC at 741. Behind the block of coal were three bleeder entries, which ran parallel to the longwall face. *Id.* The No. 1 bleeder entry, farthest from the longwall shields, was used to bring intake air to a sump pump at the back of the bleeders.⁵ *Id.* The other two bleeder entries were return entries. *Id.*

The ventilation plan included three alternative methods for ventilating the D-3 panel. *Id.* The approved method being used on July 31 ventilated the panel by forcing air across the longwall face from the headgate to the tailgate. *Id.* Intake air was brought to the face from the No. 2 entry of the headgate through the last open crosscut. *Id.* After the air ventilated the face, it

⁴ On the map attached to the judge’s decision, the judge mislabeled the No. 2 setup room as the “No. 1 setup room,” and mistakenly referred to the No. 2 setup room as the No. 1 setup room and vice-versa, throughout his decision (*see, e.g.*, 25 FMSHRC at 741, 752, 758). P. Br. at 3 n.3; Tr. 45, 70. The error was harmless, however.

⁵ The pump operated to keep water from accumulating in the bleeder entries. 25 FMSHRC at 742; Tr. 46-47.

was coursed through the tailgate inby toward the bleeder entries and passed through Measuring Point Locations (“MPLs”) 7 and 8. *Id.* at 741-42. A small amount of the intake air from the No. 2 entry of the headgate entered the last open crosscut and was directed out through the No. 1 headgate entry, which was the belt entry. *Id.* at 742. Intake air also traveled from the No. 2 headgate entry directly to the bleeders through MPLs 5 and 6. *Id.* In addition, intake air traveled up the No. 2 tailgate entry, joined with the air that had ventilated the face, and then was coursed through MPLs 7 and 8. *Id.*

Intake air traveled through the gob area through various ventilation pathways. *Id.*; Gov’t Ex. 3. Air flowed out of the rubble zone into the setup rooms, and then to the tailgate side and through the regulators at MPLs 7 and 8. 25 FMSHRC at 742. Intake air also entered the No. 1 setup room from the headgate through a regulator at MPL 4, which was between the Nos. 1 and 2 headgate entries. *Id.* Intake air traveled up the No. 1 headgate entry, inby the longwall shields, through a hole in an undercast (sometimes referred to in the transcript as an “overcast”) built at the intersection of the No. 1 entry with the No. 2 setup room, through the regulators at MPLs 7 and 8, and into the bleeder entries. *Id.* Air from the longwall panel entered the bleeder entries at MPLs 5, 6, 7, and 8 and traveled approximately 8,000 feet, where the bleeder air joined another split of air just outby MPLs B1, B2 and B3.⁶ 25 FMSHRC at 746 n.6, 749. MPL B1 was designated as a measuring point under 30 C.F.R. § 75.323(e).⁷ *Id.* at 748, 749.

Seals were constructed to separate the Nos. 1 and 2 headgate entries once the longwall retreated outby each crosscut. *Id.* at 742. The ventilation system was not designed to course air from the headgate side of the gob back into the headgate entries to the bleeders. *Id.* This is because the headgate portion of the gob was the lowest elevation, and methane, which is lighter than air, would tend to migrate to the tailgate side of the gob. *Id.*

The approved plan also required the use of an automated atmospheric monitoring system (“AMS”). *Id.* at 743. This system was designed to provide instantaneous information about the mine’s ventilation system by giving information on air velocities, as well as methane, oxygen, and carbon monoxide levels. *Id.* AMS sensors were installed at MPL 1 (the tailgate intake to the longwall), MPL 5 (the headgate No. 2 entry bleeder connector regulator), MPL 6 (headgate No. 1 entry bleeder connector regulator), MPL 7 (tailgate No. 2 entry bleeder connector regulator), MPL 8 (tailgate No. 1 entry bleeder connector regulator) and MPL B1 (D-1 tailgate No. 1 entry near the D Northeast Mains). Gov’t Ex. 31 at 21.

⁶ MPLs B1 and B2 were located between crosscuts 6 and 7 in the D-1 tailgate Nos. 1 and 2 entries, which now formed part of the bleeder for D-3, and MPL B3 was located between crosscuts 6 and 7 in the No. 3 entry of the D seam bleeders. Gov’t Ex. 31 at 20.

⁷ Section 75.323(e) provides in part that “[t]he concentration of methane in a bleeder split of air immediately before the air in the split joins another split of air . . . shall not exceed 2.0 percent.” 30 C.F.R. § 75.323(e).

Plateau had an internal protocol which required certain actions when various levels of methane were measured at designated locations. P. Ex. 15. When methane measured 4% at MPLs 7 and 8, the operator was to cease longwall production. 25 FMSHRC at 746; P. Ex. 15; Gov't Ex. 31 at 21. At 4.5% methane, the mine was to be evacuated. 25 FMSHRC at 746; Gov't Ex. 31 at 21; P. Ex. 15. When methane measured 1.95% at MPL B1, the operator was to cease production until methane levels decreased to 1.75%. Tr. 1052; Gov't Ex. 31 at 21. If methane exceeded 2%, the operator was to "shut down and make corrections," while at 2.5%, the operator was to evacuate the mine. Tr. 1052.

On July 31, 2000, mining on the D-3 panel had progressed approximately 250 feet. 25 FMSHRC at 741. Plateau was expecting to intersect the first gob vent borehole, which was designed to remove methane from the gob, in approximately 100 feet. *Id.* at 742; Tr. 1005, 1057-58. At approximately 10:14 p.m., the longwall de-energized as it approached the tailgate on its third clean-up pass. 25 FMSHRC at 739. The crew re-energized the longwall after 42 minutes at 10:56 p.m. *Id.* Later that evening and into the following morning, a series of events in the worked-out areas of the D-3 longwall panel resulted in numerous injuries to miners, including two fatal injuries. Jt. Ex. 1, Stip. 17. The operator and the Secretary of Labor differ in their explanations of the events.

The Secretary believes that at 11:48 p.m., a relatively small roof fall occurred on the headgate side of the gob, between the longwall face and the setup rooms. 25 FMSHRC at 739. The fall ignited a small pocket of methane and other gaseous hydrocarbons. *Id.* The flame traveled inby to a small methane accumulation in the gob near the setup rooms, which resulted in the first explosion. *Id.* The miners believed that the forces they felt occurred because the gob experienced its first major cave of the roof. *Id.* The first event disrupted ventilation at the longwall, which prevented methane from being removed from the gob through the bleeder entries. *Id.* As liquid hydrocarbons became involved in the fire, two subsequent explosions occurred. *Id.* After the second explosion, miners were ordered to evacuate. *Id.* at 739. At approximately 12:17 a.m. on August 1, a fourth explosion occurred. *Id.* at 740.

Plateau believes that at about 11:48 p.m., the shearer was stopped on the headgate side of the face while Shield No. 1 was advanced. *Id.* At that time, there was a significant cave of the roof in the gob. *Id.* The large roof fall ignited hydrocarbons. P. Post-Hr'g Br. at 17. In addition, the roof fall likely disrupted ventilation in the panel, which permitted methane to come into contact with the hydrocarbon fire and caused the subsequent explosions. *Id.* at 15; 25 FMSHRC at 740.

After an investigation, MSHA issued Citation No. 7143395 alleging a violation of section 75.334(b)(1), Citation No. 7143396 alleging a violation of section 75.370(a)(1), and other citations which are not the subject of these proceedings. 25 FMSHRC at 738 n.1, 763. In Citation No. 7143395, the Secretary stated that the bleeder system's effectiveness was impaired by a limited mine ventilating potential, the configuration and distribution of airflow in the bleeder system and worked-out areas, and temporary controls installed within the worked-out

area that restricted airflow. *Id.* at 743; Gov't Ex. 2. The temporary controls that allegedly restricted airflow included check curtains in the crosscuts between the setup rooms, a curtain in the headgate dogleg, and the undercast in the intersection of the No. 1 headgate entry and the No. 2 setup room. 25 FMSHRC at 751. Citation No. 7143396 alleged that Plateau violated section 75.370(a)(1) because the temporary controls were left intact after retreat mining commenced but were not shown on the longwall start-up ventilation plan approved on July 7, 2000. *Id.* at 757; Gov't Ex. 4. Plateau challenged Citation Nos. 7143395 and 7143396, and the matter proceeded to hearing before Judge Manning.

As to Citation No. 7143395, the judge determined that Plateau was not controlling air passing through the gob so as to continuously dilute and move methane-air mixtures and other gases from the gob into the bleeders as required by section 75.334(b)(1). 25 FMSHRC at 745, 763. The judge found that the Secretary failed to prove two of three reasons that she argued demonstrated a violation of the standard, namely, that Plateau was improperly distributing air through the gob (*id.* at 750-51), and that temporary ventilation controls restricted air flow in the gob (*id.* at 751-53). The judge determined, however, that the Secretary proved a violation of section 75.334(b)(1) because the ventilation system was overextended and could not handle the levels of methane liberated. *Id.* at 751. In so concluding, the judge relied upon evidence that methane levels increased (*id.* at 746-47), that the measuring point under section 75.323(e) showed artificially low methane readings (*id.* at 748-49), and that the accident was caused by the ignition of a small pocket of methane-air mixture that had accumulated on the headgate side of the rubble zone. *Id.* at 753-54. The judge further concluded that the operator could violate section 75.334(b) even if it complied with its ventilation plan, and that Plateau should have been on notice that its bleeder system was not functioning properly on July 31. *Id.* at 746. The judge held that the violation was S&S and assessed a civil penalty of \$25,000, the amount proposed by the Secretary. *Id.* at 757, 763.

As to Citation No. 7143396, the judge determined that Plateau had violated section 75.370(a)(1) by failing to comply with its ventilation plan but determined that the violation was not S&S.⁸ *Id.* at 758-60. In so holding, the judge rejected the Secretary's theory that two of the three temporary ventilation controls, namely, the curtains in the setup rooms and the curtain in the dogleg, violated Plateau's ventilation plan. *Id.* at 758. However, he agreed that the undercast violated the ventilation plan because it functioned as a regulator, and Plateau had failed to seek modification of the plan to include the undercast. *Id.* at 759. The judge assessed a penalty of \$1,000 rather than the penalty of \$20,000 proposed by the Secretary. *Id.* at 760, 763; Pet. for Assess. of Pen.

⁸ In concluding that the violation was not S&S, the judge determined that the Secretary failed to prove that Plateau's failure to completely remove the undercast contributed to the explosions. 25 FMSHRC at 760.

II.

Disposition

A. Citation No. 7143396, Section 75.370(a)(1)⁹

Plateau argues that the judge erred in finding a violation of section 75.370(a)(1) because Plateau's ventilation plan did not depict the undercast. P. Br. at 30-33. It asserts in part that there is no evidence that the undercast inhibited airflow. *Id.* at 31. Plateau submits that the judge's finding that the undercast should have been shown in the ventilation plan as a regulator is also erroneous because the undercast did not function as a regulator. *Id.* The Secretary responds that the judge's finding of violation should be affirmed. S. Br. at 45-50.

Section 75.370(a)(1) provides in part that an "operator shall develop and follow a ventilation plan approved by the district manager." 30 C.F.R. § 75.370(a)(1). A ventilation plan is required to specify the "location of ventilating devices such as regulators, stoppings and bleeder connectors used to control air movement through the worked-out area." 30 C.F.R. § 75.334(c)(4); *see also* 30 C.F.R. § 75.371(bb).

The undercast was located in by the longwall shields at the intersection of the No. 1 headgate entry and the No. 2 setup room. 25 FMSHRC at 742; Tr. 51, 70. The undercast was part of the approved ventilation plan during longwall setup and continuous miner development in the D-3 panel and was originally constructed to separate air coursing into the No. 2 setup room from air coursing over the undercast. Tr. 736, 1035-36; J. Ex. 3. The amended ventilation plan, which was approved on July 7, 2000 and applied to the startup of longwall mining in the D-3 panel, did not include the undercast. 25 FMSHRC at 758; S. Br. at 46; Tr. 110-12; Gov't Ex. 5; Jt. Ex. 1.

We conclude that the judge erred in determining that Plateau should have sought to modify the July 7 ventilation plan to include the undercast as a ventilation device used to control air movement through the worked-out area. 25 FMSHRC at 759. It is undisputed that Plateau created a 3 by 4 foot hole in the undercast in order to allow water and air to travel through the undercast.¹⁰ *Id.* at 759; Tr. 496, 620, 1038-41. It is also undisputed that MSHA's computer simulations showed that, as a statistical matter, the breached undercast would have no significant

⁹ Commissioner Jordan dissents from Part II.A of this opinion. *See slip op.* at 20-22.

¹⁰ At the time of the citation, MSHA mistakenly believed that the hole in the undercast was smaller than 3 feet by 4 feet. Tr. 620, 675, 1321. MSHA stated in part that the undercast had been "left intact" in the citation issued to Plateau for failing to include the undercast in its July 7 ventilation plan. Gov't Ex. 4.

effect on the movement of air through the worked-out area.¹¹ Tr. 633-35, 638, 1184, 1321; Gov't Exs. 28, 29. Moreover, it is undisputed that the breached undercast no longer functioned as an undercast to separate air courses. 25 FMSHRC at 759; Tr. 192, 496, 1041-42, 1267. Accordingly, the breached undercast no longer constituted a “ventilating device[] . . . used to control air movement through the worked-out area.” 30 C.F.R. § 75.334(c)(4).¹²

Furthermore, the judge erred in characterizing the breached undercast as a regulator. 25 FMSHRC at 759. The Commission has recognized that the term “regulator” means “a door, of any size, located in a stopping” which “can be opened or closed as needed.” *VP-5 Mining Co.*, 15 FMSHRC 1531, 1532 n.3 (Aug. 1993) (citing Am. Geological Institute, *Dictionary of Mining, Mineral, and Related Terms* (“DMMRT”) 910 (1968); see also DMMRT 451 (2d ed. 1997) (“Regulators are usually set in doors as adjustable, sliding partitions that can be varied to the desired opening.”). The breached undercast had no such capability of adjustment. In fact, during a ventilation technical evaluation of the D-3 panel that took place on July 26, five days before the accident, MSHA Field Office Supervisor Gene Ray took oxygen and methane readings at the breached undercast without recognizing the breached undercast as a regulator that should have been included in Plateau’s ventilation plan. Tr. 487-88, 494-96, 865, 873, 875-76.

Accordingly, because the breached undercast did not function as a ventilation device that controlled air through the worked-out area, we reverse the judge’s determination that Plateau violated section 75.370(a)(1) by failing to seek modification of its plan to allow the breached undercast to remain in place. We therefore vacate Citation No. 7143396 and the penalty assessed by the judge.

B. Citation No. 7143395, Section 75.334(b)(1)

Plateau argues that its bleeder system complied with the requirements of section 75.334(b)(1) and that the judge erred in finding a violation. P. Br. at 13, 18-19. It maintains that the judge erred in interpreting the standard to prohibit methane accumulations in a gob, and that the judge’s conclusion that its ventilation system was overextended is not supported by substantial evidence. *Id.* at 13-30. Plateau asserts that the judge also erred by relying upon a misinterpretation of section 75.323(e) and in concluding that a violation of section 75.334(b)(1)

¹¹ Although two of MSHA’s witnesses stated that they believed the undercast would have impacted airflow, they acknowledged that the computer simulations did not show a significant impact on airflow caused by the breached undercast. Tr. 635, 1321.

¹² Our dissenting colleague effectively interprets the regulatory language that a plan is required to specify devices “used to control air movement” to mean that a plan must depict any device that might affect air flow, even to an insignificant degree. Slip op. at 21-22. Such an overly broad interpretation essentially ignores the “used to control air movement” language and would appear to encompass within the regulatory parameters such things as mining equipment left in an area that might have a de minimus impact on airflow.

could exist even if the operator complied with its ventilation plan. *Id.* at 18-23, 26. Finally, Plateau submits that section 75.334(b)(1) does not provide criteria for determining the effectiveness of a bleeder system, and that the judge's finding that Plateau knew or should have known that its system was not functioning effectively was not supported by substantial evidence. *Id.* at 14, 24-25, 26.

The Secretary responds that the judge's determination that Plateau violated section 75.334(b)(1) should be affirmed. S. Br. at 50. She states that the judge properly accepted her interpretation of the standard that methane must not be allowed to accumulate in the gob, and that such an interpretation is supported by the standard's plain language, the legislative history and purpose of the underlying statutory provision, and Commission precedent. *Id.* at 14-23. The Secretary maintains that the judge properly determined that a violation of section 75.334(b)(1) could exist even if an operator were in compliance with its ventilation plan and that the operator's contrary contention would render section 75.334 superfluous. *Id.* at 23-26. She submits that the judge did not misinterpret, or even interpret, section 75.323(e) and properly relied on the standard in determining that the operator violated section 75.334(b)(1). *Id.* at 26-32. The Secretary asserts that substantial evidence supports the judge's findings that the operator violated section 75.334(b)(1) and that the operator had notice that the bleeder system was not functioning properly. *Id.* at 32-45.

Section 75.334, entitled, "Worked-out areas and areas where pillars are being recovered," sets forth, in part, ventilation requirements for such areas, the circumstances under which such areas must be sealed, and ventilation plan requirements. 30 C.F.R. § 75.334. Section 75.334(b)(1) requires that during pillar recovery, a bleeder system shall be used "to control the air passing through the area and to continuously dilute and move methane-air mixtures . . . from the worked-out area away from active workings and into a return air course or to the surface of the mine." 30 C.F.R. § 75.334(b)(1). Section 75.334 is derived from section 303(z)(2) of the Mine Act, 30 U.S.C. § 863(z)(2). The purpose of section 303(z)(2) of the Mine Act "is to require bleeder systems continuously to dilute, render harmless, and carry away methane effectively within the bleeder system and to protect active workings from the hazards of methane accumulations." *RAG Cumberland Res., LP*, 26 FMSHRC 639, 647 (Aug. 2004), *aff'd sub nom. Cumberland Coal Res., LP v. FMSHRC*, No. 04-1427, 2005 WL 3804997 (D.C. Cir. Nov. 10, 2005) (unpublished).

The Commission has recognized that although section 75.334(b)(1) does not literally set forth a requirement that a bleeder system shall function effectively, such a requirement is implicit in the standard's language and underlying purpose. *Id.* Thus, consistent with its underlying statutory purpose, the Commission has read section 75.334(b)(1) to require a bleeder system "to control air passing through the area and continuously to dilute and move methane-air mixtures away from active workings and into a return or to the surface in an effective manner." *Id.* That is, "a bleeder system must effectively ventilate the area within the bleeder system and protect active workings from the hazards of methane accumulations." *Id.*

Section 75.334(b)(1) is broadly worded, and the concept of “effectiveness” is a general one. As the Commission has previously observed, however, “[m]any standards must be ‘simple and brief in order to be broadly adaptable to myriad circumstances.’” *Alabama By-Products Corp.*, 4 FMSHRC 2128, 2130 (Dec. 1982), quoting *Kerr-McGee Corp.*, 3 FMSHRC 2496, 2497 (Nov. 1981). Nevertheless, such broad standards must afford reasonable notice of what is required or proscribed. *Alabama By-Products*, 4 FMSHRC at 2129. When faced with a challenge that a safety standard fails to provide adequate notice of prohibited or required conduct, the Commission has applied an objective standard, the “reasonably prudent person test.”¹³ *BHP Minerals Int’l Inc.*, 18 FMSHRC 1342, 1345 (Aug. 1996). The appropriate test “is not whether the operator had explicit prior notice of a specific prohibition or requirement, but whether a reasonably prudent person familiar with the mining industry and the protective purposes of the standard would have recognized the specific prohibition or requirement of the standard.” *Ideal Cement Co.*, 12 FMSHRC 2409, 2416 (Nov. 1990). The Commission has recognized that various factors that bear upon what a reasonably prudent person would do include accepted safety standards in the field, considerations unique to the mining industry, and the circumstances at the operator’s mine. *BHP*, 18 FMSHRC at 1345.

Commissioners are evenly divided regarding whether the judge correctly determined that Plateau violated section 75.334(b)(1). Commissioners Jordan and Young would affirm the portion of the judge’s decision holding that Plateau violated section 75.334(b)(1). Chairman Duffy and Commissioner Suboleski would vacate the judge’s determination of violation and remand for further proceedings. The effect of the split decision is to allow the judge’s affirmation of Citation No. 7143395 and assessment of penalty to stand. See *Pa. Elec. Co.*, 12 FMSHRC 1562, 1563-65 (Aug. 1990), *aff’d on other grounds*, 969 F.2d 1501 (3d Cir. 1992). The separate opinions of the Commissioners follow.

III.

Separate Opinions of the Commissioners

Commissioner Young, in favor of affirming the judge’s determination that Plateau violated section 75.334(b)(1):

A. Interplay between 30 C.F.R. §§ 75.370(a) and 75.334(b)

Although the Commission has determined that Plateau did not violate 30 C.F.R. § 75.370(a)(1) by failing to seek modification of its ventilation plan to incorporate the breached

¹³ In *RAG Cumberland*, the operator did not argue that it failed to receive adequate notice that section 75.334(b)(1) applied to the cited conditions but merely submitted that reading the standard to require adequate dilution could “potentially deprive operators of due process notice.” 26 FMSHRC 647 n.14. In contrast, Plateau has raised the issue of notice. P. Br. at 14, 24-25, 26.

undercast, I would reject Plateau's assertion that such a holding precludes the Commission from finding that Plateau violated section 75.334(b)(1).

Ventilation regulations and ventilation plan provisions were designed to recognize that mine ventilation is a dynamic process. The provisions of section 75.334 set forth a level of safety required at all mines, while ventilation plan provisions specify precautions and practices applicable to the particular conditions at a mine. 57 Fed. Reg. at 20,868, 20,900 (May 15, 1992). Such plan provisions are not limited to implementing the substantive provisions of the Secretary's ventilation regulations, but may provide for protection in addition to the standards they implement. *See C.W. Mining Co.*, 18 FMSHRC 1740, 1745 (Oct. 1996) (stating that roof control plan provisions are not limited to implementing regulations).

The Commission has previously held that compliance with a mine's roof or dust control plan does not preclude a finding of violation of the underlying roof or dust control regulations. *See, e.g., Southern Ohio Coal Co.*, 10 FMSHRC 138, 140-41 (Feb. 1988) (concluding that compliance with an approved roof control plan is not controlling for purposes of determining compliance with roof control regulation); *Utah Power & Light Co.*, 12 FMSHRC 965, 969 (May 1990), *aff'd*, 951 F.2d 292 (10th Cir. 1991) (concluding that compliance with the terms of a dust control plan does not preclude a finding that an operator violated the terms of a dust control regulation). Similarly, an operator cannot avoid a finding of violation of section 75.334(b)(1) by arguing that it was complying with the provisions of its ventilation plan. Rather, an operator is required to comply with ventilation plan provisions, which encompass conditions specific to a mine, in addition to the more general requirements of section 75.334, which establish a general baseline which all mines must meet. Conditions in a mine may change unexpectedly so that compliance with specific ventilation plan provisions may not necessarily assure that the general protections imposed by ventilation regulations are being met. Thus, an operator is required to address its bleeder system if the bleeder system is not effectively controlling air through the worked-out area as required by section 75.334, even if the operator is complying with the terms of its ventilation plan. Tr. 698. Accordingly, I would affirm the judge's determination that an operator may be found to have violated section 75.334(b)(1) even though it has not violated its ventilation plan. 25 FMSHRC at 746.

B. Violation of section 75.334(b)(1)

1. Substantial evidence

I would affirm the judge's determination that Plateau violated section 75.334(b)(1). I find substantial evidence in the record to support the judge's conclusion that Plateau's bleeder system failed to effectively ventilate the worked-out area of the D-3 panel as required by section 75.334(b)(1). In particular, as discussed below, in the context of unusually challenging mining conditions, the mine ventilation system was operating with a "limited mine ventilating potential," methane levels were increasing and had exceeded a regulatory limit at MPL B1. Additionally, readings at MPL B1 were artificially low. The record supports the judge's conclusion that the

bleeder system was not adequate to overcome these challenges as Plateau proceeded to increase production, and that the resultant conditions led to an ignition, several explosions and multiple fatalities.

The judge's findings of fact must be analyzed through the lens of the statutory substantial evidence test. 30 U.S.C. § 823(d)(2)(A)(ii)(I). Under this test, the Commission may not "substitute a competing view of the facts for the view [an] ALJ reasonably reached." *Donovan ex rel. Chacon v. Phelps Dodge Corp.*, 709 F.2d 86, 92 (D.C. Cir. 1983). The fact that evidence in the record may support a position adverse to the judge's decision is not determinative. Rather, the Commission's review is statutorily limited to whether the judge's findings of fact were supported by "such relevant evidence as a reasonable mind might accept as adequate to support [the judge's] conclusion." See, e.g., *Jim Walter Res. Inc.*, 19 FMSHRC 1761, 1767 n.8 (Nov.1997) (citing *Rochester & Pittsburgh Coal Co.*, 11 FMSHRC 2159, 2163 (Nov. 1989)). The Commission has recognized that it is for the judge in the first instance, not the Commission on review, to make inferences and findings based on record evidence. *Harlan Cumberland Coal Co.*, 20 FMSHRC 1275, 1283 (Dec. 1998).

Mining the D-3 panel presented a number of extraordinary challenges. Mining liberated large quantities of methane and released liquid hydrocarbons, and the liquid hydrocarbons in turn created hydrocarbon vapors. 25 FMSHRC at 739, 740-41. The depth of the ground cover over the coal seam resulted in stresses during mining, such as roof and rib bounces. *Id.* at 740-41. In addition, Plateau used a two-entry system to develop the D-3 panel headgate entries. *Id.* at 739. A two-entry system provides fewer entries through which air can flow than a system with a greater number of entries. Tr. 62, 608-09, 1207. This increases the demands placed on the available entries. Tr. 62; . This combination of factors can compound the hazards in the mine. A little more than two years prior to the subject accident, the mine had experienced an explosion in the D-1 panel, which also used a two-entry system, after a roof fall in the worked-out area ignited methane. 25 FMSHRC at 739; Tr. 37-38.

Ventilating the D-3 panel also presented challenges that had not previously been experienced at the mine. The D-3 panel was the first panel at the mine that would not be separated from the previous panel by a solid barrier of coal. 25 FMSHRC at 740-41. Rather, the D-3 panel immediately abutted the D-2 panel. *Id.* at 739. Because of this design, the No. 2 headgate entry of the D-2 panel served as the sole tailgate entry for the D-3 panel. Gov't Ex. 31, App. I. The No. 1 tailgate entry of the D-3 panel was sealed as part of the gob of the D-2 panel. *Id.* The No. 1 entries of the D-1 and D-2 panels had not been similarly sealed at the time that those panels had been mined. Tr. 1207. Thus, as Plateau's witness, Robert Derick, an expert in ventilation and mine fires, testified, the "D-3 was really the beginning of the challenging future." Tr. 1207-08.¹

¹ The record shows that the estimated methane capacity of the D-3 panel was based on the range of concentrations that the mine experienced on the D-1 and D-2 panels. Tr. 1001-02. Given the critical differences between the panels, as discussed above, it would appear that

Confronted by these difficult circumstances, it appears that there was a “limited mine ventilating potential.” Gov’t Ex. 2 (Citation No. 7143395); Tr. 106-07. Kerry Hales, Plateau’s mine manager (Tr. 731-32) and Stephan Jones, one of the mine’s engineers (Tr. 769), agreed that the mine fan was operating at capacity and that no additional air could be added to the system. Tr. 762, 799. In addition, the regulators at MPLs 7 and 8, the point where all airflow left the gob and entered the No. 3 bleeder entry, were wide open. Tr. 606, 798-99. Thus, there was no capacity to induce more airflow through those regulators. Tr. 606, 799. Mine Manager Hales acknowledged that without the gob vent boreholes or horizontal degassing system in place, the system had reached its maximum capacity for methane dilution and dispersal.² Tr. 762.

It is also undisputed that in the days prior to the subject accident methane liberation increased at the D-3 panel as longwall mining increased. 25 FMSHRC at 746. On July 19, three days after mining began on the panel, methane measured between 0.5% and 1% at MPLs 7 and 8. 25 FMSHRC at 746; Gov’t Ex. 31 at 27, Fig. 3. Between July 25 and 30, methane levels at MPLs 7 and 8 averaged around 1.5%, although levels reached 3% on July 24 at MPL 8. 25 FMSHRC at 746; Gov’t Ex. 31, Fig. 3. On July 31, methane at MPL 7 was measured between 2.5 and 3.0%, and was measured at 3.5% at MPL 8. *Id.*

Methane liberation also increased at MPLs B1, B2, and B3, the location where airflow was measured from the D seam bleeders and the D-1 tailgate. Gov’t Ex. 31 at 20, 27. On July 18 and 19, methane was measured at MPL B1, MPL B2 and MPL B3 at approximately 2.5 million cubic feet per day (“CFD”). 25 FMSHRC at 747; Gov’t Ex. 31 at 27. On July 25 and 26, 2000, methane liberation was measured at approximately 6.34 million CFD, and on July 31, methane liberation had increased to over 7 million CFD. 25 FMSHRC at 746-47; Gov’t Ex. 31 at 27.

methane liberation and the capacity of the panels would be inappropriate for comparison. Moreover, as noted by the Secretary (S. Br. at 43), there was no evidence admitted regarding the reliability of the studies used by Plateau to estimate capacity. Although a finding regarding the methane capacity of the D-3 panel would have been relevant, given this evidence, the judge’s failure to make such a finding is of no avail.

² While my colleagues contend that the ventilation system was operating well within its capacity (slip op. at 26-28 & n.7), I view this admission by Plateau’s mine manager to be highly probative and amply supported by the record. It also appears that Plateau did not promptly cease production, but that the exceedances occurred while production was idle and prompted no investigation or action by Plateau. *See* Gov’t Ex. 31 at 21, 30; Tr. 103, 107, 164, 762, 793, 802, 812.

There were also increased methane readings at MPL B1, the section 75.323(e) measuring point.³ Gov't Ex. 31, Fig. 3. On July 19, methane at MPL B1 measured between 0.5% and 1.0%. *Id.* On July 21, methane averaged between 1 and 1.5% at MPL B1. *Id.*; 25 FMSHRC at 746. On July 31, 2000, the action level at MPL B1 was exceeded on at least 2 occasions. 25 FMSHRC at 748; Gov't Ex. 31 at 21 and Fig. 3; Tr. 164, 1252; P. Br. at 24. The first exceedance occurred at approximately 2:48 a.m. and lasted 11 minutes, while the second exceedance occurred at 3:33 a.m. and lasted approximately 40 minutes. Tr. 164; Gov't Ex. 31 at 21. It is undisputed that, although both measurements exceeded the action level of 1.95%, one measurement also exceeded the 2% limit set forth in section 75.323(e). 25 FMSHRC at 746; Gov't Ex. 31, Fig. 3; P. Br. at 19-20.

The judge credited the testimony of John Urosek, the chief of the ventilation division in MSHA's Pittsburgh Safety and Health Technology Center (Tr. 533-34), that the methane readings obtained at MPL B1 were artificially low as the result of fresher air leaking into the system. 25 FMSHRC at 748. Urosek testified that on July 31, methane at MPLs 7 and 8 averaged about 3%. *Id.*; Tr. 598-99, 655. He stated that the methane measured was less than 2% by the time the airflow reached MPL B1 because the airflow from the worked-out area was diluted before it reached MPL B1. Tr. 599-601; 25 FMSHRC at 748. Urosek explained that there was a significant amount of leakage between the No. 1 bleeder entry, which brought intake air to the sump pump, and the No. 2 bleeder entry which carried air from the gob to MPL B1. 25 FMSHRC at 748; Tr. 599-601, 641, 1370-74. I see no basis to overturn the judge's credibility determination. *See Farmer v. Island Creek Coal Co.*, 14 FMSHRC 1537, 1541 (Sept. 1992) (a judge's determinations may not be overturned lightly); *Penn Allegh Coal Co.*, 3 FMSHRC 2767, 2770 (Dec. 1981) (a judge's credibility determinations are entitled to great weight).

The judge's findings are also supported by other substantial evidence in the record. MSHA Supervisory and Special Investigator Gary Wirth estimated the amount of leakage to be approximately 50,000 CFM. 25 FMSHRC at 748; Tr. 101; Gov't Ex. 31 at 22. In addition, intake air that came from the No. 2 headgate entry through MPLs 5 and 6 provided a sweetener by entering the No. 3 bleeder entry without ventilating the worked-out area. Tr. 48-50; 25 FMSHRC at 748. Wirth also testified that the intake air that coursed up the No. 2 tailgate entry traveled through MPLs 7 and 8 without ventilating the worked-out area, and thus provided a sweetening effect. Tr. 81-84.

Based on the record, the judge found that if this sweetening effect had not occurred, methane levels at the 75.323(e) measuring point would have been above 2% on a fairly regular basis beginning on July 30. 25 FMSHRC at 748; Tr. 50, 83, 100-01, 601-02. Urosek testified that after the airflow traveled through MPLs 7 and 8, it was diluted to a range between 2.3 and

³ Section 75.323(e) provides in part that the concentration of methane in a bleeder split of air immediately before the air in the split joins another split of air shall not exceed 2%. 30 C.F.R. § 75.323(e).

2.6%, and that if there had been no leakage, readings at MPL B1 would also have been between 2.3 and 2.6%.⁴ 25 FMSHRC at 748; Tr. 599.

Monitoring the methane levels at a section 75.323(e) measuring point is critical to evaluating the effectiveness of a bleeder system. 25 FMSHRC at 748-49; Tr. 1370. As Urosek also testified, the readings at MPL B1 were critical to evaluating the effectiveness of the D-3 panel's bleeder system because the amount of methane at such locations indicates whether there is enough airflow in the system. *Id.* He explained that more than 2% methane indicates that the system needs to be changed and either needs more airflow or less methane. Tr. 595, 652, 1370-71. Urosek stated that section 75.323(e) measuring points are designed so that an operator can detect small changes or trends of increasing methane and make changes and adjustments before the 2% level is exceeded. Tr. 1389. He observed that, prior to the accident, measurements at MPL B1 showed a trend of increasing methane indicating that adjustments and changes needed to be made. Tr. 1389-90. Plateau's president, John DeMichiei, acknowledged that if methane exceeded 2% at a 75.323(e) evaluation point, the situation might reflect an inadequate bleeder system and should be addressed. Tr. 1288. Plateau's general manager at the mine, Charles Burggraf, also acknowledged that if methane exceeded 2%, the mine "would have to shut down and make corrections." Tr. 979, 1052. Of course, any correction would have required Plateau to investigate the exceedance of the 2% methane level, an occurrence that should have borne some urgency, given the increasing methane trend and the challenging circumstances involved in mining the D-3 panel. Nonetheless, it appears that Plateau did not take measures to investigate the cause or effect of the exceedance of the 2% limit at MPL B1, or to make adjustments to its system. Tr. 762, 802.

In fact, it appears that Plateau proceeded to accelerate production, as planned, which could only increase, rather than decrease, methane levels. It is undisputed that the liberation of methane spiked at times that production was high and decreased during idle periods. 25 FMSHRC at 746; Gov't Ex. 31 at 28, Fig. 4; Tr. 89, 195. Mine Manager Hales and Mining Engineer Jones testified that while the increasing trend in methane in late July had been noticed, the only response that the mine could take, given that maximum ventilation capacity had been reached, was to slow down or cease production. Tr. 762, 793, 802, 812. Nonetheless, Plateau

⁴ The last recorded airflow at MPLs 7 and 8 prior to the accident was approximately 185,600 CFM of air. Gov't Ex. 31 at 22. Wirth testified that three small splits entered the bleeder system but did not ventilate the gob, namely, a split from the No. 2 intake entry that entered the bleeder system at MPL 5 (5,200 CFM), and at MPL 6 (14,500 CFM), and a third split of intake air, approximately 65,000 CFM, which was directed into the No. 1 bleeder entry and measured 15,000 CFM when it reached the pump (50,000 CFM). Gov't Ex. 31 at 22; Tr. 100-01; Gov't Ex. 7. The total airflow for this worked-out area (MPLs 5, 6, 7, and 8 and the pump) was 220,300 CFM of air. Approximately 331,600 CFM of air was measured exiting from MPLs B1, B2, and B3. Gov't Ex. 31 at 22. The Secretary submitted that approximately 111,000 CFM of air that was not used to ventilate the gob and was not acknowledged in the ventilation plan, was leaking into the bleeder system. *See* S. Br. at 30-31 n.10; S. Post-Hr'g Br. at 12-13.

increased production during the days preceding the accident. Gov't Ex. 31, Fig. 4; Tr. 89-90, 98. Up until approximately July 30, production averaged about four longwall passes per day shift and one to one-and-a-half passes per evening shift. Tr. 89; Gov't Ex. 31, Fig. 4. On July 30, there were eight passes mined during the day shift and four passes during the evening shift. *Id.* On July 31, there were six-and-a-half passes mined during the day shift and, during the evening shift in which the accident occurred, there were three-and-a-half passes mined. *Id.*

As the judge acknowledged, factors that must be considered in evaluating the readings at MPL B1 include the approximately 8,000-foot distance between MPL B1 and the point where ventilation from the gob entered the bleeder entries, as well as significant leakage outby the gob. 25 FMSHRC at 749. Such evidence does not make consideration of the readings at MPL B1 erroneous, however. Rather, these facts reinforce the judge's conclusion that "the readings at MPL B1 gave a false impression that Plateau's bleeder system was functioning properly when it actually was not." *Id.* That is, readings at MPL B1 were a critical indicator that the bleeder system was ineffective because actual methane levels at MPL B1 were likely to be higher than those recorded at MPL B1 after dilution.⁵

As previously discussed, Plateau's mining of the D-3 panel limited the system's ability to effectively control and continuously dilute and move unanticipated methane-air mixtures. The judge found that when an operator can no longer continuously dilute and move methane from the gob, there is a high risk that an explosive air-mixture will accumulate in the gob, and that such an accumulation developed at the mine on July 31. 25 FMSHRC at 749.

I agree with the judge that the occurrence of the accident was an additional factor establishing a violation of section 75.334(b)(1). *Id.* at 753. The Commission has long recognized that the "fact of an accident . . . does not by itself necessarily prove or disprove the existence of a violation." *Old Ben Coal Co.*, 10 FMSHRC 1800, 1804 n.4 (Oct. 1982); *Consolidation Coal Co.*, 20 FMSHRC 227, 240 (Mar. 1998) (Commissioners Riley and Verheggen), *aff'd*, 1999 WL 335777 (4th Cir. 1999). However, the Commission has explained that even though a standard may be violated regardless of whether an accident has occurred, an accident may "sometimes shed light on an unsafe situation that had escaped previous notice or citation." *Old Ben*, 10 FMSHRC at 1804 n.4. Although an accumulation of methane may not, in

⁵ I disagree with my colleagues' conclusion that the judge erred by failing to give primary consideration to measurements at MPLs 7 and 8 in determining the bleeder system's efficacy under section 75.334(b)(1). Slip op. at 28-29. First, it is not clear that the readings at MPLs 7 and 8 provided a materially more accurate picture of methane in the gob given that those readings were diluted by intake air from the No. 2 tailgate entry. Tr. 81-84. Moreover, my colleagues effectively deem the readings at MPL B1 irrelevant, contrary to the inherent significance of MPL B1 as the measuring point established by section 75.323(e) and its underlying statutory provision as an indicator of the effectiveness of the bleeder system. The 2% limit set by section 75.323(e) was exceeded at MPL B1 even though the judge found leakage diluted the methane reading at that measuring point.

and of itself, establish a violation of section 75.334(b)(1), a small explosive methane-air mixture near the rubble zone constitutes additional evidence demonstrating that Plateau's bleeder system was unable to effectively control the methane-air mixtures and continuously dilute and move such mixtures from the worked-out area away from the active workings.

In sum, as methane levels were increasing and had exceeded the 2% limit at MPL B1, the operation and evaluation of the mine ventilation system was impeded both by a limited potential for effectively diluting and dispersing the methane and by air flows which produced artificially low readings at MPL B1. Given these challenging conditions at the mine, I conclude that substantial evidence supports the judge's determination that Plateau's bleeder system was not effectively ventilating the worked-out area of the D-3 panel as required by section 75.334(b)(1).

2. Notice

Substantial evidence in the record supports a determination that a reasonably prudent person familiar with the mining industry and the protective purposes of section 75.334(b)(1) would have recognized that Plateau's bleeder system failed to control and continuously dilute and move methane-air mixtures from the worked-out area away from active workings as required by the standard.⁶ A reasonably prudent person, having knowledge of the circumstances of Plateau's mine, would know that the mine was operating at its maximum ventilation capacity under difficult mining conditions. Mine Manager Hales and Mining Engineer Jones agreed that the mine fan was operating at capacity and that no additional air could be added to the system, and that there was no further capacity to induce more airflow through the regulators at MPLs 7 and 8. Tr. 606, 762, 799. Mine Manager Hales acknowledged that the system had reached its maximum capacity for being able to dilute and carry away methane without the gob vent boreholes or horizontal degassing system in place. Tr. 762.

Moreover, a reasonably prudent person, considering the standard's requirement that a bleeder system must effectively ventilate the area within the bleeder system and protect active workings from the hazards of methane accumulations, would have recognized a disruption in the effectiveness of the system. The disruption was manifest in the increasing levels of methane and an exceedance at the section 75.323(e) measuring point. Jones and Hale testified that they were aware of an increasing trend in methane in late July. Tr. 762, 793, 802, 812. Hales acknowledged that methane readings "were a little high," and that they had been "struggling with it for a few days, trying to reach the next gob vent borehole," and that reaching the borehole

⁶ Although the judge did not explicitly apply the Commission's "reasonably prudent person test," he concluded that Plateau should have been on notice that its bleeder system was not functioning properly on July 31. 25 FMSHRC at 746. Contrary to my colleagues' assertion that this conclusion injects subjectivity into the process (slip op. at 31), the judge merely inferred constructive notice from the circumstances. This is not improper. *See generally Dolese Bros. Co.*, 16 FMSHRC 689, 693-94 (Apr. 1994) (affirming finding of violation upon application of reasonably prudent person test where judge in part inferred constructive knowledge).

would have alleviated the “methane problem.” Tr. 752-53. Hales testified that the increasing trend in methane was of particular concern because the fan was at full capacity. Tr. 762. Hales and Jones testified that the operator’s only option was to slow down or cease production to let the methane bleed off. Tr. 762, 812. Nonetheless, even with this information, the operator increased production and did not take the corrective action required. Tr. 88-90, 98, 106-07; Gov’t Ex. 31, Fig. 4. Given this evidence, I would reject Plateau’s assertion that it failed to receive adequate notice that its bleeder system violated the requirements of section 75.334(b)(1). P. Br. at 14, 24-25, 26.

3. Significant and substantial

A violation is S&S if, based on the particular facts surrounding the violation, there exists a reasonable likelihood that the hazard contributed to will result in an injury or illness of a reasonably serious nature. See *Cement Div., Nat’l Gypsum Co.*, 3 FMSHRC 822, 825 (Apr. 1981). In *Mathies Coal Co.*, 6 FMSHRC 1 (Jan. 1984), the Commission further explained:

In order to establish that a violation of a mandatory safety standard is significant and substantial under *National Gypsum*, the Secretary of Labor must prove: (1) the underlying violation of a mandatory safety standard; (2) a discrete safety hazard — that is, a measure of danger to safety — contributed to by the violation; (3) a reasonable likelihood that the hazard contributed to will result in an injury; and (4) a reasonable likelihood that the injury in question will be of a reasonably serious nature.

Id. at 3-4 (footnote omitted); accord *Buck Creek Coal, Inc. v. MSHA*, 52 F.3d 133, 135 (7th Cir. 1995); *Austin Power, Inc. v. Secretary of Labor*, 861 F.2d 99, 103 (5th Cir. 1988) (approving *Mathies* criteria).

I would reject Plateau’s argument that its alleged violation of section 75.334(b)(1) is not S&S because the events that occurred on July 31 were unlikely. PDR at 13 n.7; P. Br. at 12 n.8. In effect, Plateau is arguing that the judge should have confined his consideration to whether an injury-producing event was reasonably likely to occur during continued mining operations. The “operative time frame for determining if a reasonable likelihood of injury exists includes *both* the time that a violative condition existed prior to the citation and the time that it would have existed if normal mining operations had continued.” *Bellefonte Lime Co.*, 20 FMSHRC 1250, 1255 (Nov. 1998) (quoting *Rushton Mining Co.*, 11 FMSHRC 1432, 1435 (Aug. 1989)) (emphasis added); *Elk Run Coal Co.*, 27 FMSHRC 899, 905 (Dec. 2005). The conditions creating the potential for injury occurred prior to the citation and, in fact, resulted in multiple fatal injuries. 25 FMSHRC at 739. Thus, the judge appropriately considered the violative conditions that existed prior to the citation. *Id.* at 756-57.

C. Conclusion

For the foregoing reasons, I would affirm the judge's determination that Plateau violated section 75.334(b)(1) and that the violation was S&S.

Michael G. Young, Commissioner

Commissioner Jordan, in favor of affirming the judge's determinations that Plateau violated 30 C.F.R. §§ 75.334(b)(1) and 75.370(a)(1):

I agree with the reasoning and conclusions expressed in Commissioner Young's opinion affirming the judge's determination that Plateau violated section 75.334(b)(1) and that the violation was S&S. I also agree with his analysis affirming the judge's determination that an operator may be found to have violated section 75.334(b)(1) even though it has complied with the terms of its ventilation plan. However, I would also affirm the judge's ruling that Plateau violated section 75.370(a), and therefore dissent from the majority's holding regarding that citation.

Section 75.370(a)(1) provides in relevant part that an "operator shall develop and follow a ventilation plan approved by the district manager." 30 C.F.R. § 75.370(a)(1). Sections 75.334(c)(4) and 75.371(bb) set forth an illustrative list of ventilation devices that must be included in a ventilation plan based upon the device's function to control air through a worked-out area. *See* 30 C.F.R. § 75.334(c)(4) (stating that a ventilation plan must specify the "location of ventilating devices *such as* regulators, stoppings and bleeder connectors *used to control air movement through the worked-out area*" (emphasis added)); *see also* 30 C.F.R. § 75.371(bb). By the regulations' plain language, if a ventilation device controls air through a worked-out area, it must be included on a ventilation plan. The regulations do not set forth limitations on the types of ventilation devices that must be specified, nor do they set forth limitations on the locations of the ventilation devices. Thus, under the plain terms of the standards, if the breached undercast controlled air movement through the worked-out area, it was required to be shown in the ventilation plan.¹

In determining whether substantial evidence² supports the judge's finding, it is therefore important to keep in mind exactly what is and what is not relevant under this regulation. Whether the undercast controlled air movement is dispositive; whether the undercast was

¹ The undercast at issue here was not included in the ventilation plan. Gov't Ex. 4.

² When reviewing a judge's findings of fact, the Commission must by statute apply the substantial evidence test. 30 U.S.C. § 823(d)(2)(A)(ii)(I). Under this test, the Commission may not "substitute a competing view of the facts for the view [a judge] reasonably reached." *Donovan ex rel. Chacon v. Phelps Dodge Corp.*, 709 F.2d 86, 92 (D.C. Cir. 1983). The fact that evidence exists in the record to support a party's position adverse to the judge is not determinative. Rather, the Commission's review is statutorily limited to whether the judge's findings of fact were supported by "such relevant evidence as a reasonable mind might accept as adequate to support [the judge's] conclusion." *See, e.g., Jim Walter Res., Inc.*, 19 FMSHRC 1761, 1767 n.8 (Nov. 1997) (citing *Rochester & Pittsburgh Coal Co.*, 11 FMSHRC 2159, 2163 (Nov. 1989)).

functioning as a regulator is not.³ Whether the undercast had an impact on air movement is pertinent; whether that impact was “significant” is not. Consequently, the majority’s rationale for reversing the judge, slip op. at 7-8, is grounded on assertions that have nothing to do with the plain meaning of the regulation at issue.

Substantial evidence supports the judge’s conclusion that the breached undercast was inhibiting the flow of air up the No. 1 headgate entry into the No. 2 setup room, although it may have done so to an insignificant degree. 25 FMSHRC 738, 759 (Dec. 2003) (ALJ); Tr. 112-13, 118-19, 620, 638-39, 1321. Testimony from MSHA witnesses supports this conclusion. For instance, MSHA official Gary Wirth stated that the overcast “was still functioning to limit airflow in that area and, therefore, played a role in inhibiting airflow on the headgate side in the worked-out area. . . . [T]hat three-by-four hole would not have rendered that overcast completely in effective [sic].” Tr. 112-13, 118. MSHA ventilation expert John Urosek, testified that the overcast “would impact the air flow on the headgate,” Tr. 620, and that “the overcast, and the holes in the overcast . . . would have impacted. We have that from experience. . . . [A hole in the overcast] will control air flow.” Tr. 638-39.

MSHA’s ventilation staff expected the undercast to be removed, leaving the area completely open in accordance with the approved ventilation plan. 25 FMSHRC at 759; Tr. 110-12; Gov’t Ex. 5; Jt. Ex. 1. Instead, Plateau retained the undercast and created a three-by-four foot hole in it, to allow water and air to travel through it. 25 FMSHRC at 759. Although the breached undercast may not have affected airflow in the worked-out area to a significant degree, the area of the No. 1 headgate at the location of the breached undercast was less than completely open. P. Ex. 3B. Thus, as the judge found, the operator was required to seek to modify its plan to include the breached undercast. 25 FMSHRC at 759.

I reject Plateau’s argument that the judge’s determination of violation should be reversed because there is no requirement to obtain MSHA approval of ventilation control devices that

³ The operator argues that the judge’s decision should be reversed because his ruling is based on his finding that the undercast was a regulator, an issue not raised by the Secretary or addressed by the parties below. P. Br. at 31. Although the parties did not litigate whether the breached undercast acted as a regulator, they litigated whether the undercast affected airflow through the worked-out area. *See* S. Post-Hr’g Br. at 29-31; P. Post-Hr’g Br. at 58-59. In addition, as the Secretary argues, S. Br. at 48, the citation sets forth the Secretary’s position that Plateau violated section 75.370(a)(1) because the undercast controlled air movement through the worked-out area but was not depicted in the ventilation plan. Gov’t Ex. 4. In addition, Plateau litigated whether the undercast controlled air movement. P. Post Hr’g Br. at 59 (“the breached [undercast] had no effect on the ventilation of the worked-out area Thus the presence of the breached [undercast] provided no support for a violation of the ventilation plan.”). Thus, the parties litigated the underlying basis for the judge’s determination.

exist in the gob.⁴ P. Br. at 31. The parties do not dispute that the undercast existed in the worked-out area. *Id.* at 32. As discussed above, however, section 75.334(c)(4) and 75.371(bb) require ventilation devices that control air through a worked-out area to be included in a ventilation plan and do not set forth any limitations based on the location of a ventilation device. Moreover, as the Secretary submits, S. Br. at 49, the purpose of the standard is to inform MSHA of the locations of ventilation devices and allow MSHA to decide whether to approve those devices. Unauthorized changes in a ventilation plan can have unintended effects on ventilation. 25 FMSHRC at 760. In short, the evidence put forth by Plateau regarding that the undercast was in the gob and could not be maintained or examined, Tr. 1200, is irrelevant.

I also reject Plateau's argument that it should not have been cited for violating its ventilation plan because MSHA inspectors observed the breached undercast and failed to cite it as a violation of the ventilation plan. The Commission has refused to acknowledge estoppel as a defense to a violation, holding that MSHA was not estopped from issuing a citation because the operator relied on MSHA's previous actions. *King Knob Coal Co.*, 3 FMSHRC 1417, 1421-22 (June 1981); *see also Emery Mining Corp. v. Sec'y of Labor*, 744 F.2d 1411, 1416 (10th Cir. 1984). Rather, MSHA's failure to previously cite a disputed condition is appropriately considered in the context of the operator's negligence. Here, the judge noted that Inspector Ray's tacit approval of the breached undercast supported a low negligence finding. 25 FMSHRC at 759.

For the foregoing reasons, I respectfully dissent.

Mary Lu Jordan, Commissioner

⁴ The Secretary asserts that the Commission need not reach Plateau's argument that a ventilation device in a gob, effective or not, does not have to be in a ventilation plan, because Plateau failed to raise the issue before the judge. S. Br. at 48-49. However, as Plateau contends, it appears that Plateau raised the issue before the judge. Tr. 1200; P. Post-Hr'g Br. at 61.

Chairman Duffy and Commissioner Suboleski, in favor of vacating the judge's determination that Plateau violated 30 C.F.R. § 75.334(b)(1) and remanding:

A. Overview

This is a case in which MSHA had little evidence that the ventilation system was malfunctioning, yet the mine experienced an explosion and fire. Prior to the first explosion, air volumes were above design levels and all measuring points were within expected ranges. The explosion itself was caused by a very small amount of methane (50 cubic feet), a volume that would not be unexpected at the fringe of the rubble zone. However, MSHA found what it believed to be the causes of a distribution problem, near the headgate at the inby corner of the gob, where the explosion was believed to have originated. This problem, which was allegedly caused by a combination of a largely intact undercast, an un-removed check curtain, and a series of check curtains in the set up rooms, combined to restrict air flow in this corner, and resulted in a violation of section 75.334(b)(1). However, trial testimony showed that these obstructions were not present and MSHA's primary case fell apart.

In the course of presenting that case, MSHA witnesses pointed out that the mine fan was at capacity; that, as production increased from start-up at the longwall, methane levels were rising; that the tailgate-side bleeder regulators were open as wide as possible to maximize air flow across the face and gob; that it took a great deal of air to dilute the methane level from the face and gob to the 2% concentration limit specified at the point where the bleeder air enters another air stream; and that once, two shifts before the explosion, the system's ability to dilute to the 2% level, i.e., the bleeder-system capacity, had briefly been reached. Finally, MSHA testified that Plateau's only recourse when it reached system capacity was to temporarily halt production.

———The judge, rather than dismissing the case, used these circumstantial facts to construct an entirely new theory of the case since MSHA had failed to prove that the ventilation system had significant distribution problems. Moreover, he added a crucial element that directly contradicted the testimony of the MSHA witnesses – that the volume of air in the gob was inadequate. For the following reasons, we find that the judge's analysis was incorrect and we would remand to him for reconsideration of his decision.

B. Section 75.334(b)(1)

We disagree with the conclusions reached by our colleagues, who would affirm the judge's finding that Plateau violated section 75.334(b)(1). Our disagreements with the judge's decision lie in three areas. First, some of the judge's factual findings are not supported by the record. In this regard, the judge failed to explain or address conflicting evidence on several key issues. Second, the judge drew conclusions or inferences that were not warranted by the underlying facts. Finally, the judge did not adequately address, under Commission precedent, whether Plateau had notice that, under the Secretary's regulation, its bleeder system was in violation because it was not moving and diluting methane in the gob area.

These errors largely flow from the basis for the judge's decision – that there was an inadequate volume of air in the bleeder system. The theory of the judge's decision stands in contrast to the Secretary's litigation theory – that volume was not the problem, but the air in the system was not being distributed properly within the gob. Significantly, if the Secretary and the judge cannot agree on the basis for determining whether the bleeder system was operating effectively, it is unclear how Plateau could have responsively addressed any performance problems in the system under section 75.334(b)(1).

We begin our analysis of the judge's decision by noting, "The Mine Act imposes on the Secretary the burden of proving each alleged violation by a preponderance of the credible evidence." *In re: Contests of Respirable Dust Sample Alteration Citations*, 17 FMSHRC 1819, 1878 (Nov. 1995), *aff'd sub nom. Sec'y of Labor v. Keystone Coal Mining Corp.*, 151 F.3d 1096 (D.C. Cir. 1998) (quoting *Garden Creek Pocahontas Co.*, 11 FMSHRC 2148, 2152 (Nov. 1989)). "The preponderance standard, in general, means proof that something is more likely so than not so." *In re: Contests of Respirable Dust*, 17 FMSHRC at 1838. Further, the occurrence of an ignition is not, in and of itself, evidentiary proof of an inadequate bleeder system. *Consolidation Coal Co.*, 20 FMSHRC 227, 240 (Mar. 1998) (Comm'rs Riley and Verheggen) (citing *Mar-Land Indus. Contractor, Inc.*, 14 FMSHRC 754, 758 (May 1992); *Old Ben Coal Co.*, 4 FMSHRC 1800, 1804 n.4 (Oct. 1982)).

When reviewing an administrative law judge's factual determinations, the Commission is bound by the terms of the Mine Act to apply the substantial evidence test. 30 U.S.C. § 823(d)(2)(A)(ii)(I). "Substantial evidence" means "such relevant evidence as a reasonable mind might accept as adequate to support [the judge's] conclusion." *Rochester & Pittsburgh Coal Co.*, 11 FMSHRC 2159, 2163 (Nov. 1989) (quoting *Consolidated Edison Co. v. NLRB*, 305 U.S. 197, 229 (1938)). In reviewing the whole record, an appellate tribunal must consider anything in the record that "fairly detracts" from the weight of the evidence that supports a challenged finding. *Midwest Material Co.*, 19 FMSHRC 30, 34 n.5 (Jan. 1997) (quoting *Universal Camera Corp. v. NLRB*, 340 U.S. 474, 488 (1951)). Further, the Commission has held that "the substantial evidence standard may be met by reasonable inferences drawn from indirect evidence." *Mid-Continent Res., Inc.*, 6 FMSHRC 1132, 1138 (May 1984). The Commission has emphasized that inferences drawn by the judge are "permissible provided they are inherently reasonable and there is a logical and rational connection between the evidentiary facts and the ultimate fact inferred." *Id.*

Finally, we apply the principles established by the Commission regarding notice. Slip op. at 10. In a case such as this, the existence of a violation turns on whether the Secretary can establish that a reasonable operator familiar with the conditions in the mine, including the mine's history of methane liberation and the capacity of its ventilation system, would have made adjustments to the bleeder system so as to ensure that methane continuously and effectively was diluted and moved away from active workings and into a return. *See U.S. Steel Mining Co.*, 27 FMSHRC 435, 439 (May 2005) (the reasonably prudent person test must be based on

conclusions drawn by an objective observer with knowledge of relevant facts that must be reasonably ascertainable prior to the alleged violation).

Under section 75.334(b)(1), Plateau was required to use its bleeder system “to control the air passing through the [worked out] area and to continuously dilute and move methane-air mixtures . . . from the worked-out area away from active workings and into a return air course or to the surface of the mine.” 30 C.F.R. § 75.334(b)(1). In *RAG Cumberland Res., LP*, 26 FMSHRC 639, 647 (Aug. 2004), *aff’d sub nom. Cumberland Coal Res., LP v. FMSHRC*, No. 04-1427, 2005 WL 3804997 (D.C. Cir. Nov. 10, 2005) (unpublished), the Commission read section 75.334(b)(1) to require that a ventilation system must function effectively in order to comply with the regulation. The Commission has also noted that not every accumulation of methane in the gob is a violation of this requirement. *See VP-5 Mining Co.*, 15 FMSHRC 1531, 1539 (Aug. 1993) (“If the Secretary believes that air flowing through a gob should contain no more than 4% methane as it enters bleeder entries, he should consider promulgating a safety standard containing such a requirement.”); *Island Creek Coal Co.*, 15 FMSHRC 339, 350 (Mar. 1993) (“If the Secretary believes that specific accumulations of methane create a hazard in gobs or other inactive areas of underground coal mines, he should consider promulgating safety standards to deal with this problem.”). Here, the Secretary conceded as much before the judge. 25 FMSHRC 738, 744 (Dec. 2003) (ALJ).¹

Consistent with this approach to interpreting the regulation, MSHA investigator David Wirth testified, “there will be some point within [the longwall gob] that the methane will be in the explosive range.” Tr. 203. MSHA experts Stephan and Urosek testified to the same effect. Tr. 531-32; 663-64. Indeed, because methane is liberated at a level of 100% and has to be diluted to the 2% level at the section 75.323(e) measurement point, methane will be found at explosive levels, on a transient basis, in the gob. 25 FMSHRC at 747. Nevertheless, the judge concluded, “Methane must not be allowed to accumulate in the gob because explosive concentrations are likely to develop . . .” *Id.* This conclusion is contrary to record testimony. Moreover, this conclusion appears to have influenced, to a large degree, the judge’s analysis of Plateau’s bleeder system and its ability to dilute and control methane in the gob.² We would

¹ The Secretary’s position on this point before the Commission is less clear; nevertheless, the Secretary has failed to explain under what circumstances a small accumulation of methane, such as the one that caused the initial explosion at Plateau’s mine, becomes a violation under section 75.334(b)(1). *See* S. Br. at 18-21.

² Earlier in his decision, the judge inconsistently stated, “The presence of explosive levels of methane in the gob does not establish a violation of the Mine Act or the Secretary’s safety standards.” 25 FMSHRC at 745.

instruct the judge not to rely on this consideration in determining whether Plateau's bleeder system met the requirements of section 75.334(b)(1) on remand.³

In addition to this fundamental misunderstanding regarding the operation of the ventilation system in the gob, the judge made other factual findings at odds with the record. In further analyzing Plateau's bleeder system, the judge found that the system "was *over-extended* so that it could not, on July 31, 2000, control the air passing through the [worked-out] area so as to continuously dilute and move methane-air mixtures and other gases from the gob into the bleeders." 25 FMSHRC at 746 (emphasis added). The judge's finding on this point does not reflect record testimony and relies on evidence not probative of the issue. Moreover, his analysis fails to address conflicting evidence.⁴

The underpinning of the judge's finding, *id.*, that the bleeder system was over-extended, was MSHA investigator Wirth's testimony that the main mine fan was operating at or near capacity and that the operator could not make any adjustments to bring in additional airflow or create additional pressure. Tr. 58-59. However, the fact that the mine fan was running at maximum is unrelated to the capacity of the bleeder system to handle the level of methane being liberated at the mine.⁵ Nor is the capacity of the mine fan, by itself, probative of the adequacy of the bleeder ventilation system. In this regard, it is significant that the judge failed to address the testimony of Plateau's general manager Charles Burggraf, who testified that the mine's ventilation system was operating well within the limits of methane levels that it was designed to handle. Tr. 1004-05. *See* P. Ex. 4A (degasification chart). We would instruct the judge to address this testimony and any contrary evidence on remand.⁶

³ As the judge noted, the occurrence of an explosion in the gob does not indicate the ventilation system was not operating effectively under section 75.334(b)(1). 25 FMSHRC at 745, *citing Consolidation Coal*, 20 FMSHRC at 240.

⁴ A judge must analyze and weigh the relevant testimony of record, make appropriate findings, and explain the reasons for his decision. *Anaconda Co.*, 3 FMSHRC 299, 299-300 (Feb. 1981). The substantial evidence standard of review requires the Commission to weigh all probative evidence and to examine the fact finder's rationale in arriving at the decision. *Pittsburgh & Midway Coal Mining Co.*, 15 FMSHRC 2243, 2245-46 (Nov. 1993) (citing *Universal Camera*, 340 U.S. at 487-88. The judge's broad statement that "Any evidence or argument not discussed herein that is inconsistent with my findings and conclusions is hereby rejected[.]" 25 FMSHRC at 744, is not adequate given the complex factual and technical issues in this case.

⁵ That is, because the fan could not do more does not indicate it was not doing enough.

⁶ Our colleagues compound the omission of the judge by adopting the Secretary's post-accident allegation in the citation, stating that "it appears" that Plateau had "limited mine ventilating potential." Slip op. at 13. Such a conclusory statement, however, cannot substitute

The judge, in concluding that there was an insufficient quantity of air moving methane from the gob, also found that there was not a sufficient air pressure drop between the last open crosscut in the headgate entries and the connection between the gob and the bleeder entries. 25 FMSHRC at 747. From that finding, the judge further concluded, “As the methane levels increased, the amount of intake air sweeping the gob actually decreased because of increased resistance to air movement in the gob.” *Id.* at 747-48.

Initially, the judge’s suggestion that there was an insufficient air pressure differential is incorrect and contrary to record evidence. MSHA’s own ventilation expert, Urosek, testified, without contradiction, that the pressure differential was sufficient. Tr. 665, 1366-67. Other record evidence is also at odds with the judge’s findings. The last open crosscut in the headgate entries is outby MPLs 5 and 6, and regulators at that point were only slightly open to prevent excess air from escaping into the bleeder entries (under Plateau’s ventilation plan no more than 10% of the air could be allowed through). Tr. 48-50. Because MPLs 5 and 6 are upstream of MPLs 7 and 8, the pressure drop from the last open crosscut in the headgate to the bleeder entries in the tailgate section (MPLs 7 and 8) must be even larger than to outby MPLs 5 and 6. Thus, the pressure drop from the last crosscut in the headgate entry to the connection to the bleeder entry was large.

Even if the factual basis for the judge’s analysis were correct, his conclusion – “the amount of intake air sweeping the gob actually decreased because of increased resistance to air movement in the gob,” 25 FMSHRC at 747-48 – is not probative of the issue of whether the volume of air sweeping the gob was sufficient. The record reflects that as roof falls occur in the gob, there is increased resistance to airflow. Tr. 76, 169-70, 668. However, that occurrence is not determinative of whether there is sufficient air entering the gob. While the pressure differential between the headgate and tailgate entries impacts the volume of air sweeping the gob, it does not prove whether sufficient flow exists. In fact, there was no allegation or evidence of insufficient flow through the gob presented by the Secretary.⁷ Decreased flow is not the same as insufficient flow.

for the record review that we would ask the judge to make. Moreover, our colleagues state that a finding regarding the methane capacity of Plateau’s bleeder system in the D-3 longwall panel would be “of no avail” in deciding this case. Slip op. at 12-13 n.1. At best, this statement is contradictory, given their willingness to embrace the Secretary’s allegation noted above. *See also* slip op. at 13-14 (analyzing levels of methane liberation). For purposes of reviewing the judge’s finding that the system was “over-extended” and reaching the ultimate conclusion whether the system was able to continuously dilute and move methane, we conclude that such a finding is an essential part of such an analysis. 25 FMSHRC at 746.

⁷ Two of the Secretary’s witnesses, investigator Wirth (Tr. 61) and ventilation expert Urosek (Tr. 645), testified that there was not a volume problem.

In sum, the judge's reliance on pressure differentials between the headgate and bleeder entries is factually incorrect, and his conclusion regarding the decrease in air sweeping the gob based on resistance in the gob does not support a conclusion that there was an insufficient airflow in the mine.

A further basis for the judge's finding that the bleeder system was over-extended was his finding that the section 75.323(e) measuring point, MPL B1, had reached capacity. 25 FMSHRC at 748. As the judge correctly recognized, methane levels in the mine increased as production at the longwall picked up and as the gob grew in size. *Id.* at 746. This trend began when production started on July 17 and continued through July 31, and was reflected by the readings at MPLs 7 and 8, where air left the gob and entered the No. 3 bleeder entry. *Id.* During this same period, methane readings at MPL B1 also increased. *Id.* In his decision, the judge placed particular reliance on the occurrence of increased readings at MPL B1 that twice reached actionable levels, above 1.95% methane, and briefly exceeded the 2% level on July 31, two shifts prior to the shift when the explosion occurred. *Id.* Plateau's protocol required the cessation of production at the face when methane registered at the actionable level, a fact that we would instruct the judge to consider on remand.⁸ Tr. 595.

The judge's analysis reflects a fundamental misunderstanding of the relationship between the section 75.323(e) measuring point and compliance with section 75.334(b)(1). MPL B1 measured the combined airstream from five distinct air flows: the face, the gob, the headgate, the tailgate, and the sump pump and was located over 8000 feet from the gob. *See* Gov't Ex. 31, App. I. Notwithstanding the elevated readings at MPL B1, methane levels at MPLs 7 and 8 remained below actionable levels throughout the period preceding the accident. These readings gave a much more accurate picture of methane in the gob because these measurement points were the closest to the gob and captured readings in the bleeders before gob air exited and mixed with air from the headgate and sump pump. Tr. 84-85. Therefore, the judge's reliance on readings at MPL B1 to support his conclusion that there was a violation of section 75.334(b)(1) was misplaced.⁹ *See also RAG Cumberland*, 26 FMSHRC at 650 (air in the eastern bleeder entry

⁸ Reaching capacity is signaled by exceeding action levels at the evaluation points, and having excess capacity is demonstrated by staying below those levels. Here, the record shows that, two shifts prior to the explosion, methane measurements at MPL B1 briefly reached action levels of 1.95% twice. Thus, the ventilation system was operating well within capacity 100% of the time on the shift during which the accident occurred and the immediately preceding shift, and over 95% of the time on the day of the accident. Finally, our colleagues' implication that Plateau should have addressed the elevated readings at MPL B1 by changing the ventilation system ignores the realities of the ventilation plan approval process and the fact that Plateau timely and effectively addressed the high readings by ceasing production, as required by its protocol.

⁹ We disagree with our colleagues that Plateau somehow erred by not investigating the "cause or effect of the exceedance . . . at MPL B1." Slip op. at 15. *See also* slip op. at 13 n.2. Plateau performed exactly as its protocol demanded by ceasing production (which had stopped

likely had higher methane levels before it was diluted by air and exited from the mine through the bleeder shaft). Significantly, there is no evidence that we can glean from the record testimony that readings at MPLs 7 and 8 would have indicated that the ventilation system was not operating effectively. We would instruct the judge to give primary consideration to measurements at MPL 7 and 8 in determining the bleeder system's efficacy under section 75.334(b)(1) on remand.

The judge further erred in his lengthy consideration of the injection of "sweetened" air into the bleeder system which resulted in lowering methane levels at the section 75.323(e) measuring point, MPL B1. 25 FMSHRC at 748-49. As noted above, the judge's primary focus under section 75.334(b)(1) should have been on MPLs 7 and 8, which were the best indicators of the methane level in air coming out of the gob. It is not alleged that Plateau was doing anything improper under section 75.323(e) or its ventilation plan by the leakage of intake air into its bleeder system. Thus, the judge's finding that the sweetened air "artificially lower[ed] the methane concentrations" at MPL B1 is without factual or legal significance and we would instruct him not to consider the matter on remand.¹⁰

To the extent that the judge considered the readings at MPLs 7 and 8 at all, he examined them primarily in relation to readings at MPL B1. Not surprisingly, the judge initially noted that, as production increased, readings at MPLs 7 and 8 increased. 25 FMSHRC at 749. The judge further noted that the spread between methane readings at MPLs 7 and 8 and those at MPL B1 was growing from 0.25%, prior to July 28, to 0.75% by July 31. *Id.* at 749-50. Based on this factual circumstance, the judge concluded that "gob airflow was becoming a smaller percentage of the total airflow at MPL B1" and, therefore, "methane was accumulating in the gob more rapidly than the ventilation system was able to dilute and move it into the bleeders." *Id.* at 750. However, the judge's conclusion simply does not follow from the facts.

prior to the high reading because of a shift change). Further, with the idling of production, methane levels at MPL B1 dropped, as intended by Plateau's protocol. In these circumstances, we fail to see what Plateau would have investigated.

¹⁰ Because what Plateau was doing here was permissible, indeed intended under section 75.323(e), the judge's suggestion, reinforced by our colleagues' analysis, slip op. at 12, 14-17, that the measurement point was improperly placed, because of its distance from the gob and injection of additional air, is not well taken. Indeed, only the Secretary can change the section 75.323(e) measurement point through notice-and-comment rulemaking. Labeling this determination as a credibility issue, 25 FMSHRC at 748, slip op. at 14, does not change the legal nature of the ruling, which is to move the location of the section 75.323(e) measurement point within the bleeder system. Finally, even while chastising Plateau for allegedly inappropriately diluting the air stream measured at MPL B1, our colleagues nevertheless give primacy to readings taken there over those taken at MPLs 7 and 8. This displays a misunderstanding of the purposes of these distinct measuring points.

First, the basis for the judge's conclusion is mathematically incorrect. As the level of methane at MPLs 7 and 8 increased, the difference between those readings and readings at MPL B1 would grow regardless of whether the percentage of air going through MPLs 7 and 8 decreased, remained constant, or even modestly increased.¹¹ Second, it is apparent from the record that methane readings at MPL B1 were not probative of the volume of gob airflow. The record shows that bleeder air at MPL B1 came from multiple areas of the mine, including the face where increasing amounts of methane were liberated as production increased. Thus, unless the effect of methane liberation from the face, as well as airflow from other areas, could be eliminated, any correlation between the difference in readings at MPL B1 and MPLs 7 and 8, and gob airflow is tenuous at best.

Finally and most significantly, the judge's further conclusion, drawn from the readings at MPL B1 and MPLs 7 and 8, that methane was accumulating in the gob too rapidly to be removed by ventilation simply does not follow from the record evidence. An increase in the level of methane being removed from the gob and an excess accumulation are not the same thing. An increase in the level of methane at MPLs 7 and 8, by itself, could just as logically lead to the conclusion that the ventilation system was operating effectively. Moreover, methane liberation at the face also would cause an increase in the level of methane at MPLs 7 and 8.

Even if methane levels at MPL B1 and MPLs 7 and 8 were increasing, the judge's ultimate conclusion – that methane was accumulating more rapidly than the ventilation system was able to remove it, 27 FMSHRC at 750 – does not follow from this. As we have noted, higher levels of methane at these measurement points were expected as production increased and the gob area expanded. Methane levels at MPLs 7 and 8 never reached actionable levels. Even the Secretary's own expert, Stephan, opined that the initial explosion that touched off the later more serious explosions occurred as a result of the ignition of a very small amount of methane, approximately 50 cubic feet. Thus, we believe that the judge should rely on other record evidence if he is to support this conclusion.

Because of these factual discrepancies in the judge's decision, a remand to the judge to reevaluate the record evidence would be warranted. In addition, for the reasons more fully

¹¹ For example, if the air from MPLs 7 and 8 remained at a constant 75% of the total air flowing to MPL B1 and contained 1.5% methane, while the remainder of air contained 0.5% methane, then the air at MPL B1 would contain 1.25% methane $[(1.5\% \times 0.75) + (0.5\% \times 0.25) = 1.25\%]$. The difference between the methane levels at the MPLs is: $(1.50\% - 1.25\%)$ or 0.25%. Now, if the methane content at MPLs 7 and 8 increases to 3.5% and nothing else changes, the level at MPL B1 becomes 2.75% $[(3.5\% \times 0.75) + (0.5\% \times 0.25)]$ and the difference between the methane levels at the MPLs increases to: $(3.50\% - 2.75\%)$ or 0.75%. Furthermore, even if the "gob flow" were to increase to 85% of the total in the second case, the difference between the MPLs would have risen from 0.25% to 0.45%, contrary to the judge's conclusion that a rising difference indicates a decrease in flow from the gob.

discussed below, we would instruct the judge to also further analyze the notice issue before him, using the correct legal standard.

C. Notice

We disagree with the judge's terse analysis of whether a reasonably prudent person would have been on notice that there was a violation of section 75.334(b)(1). The judge concluded, "I agree with the Secretary that Plateau *should have been on notice* that its bleeder system was not functioning properly on July 31, 2000." 25 FMSHRC at 746 (emphasis added). However, the Commission has long rejected a subjective approach to the reasonably prudent person test. See *Canon Coal Co.*, 9 FMSHRC 667, 668 (Apr. 1987). Rather, as the Commission has explained, "[T]he reasonably prudent person test must be based on conclusions drawn by an objective observer with knowledge of the relevant facts. It follows that the facts to be considered must be those which were reasonably ascertainable prior to the alleged violation." *U.S. Steel*, 27 FMSHRC at 439 (citation omitted). The judge's reliance on a "should have known" test substitutes a subjective standard that the Commission has long eschewed. Therefore, for this additional reason, his decision should be vacated and remanded for application of the correct legal standard that is set forth above, slip op. at 24.

We would instruct the judge to consider the factual circumstances surrounding the ventilation system prior to July 31 on remand. As the judge noted, 25 FMSHRC at 745, the only numerical requirement in the safety standards is that methane cannot exceed 2% in the return air just before it joins another split of air.¹² 30 C.F.R. § 75.323(e). However, section 75.334(b)(1), the regulation alleged to have been violated here, has no numerical standards against which an operator's ventilation plan may be evaluated. In addition, Plateau was in full compliance with its ventilation plan. While we do not agree with Plateau's position that complying with an approved ventilation plan is an absolute defense to a citation under section 75.334(b)(1),¹³ MSHA's involvement at this mine was much more extensive.

¹² Our colleagues' *de novo* analysis of the record relating to notice ignores the crucial question of *how* a reasonably prudent operator would know that the ventilation system was not operating effectively in light of measurements that were, except in the two instances previously noted, within permissible and expected ranges. See slip op. at 17-18. In an effort to address this issue, our colleagues describe the two exceedances at the section 75.323(e) measurement point and the elevated readings at MPLs 7 and 8 as evidencing a "disruption" in the system. However, the Secretary has never alleged that Plateau violated the terms of its approved ventilation plan in any regard.

¹³ "Once a ventilation plan is approved and adopted, its provisions and revisions are enforceable as mandatory standards." *Wyoming Fuel Co.*, 16 FMSHRC 1618, 1624 (Aug. 1994) (citations omitted). Major changes in the plan require MSHA's approval before they can be implemented. *Id.*

Further, there is little in the record to suggest that there was a problem in the gob. All volume measurements appear to have been within the desired range. Measurements of methane levels at MPLs 7 and 8 were within the acceptable range. The methane level at MPL B1 had also remained below the action level for all of this shift and the previous shift, after twice briefly exceeding that level two shifts prior. Plateau's protocol dictated that an elevated level of methane would be addressed by a cessation of production, and the methane level at MPL B1 had fallen below the action level during the idle period. While we leave it to the judge to thoroughly review the record, we can find no evidence to indicate that there were dangerous levels of methane accumulating in violation of section 75.334(b)(1), that the system was in any way not performing as expected, or that there was any reason to suspect that the system was not performing as expected. Given the above facts, it is difficult to ascertain how a reasonably prudent operator would have known that there was a violation of the regulation.

Finally, we note that it is difficult to ascertain how a reasonably prudent operator should have responded to the problems that the Secretary found in the ventilation system. The Secretary presented several experts at trial who testified that Plateau failed to adequately distribute air in the gob. The judge rejected the Secretary's theory and concluded that the problem was one of inadequate volume of air. 25 FMSHRC at 750-51. In fact, Plateau responded to the elevated readings at MPL B1 as its protocol required.¹⁴ Absent other evidence that the ventilation system was not performing as expected, it is not evident to us what further actions a reasonably prudent operator should have taken.

In sum, we would instruct the judge to apply the reasonably prudent person test from the perspective of an objective mine operator who considers the totality of factual circumstances and evaluate all conflicting testimony and evidence that are relevant to this inquiry on remand. *U.S. Steel*, 27 FMSHRC 444.

Michael F. Duffy, Chairman

Stanley C. Suboleski, Commissioner

¹⁴ The elevated readings at MPL B1 actually appeared near the start of an idle shift, possibly reflecting the length of time that it would take air to travel the long distance from the face and gob to the section 75.323(e) measuring point.

Distribution

R. Henry Moore, Esq.
Jackson Kelly, PLLC
Three Gateway Center, Suite 1340
401 Liberty Avenue
Pittsburgh, PA 15222

Robin A. Rosenbluth, Esq.
Office of the Solicitor
U.S. Department of Labor
1100 Wilson Blvd., 22nd Floor West
Arlington, VA 22209-2247

Administrative Law Judge Richard Manning
Federal Mine Safety & Health Review Commission
Office of Administrative Law Judges
1244 Speer Blvd., Suite 280
Denver, CO 80204