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United States Court of Appeals
Tenth Circuit

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Elisabeth A. Shumaker
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PUBLISH

UNITED STATES COURT OF APPEALS

TENTH CIRCUIT

PLATEAU MINING
CORPORATION,

Petitioner,

v.

No. 06-9582

FEDERAL MINE SAFETY AND
HEALTH REVIEW COMMISSION;
THE SECRETARY OF LABOR,
MINE SAFETY & HEALTH
ADMINISTRATION,

Respondents.

**APPEAL FROM THE FEDERAL MINE SAFETY AND
HEALTH REVIEW COMMISSION
(NO. MSHR-1; WEST 2002-207)**

Ralph Henry Moore II, Jackson Kelly PLLC, Pittsburgh, Pennsylvania, (Karen L. Johnston, Jackson Kelly PLLC, Denver, Colorado, with him on the brief), for Petitioner.

Jerald S. Feingold, Attorney (Jonathan L. Snare, Acting Solicitor of Labor, Edward P. Clair, Associate Solicitor, W. Christian Schumann, Counsel, Appellate Litigation, Robin A. Rosenbluth, Attorney, with him on the brief), United States Department of Labor, Arlington, Virginia, for Respondents.

Before **HARTZ, O'BRIEN**, and **HOLMES**, Circuit Judges.

HARTZ, Circuit Judge.

This appeal arises out of a citation issued to Plateau Mining Corporation after a fatal methane explosion at its Willow Creek Mine on July 31, 2000. The citation, issued by the Mine Safety and Health Administration (MSHA), alleged that the accident was the result of a deficient mine-ventilation system. An administrative law judge (ALJ) affirmed the citation, though not on the primary theory of liability advanced by MSHA. On review, the commissioners of the Federal Mine Safety and Health Review Commission (the Commission) split evenly, with the effect of allowing the citation to stand. Exercising jurisdiction under 30 U.S.C. § 816(a)(1), we reverse the decision of the ALJ because substantial evidence does not support a finding that Plateau was on notice that its ventilation system was performing inadequately.

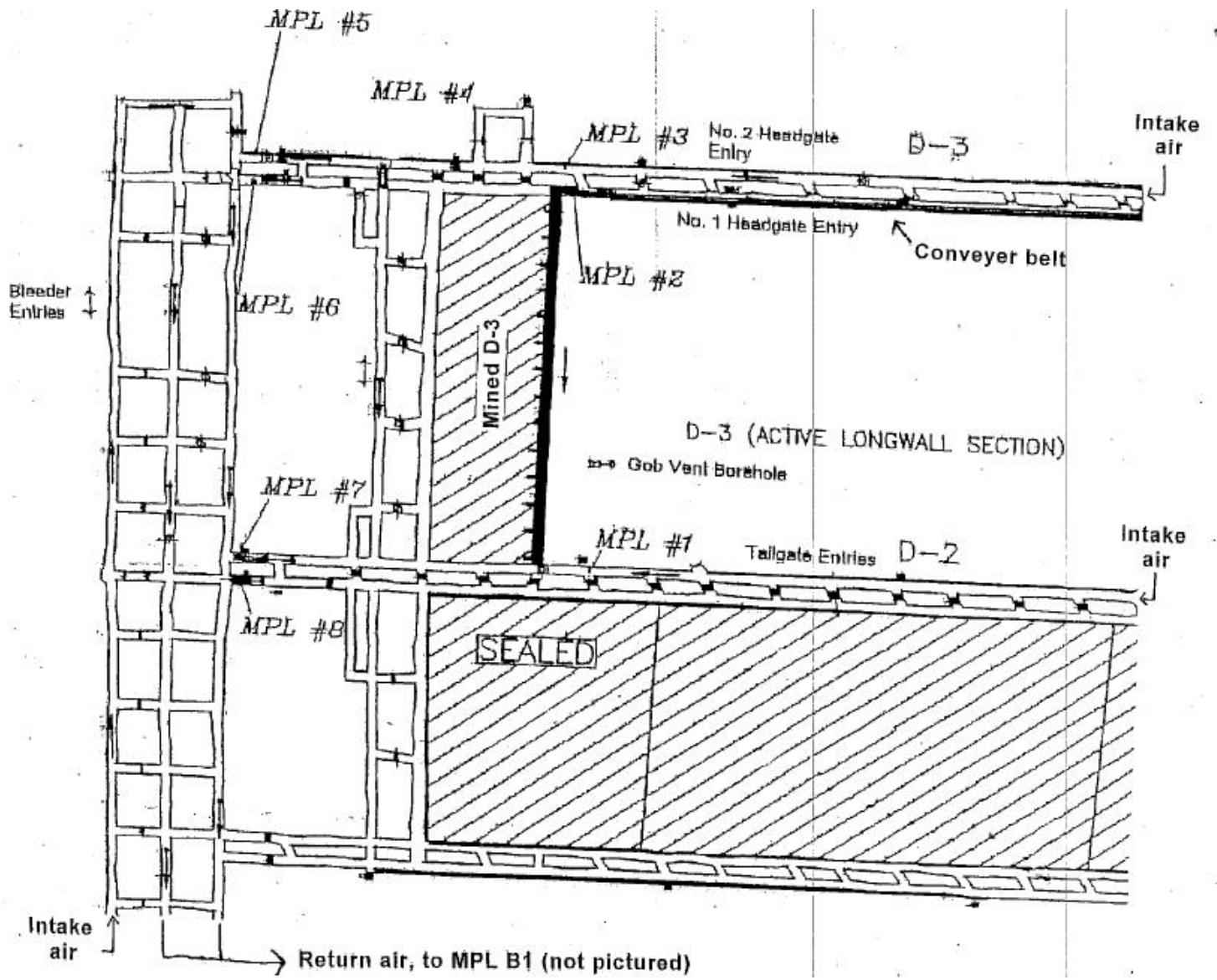
I. INTRODUCTION

Plateau operated the Willow Creek Mine, an underground coal mine in Carbon County, Utah. The coal was extracted using a method known as longwall mining, which permits a mine operator to remove a seam of coal without leaving behind pillars of coal for support.

Before longwall mining begins, a set of tunnels—called entries—is constructed around a large, rectangular block of coal, called a panel. (See schematic drawing below.) The two entries running along one long side of the block of coal are known as the headgate entries. A conveyer belt is installed in

one of these entries. The entries on the other long side are known as the tailgate entries. A machine called a shearer is placed at one end of the block of coal, known as the face. The shearer takes “passes” across the longwall face, severing approximately a 30-inch slice of coal from the seam with each pass. The severed coal falls onto a chain conveyer that runs along the face, which feeds the coal onto the conveyer belt on the headgate side for transport out of the mine.

Temporary roof supports called shields advance behind the shearer as the panel of coal retreats. The shields support the roof above the miners and the equipment. Behind the shields, the roof is allowed to collapse. This mined area behind the shields is known as the “rubble zone.” An “area where mining has been completed” is known as a “worked-out area.” 30 C.F.R. § 75.301. The mined area and the entries immediately adjacent to it are referred to as the “gob.”



Some mines, such as Willow Creek, are considered “gassy” mines because their operation liberates a significant amount of methane. Methane is trapped within the pores of a coal bed and is released when the coal is broken up during mining. Gassy mines present a challenge because methane-air mixtures are explosive at concentrations of 5 to 15% methane. Mine operators use a ventilation system, called a “bleeder system,” to dilute methane in worked-out areas. The methane is released from the coal at a concentration of 100%; the purpose of the bleeder system is to dilute the methane so that only small quantities are in the explosive range and concentrations are well below 5% near likely ignition sources, such as areas where miners are present and work is being done. At the longwall panel involved in this case (the D-3 panel), a fan blew fresh outside air into one of the headgate entries. The air was forced across the longwall face, which was 815 feet wide, and also through the rubble zone. Streams of fresh air—air from the headgate side that had not ventilated the gob and air from the tailgate side brought in to maintain appropriate ventilation pressure—joined the air coming off the rubble zone, diluting the methane further. From there the air entered tunnels on the tailgate side, known as bleeder entries, and eventually traveled out of the mine. After mining on the D-3 panel had progressed approximately 350 feet, the bleeder system would be supplemented with gob vent boreholes, which are holes from the earth's surface down to the ceiling of the gob. The holes had been drilled, and once the coal under them had

been removed, they would ventilate methane directly upward to the surface of the mine at high concentrations. At the time of the accident, Plateau believed that it would reach the first gob vent borehole within a few days.

II. REGULATORY BACKGROUND

Section 101(a) of the Federal Mine Safety and Health Act of 1977, 30 U.S.C. § 811(a), directs the Secretary of Labor to establish mandatory health and safety standards for mines. Under this authority the Secretary has promulgated a set of regulations governing underground-coal-mine ventilation. *See* 30 C.F.R. §§ 75.300–75.389. These regulations set forth various requirements for a ventilation system, including for the operation of mine fans; for air quality, quantity, and velocity; and for monitoring and evaluating the effectiveness of the system. Aside from following these generally applicable standards, each mine operator is also required to develop and follow a mine-specific ventilation plan, which must be approved by an MSHA district manager. *See* 30 C.F.R. § 75.370(a). After approval any major change to the plan must be approved by MSHA, *see* 30 C.F.R. 75.370(a)(2); *Wyoming Fuel Co.*, 16 FMSHRC 1618, 1624 (Aug. 1994).

The citation that Plateau challenges on appeal is for a violation of one of the generally applicable standards, 30 C.F.R. § 75.334(b)(1), whose relevant language states:

[A] bleeder system shall be used to control the air passing through the [worked-out] 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.

The Commission has interpreted this provision to mean that the bleeder system must function “effectively,” *see RAG Cumberland Res. LP*, 26 FMSHRC 639, 647, *aff’d sub nom. Cumberland Coal Res., LP v. FMSHRC*, 171 F. App’x 852 (D.C. Cir. 2005) (unpublished), although a mine operator can be sanctioned only if it knew or a reasonably prudent person would have known that the system was not functioning effectively. *Cf. Ideal Cement Co.*, 12 FMSHRC 2409, 2416 (Nov. 1990) (“[T]he appropriate test is whether . . . a reasonably prudent person familiar with the mining industry and the protective purposes of the standard would have recognized the specific prohibition or requirement of the standard.”)

III. FACTUAL BACKGROUND

A. The Ventilation Plan

Before beginning mining at the D-3 panel, Plateau obtained MSHA’s approval for the panel’s bleeder system, as required by 30 C.F.R. § 75.370. Because of difficult mining conditions at Willow Creek and a previous fire at the mine, MSHA had given the plan heightened attention, subjecting it to review not only at the district level but also at national headquarters. MSHA rejected an early ventilation plan submitted by Plateau, prompting two meetings to resolve issues in the plan. To obtain plan approval, Plateau agreed to use a more

extensive monitoring system than what was in use at most mines. By regulation, a person certified by the state or by MSHA must take air-quality measurements at least once a week, *see* 30 C.F.R. § 75.364, but Plateau also had a sophisticated system of sensors that continuously and instantaneously reported on the conditions in the mine.

The MSHA-approved ventilation plan authorized Plateau's use of what is known as a "two-entry system." MSHA requires that a longwall mine use three entries along each side of the longwall panel, but when a mine faces roof-control challenges, a mine operator may petition MSHA for permission to use a two-entry system. To be granted the modification, a mine operator must show that the two-entry system is at least as safe as the three-entry system. *See* 30 C.F.R. § 44.4. Plateau petitioned for and was granted permission to use a two-entry system at Willow Creek.

B. Mining on the D-3 Panel

1. Methane Liberation and Concentrations

Mining on the D-3 panel, the third longwall panel to be mined at Willow Creek, commenced on July 17, 2000. As mining progressed, the levels of methane being liberated in the mine increased. Increased methane liberation is to be expected in the early stages of longwall mining, for two reasons. First, there is a "ramping-up period" in longwall mining: at the start of mining, the shearer takes fewer passes across the face each shift than it does once the full coal-

production level is reached. Because methane is released as the coal at the face fractures, an increase in the number of passes increases the liberation of methane. Second, the gob, from which methane seeps, grows larger as mining progresses. On July 18 and 19, 2.5 million cubic feet of methane were carried by the bleeder system each day. By July 31, the day of the accident, the level had risen to over 7 million cubic feet, although that level was lower than the predicted level for that stage of mining and lower than the mine's estimated capacity. The predicted levels and estimated capacity had been submitted to MSHA during the ventilation-plan approval process.

With an increase in the amount of methane liberated, readings of the automated atmospheric monitoring systems (AMS) at certain measuring point locations (MPLs) showed rising methane concentrations. On July 19, two days after mining began, readings at MPLs 7 and 8, located where air exiting the gob entered the bleeder entries, ranged between 0.5% and 1.25%. Then, as Plateau increased its production level around the 29th of July, methane concentrations rose sharply. On July 31 they averaged between 2.5 and 3.0%; the highest point reached was a concentration of approximately 3.5% at MPL 8 early in the morning of July 31, approximately 20 hours before the accident. Such rising concentrations are expected in the beginning stages of longwall mining, although the rise is not linear, because sudden releases of methane cause spikes in the level, which drop as the methane clears.

Plateau had a protocol that dictated its response when methane concentrations at the measuring point locations reached specified levels. The “action level” established by Plateau for MPLs 7 and 8 was 4.0%. At that level Plateau would cease production until methane levels dropped to 3.7%. If an MSHA inspector notes a level of approximately 4.5% at one of those locations, the inspector issues an “imminent danger” order, requiring the evacuation of most mine personnel until the hazard is corrected. Plateau had set the action level lower than MSHA’s unofficial threshold so that it could stop production before dangerous levels were reached. The staff at Willow Creek had noticed a rise in methane levels at MPLs 7 and 8 but did not believe that the levels warranted a response because (1) the rise was expected, (2) the levels had not reached the action level, (3) the staff had the option of ceasing production if methane became excessive, and (4) the ventilation system at the time was exceeding the air-quantity requirements of the plan. In addition, the mine was experiencing fewer methane stoppages on the D-3 panel than it had on the previous longwall panel.

Among other locations at which Plateau took methane-concentration readings was the MPL B1 point, which was also known as the § 75.323(e) measuring point. That section specifies that the measuring point be placed “immediately before the air [in the bleeder system] joins another split of air.” 30 C.F.R. § 75.323(e). In the Willow Creek mine that location was at the end of the D-1 panel’s tailgate, approximately 8,000 feet from the D-3 gob. Section

75.323(e) prohibits methane concentrations above 2.0% at that measuring point. It is the only limit specifically set by regulation with respect to methane concentrations within the bleeder system.

Under Plateau's protocol, production would cease if methane levels at MPL B1 exceeded 1.95% and would resume only when methane levels had dropped to 1.75%. At 2.5%, Plateau would evacuate the mine and notify MSHA. In the early morning of July 31—approximately 20 hours before the accident—methane levels twice exceeded 1.95%; on one of those occasions, the level rose slightly above 2.0%. These exceedances of the action level occurred when production was idle, likely because it took some time for the air to travel the distance from the gob to MPL B1. Plateau waited for the levels to drop before resuming production. MSHA did not issue Plateau a citation for the exceedance at the § 75.323(e) measuring point.

An MSHA ventilation expert testified at the hearing before the ALJ that the readings at the § 75.323(e) measuring point would have been higher if not for an atypically large amount of fresh air leaking into the return entries that carried air away from the gob. The fresh air leaked into those return entries from an intake bleeder entry that ran parallel to them. Some of this fresher intake air leaked through electrical installations, which the mine operator was required to ventilate, and some leaked through stoppings, which seal off the connections between the different entries. MSHA's expert testified that air entering the return bleeder

entries likely had methane concentrations around 2.3 to 2.6% but that leakage between that point and the § 75.323(e) measuring point diluted the methane to below 2.0%.

2. Airflow

As mining progressed on the D-3 panel, airflow in the ventilation system decreased. This was to be expected as the roof of the gob caved in, increasing resistance to airflow within the gob. Plateau's ability to bring more air into the mine was limited because the mine fan was running at or near its maximum speed and the sliding doors of the ventilation control devices (called regulators) were open as far as possible. Plateau's former general mine manager testified at the hearing that there were changes that Plateau could have made to bring in more air, but that those changes had not been thought necessary because air quantities at the face were still substantially higher than required in the ventilation plan.

3. The Accident

By July 31 the longwall panel had retreated a short distance, approximately 250 feet out of a projected 4200 feet. Plateau and the Secretary dispute the precise chain of events involved in the accident, but the cause of the accident is not an issue on appeal. According to the Secretary, on the night of July 31 a section of the roof collapsed in the gob, igniting a small pocket of methane. The Secretary believes that the flame from the initial ignition then came into contact with a small accumulation of methane in the explosive range. This explosion

disrupted the ventilation system, which allowed more methane to accumulate, causing two subsequent explosions that resulted in the deaths of two miners and injuries to eight others.

Both sides agree that neither the presence of some methane in the gob nor an explosion of methane in the gob is conclusive evidence of an ineffective ventilation system, because methane is liberated from coal at concentrations at or near 100% yet is explosive only at concentrations between 5 and 15% percent. As the methane is diluted to concentrations in the low single digits, there will necessarily be a period when methane is present in the explosive range, and an event such as a rockfall can ignite that methane.

After the accident the mine was sealed. MSHA conducted an investigation, which led to the issuance of the citation that Plateau challenges on appeal.

4. The Citation

The citation alleges that Plateau violated § 75.334(b)(1). The first paragraph mostly paraphrases the regulation but adds “and distribute” to the regulatory language:

During pillar recovery of the D-3 longwall panel, the bleeder system being used did not control *and distribute* air passing through the worked-out area in a manner which continuously diluted and moved 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.

Plateau Mining Corp., 25 FMSHRC 738, 743 (Dec. 2003) (emphasis added). The next paragraph provides a bit more detail but is still rather vague:

The following factors impaired the bleeder system's effectiveness at controlling and diluting the air passing through the worked-out area: a limited mine ventilating potential; the configuration and distribution of airflow in the bleeder system and worked-out area; and temporary controls installed within the worked-out area which restricted airflow through the pillared area. As production increased and pillared area expanded, methane liberation increased and airflow paths changed within the worked-out area. These changing conditions resulted in reduced airflow and elevated methane concentrations within the worked-out area at locations containing potential ignition sources and within close proximity to the active longwall face.

Id. The citation further alleges that the accident occurred upon ignition of an explosive mixture that had accumulated in the worked-out area.

IV. THE HEARING BEFORE THE ALJ

At the hearing before the ALJ, MSHA's primary theory was that Plateau's bleeder system had failed to distribute air properly throughout the gob, allowing explosive pockets of methane to accumulate. During opening argument, counsel for the Secretary informed the ALJ that the focus of the Secretary's case would be the alleged distribution failure. "[T]he difficulty with the design of the Willow Creek ventilation system," asserted counsel, was that "it made it difficult, but not impossible, for [Plateau] to adequately monitor the airflow distribution in the headgate side of the gob." R. Vol. 2 at 12. One MSHA witness testified that to control the air, as required by § 75.334(b)(1), "means to properly distribute" the air. *Id.* at 96. Over the course of the hearing, MSHA introduced extensive

testimony in an attempt to establish that airflow was restricted on the headgate side of the gob, allowing a small pocket of methane to accumulate there. MSHA also introduced evidence intended to show that three installations in different locations within the worked-out area inhibited the proper flow of air. Even a slight change in airflow distribution, MSHA asserted, could have reduced the accumulation of methane and prevented the explosion. In response, Plateau's witnesses contended that it is impossible to direct airflow to any particular area within the gob and that § 75.334(b)(1) did not require it to do so. Plateau also presented evidence that the installations either were not present at the time of the accident or did not cause distribution problems.

Although MSHA's witnesses repeatedly asserted that faulty airflow distribution was the major flaw of the ventilation system, the Secretary also advanced the theory, not mentioned by the Secretary's counsel in her opening statement, that the mine had "limited . . . ventilating potential." *Id.* at 60. We have found no use of the term "mine ventilating potential" in any administrative or judicial opinion, nor in U.S. Bureau of Mines, *Dictionary of Mining, Mineral, and Related Terms* (2d ed. 1996), a standard mining dictionary, but apparently it is a measure of the ability to bring sufficient air into the mine to dilute the liberated methane. Thus, as we understand the record, the Secretary argued that Plateau's ventilation system was overwhelmed by the amount of methane being liberated.

In support of this theory, MSHA's witnesses testified that because the mine fan was running at capacity and the regulator doors were open as far as possible, Plateau could not bring more air into the mine or increase the air pressure. An MSHA supervisory special investigator, Gary Wirth, also cited Plateau's use of the two-entry system approved by MSHA as a factor creating the limited mine ventilating potential. He further testified that the measurements of reduced airflow should have indicated to Plateau that additional evaluation of the ventilation system was necessary. He did not explain, however, why the decrease in flow should have put Plateau on notice of a problem, given that reduced airflow was expected. Moreover, the chief of MSHA's ventilation division, John Urosek, testified later that airflow in the mine was sufficient.

The most important testimony on the issue of mine ventilating potential came from Mr. Urosek. Although his testimony appears somewhat inconsistent, he repeatedly stated that the volume of airflow in the mine was adequate and, more importantly, he never explained why a reasonable mine operator would have known before the explosions that the volume was inadequate. Initially, Mr. Urosek testified that when the 2% limit at the § 75.323(e) point is exceeded, the ventilation system is "maxed out" and is "approaching a point where it is no longer effective." R. Vol. 3 at 547. At that point, he said, the operator should realize that additional measures need to be taken, either to limit the amount of methane being produced or to increase the amount of airflow. His understanding

was that Plateau's response had been to stop production so that they could "keep the system at the levels [at which] they could still function." *Id.* at 548. They were "just maintaining the acceptable levels by limiting production" because the system was "pretty much at its maximum." *Id.* Vol. 4 at 607.

On the issue of fresh-air leakage, Mr. Urosek explained that the methane in the air was diluted as it passed through the bleeders running from MPLs 7 and 8 to MPL B1. After the air entered the bleeders just after MPLs 7 and 8, it likely had methane concentrations of 2.3 to 2.6%. Mr. Urosek asserted that the purpose of § 75.323(e) is "to control the methane that is actually coming from the gob area to two percent," but that "unfortunately, the way the regulation is written," it does not require the measuring point to be placed near the gob. *Id.* at 601–02. Because the true concentrations (the levels that would have been present absent the significant leakage) exceeded the 2% limit at MPL B1, the system was over capacity. He did not say whether this leakage would have been apparent while mining was occurring.

When asked by counsel for the Secretary how MSHA had determined that the Willow Creek mine was in violation of § 75.334(b)(1) at the time of the explosion, Mr. Urosek focused on the distribution of fresh air through the gob. He first explained that there will be areas of explosive methane in the gob and that the purpose of the ventilation system is to minimize the explosive zone and keep it away from likely ignition sources. The regulation's requirement that the

mine operator “control” the air “really refer[s] to air flow distribution within the system,” he said. *Id.* at 616. Mr. Urosek further explained that MSHA believed that a roof fall had ignited a pocket of methane, which slowly propagated until it reached an accumulation of methane, resulting in an explosion. “So the accumulation is what was important to the 334 [violation]. It wasn’t being diluted as effectively as it should have been,” he said. *Id.* at 618. Counsel for the Secretary asked: “And that should have been handled through the distribution or control of the air?” *Id.* “Yes,” he replied. *Id.*

Later, when asked again by counsel for the Secretary what had convinced MSHA that there was a § 75.334(b)(1) violation, Mr. Urosek began by mentioning that the investigators had noticed the exceedance of the 2% limit at MPL B1, which caused them to investigate further, leading to the discovery of the leakage, another cause of concern. He then proceeded to discuss indications that the distribution of airflow within the system was flawed. He concluded: “So those are some of the things that we use to evaluate the distribution. This was a system where distribution was a real problem.” *Id.* at 642–43. Upon further questioning by counsel for the Secretary, he twice confirmed that the problem was primarily with distribution:

Q: It is my understanding you are saying on 7-31 we mainly had a problem with distribution; is that correct?

A: Yes.

Q: If they had continued mining past 7-31, *would we also expect problems with quantity, as well?*

A: *It is difficult to say.* We expected that the system itself, as it mined more gob, that the air flow path would become more resistant. Our concern early on in working with district in the plan was at what point would they still get enough air to ventilate the face, ventilate the longwall, and make sure the system is effective to move the methane.

That is the reason early on we decided once the longwall was squared up, we would do a ventilation survey to see how well the system was working. If we found problems, then to work with the operator to do whatever improvements, and enforcement actions would be up to the district, depending on what we found.

Q: *Your problem on 7-31 was mostly with distribution?*

A: *Yes.*

Id. at 644–45 (emphasis added). Mr. Wirth, MSHA’s accident investigator, had previously made a similar statement: “Due to the configuration of the system and the distribution as it was occurring, it likely was more of a distribution problem than it was a quantity problem.” *Id.* Vol. 2 at 61.

On cross examination Mr. Urosek stated that the ventilation system had not been designed to handle the amount of methane encountered. He did not explain this assessment, however, which appears inconsistent with the evidence in the record that the amount of methane actually encountered was less than the amount that Plateau had projected in its submissions to MSHA. He conceded that § 75.323(e) does not require a mine operator to change its ventilation system after an exceedance, but he asserted that Plateau should have done something beyond what the plan required by having an employee verify that the MPLs were “actively reflecting what [was] going on with the system.” *Id.* Vol. 4 at 654–55.

He failed to explain why Plateau should have doubted the accuracy of the monitors, nor did he offer any ground for believing that the monitoring had been faulty. Mr. Urosek also conceded that the regulations set no requirements for methane levels in the air at MPLs 7 and 8 and that the 2.3 to 2.6% level (which he calculated to be present just past those locations) did not violate any standard or Plateau's own guidelines. Nevertheless, he said that the levels would cause an operator to "look at that system." *Id.* at 661. To do that, he said, employees would have to go into the "internal paths" to investigate the system. *Id.* Upon questioning by Plateau's counsel, however, he acknowledged that the internal paths were either unsafe for travel or were closed to miners. He named no internal path that was open and safe. In addition, Mr. Urosek agreed that relatively sudden methane-liberation events are anticipated in mining and that these may require cessation of production until the methane clears.

At the end of the hearing, MSHA called Mr. Urosek as a rebuttal witness. On direct examination by the Secretary, he reiterated that the pressure differential at Willow Creek was sufficient. Airflow at the mine, he said, was also sufficient. He then stated that the § 75.323(e) measuring point is important because it reveals whether there is sufficient airflow in the system. If the methane concentrations exceed 2% at that point, the system needs more airflow or less methane. He added that the only way to reduce the methane concentration is to bring additional airflow into the system. He did not reconcile this statement with his immediately

prior statement that reducing methane liberation would also lower the concentration. Nor did he address whether stopping production to slow methane emissions, as dictated by Plateau's protocol, would have been an appropriate method to reduce methane liberation.

During this testimony Mr. Urosek again asserted his belief that § 75.323(e) meant to establish a 2% limit for methane concentrations in air in the bleeder system. Because the regulation did not require the measuring point to be placed where air enters the bleeder system, he called it a "loop hole regulation." *Id.* Vol. 10 at 1373. He believed that the system was overextended because the air shortly after entering the bleeder system likely had methane concentrations above 2%, which fell to below 2% only after dilution with fresh air. On cross-examination, Mr. Urosek conceded that exceeding the § 75.323(e) limit once or twice did not necessarily mean that the mine operator needed to change its ventilation plan; but experiencing *consistent* readings over 2%, he stated, *would* indicate a problem with the system.

V. THE AGENCY PROCEEDINGS

A. Decision of the ALJ

The ALJ rejected the Secretary's principal theory—namely, that there was a problem with the distribution of airflow in the mine. He decided that the Secretary had failed to prove a distribution problem, 25 FMSHRC at 750–51, or that the presence of temporary ventilation controls had contributed to a violation

of § 75.334(b)(1). *Id.* at 751–53. Instead, the ALJ upheld the citation on the ground that the bleeder system was “over-extended” and therefore “could not, on July 31, 2000, control the air passing through the area so as to continuously dilute and move methane-air mixtures and other gases from the gob into the bleeders.” *Id.* at 746.

The ALJ found that “[t]he key element in diluting and moving methane-air mixtures from the gob is to ensure that there is a sufficient quantity of air sweeping the gob.” *Id.* at 747. He said that even though methane liberation had increased “quite significant[ly],” *id.*, the quantity of air sweeping the gob had decreased, *id.* at 747–48, the mine fan was running “at or near full capacity,” *id.* at 747, and the regulator doors were wide open, *id.*, Plateau did not make any changes to its system, *id.* at 747, 748. (He failed to state, however, what changes could have been made.)

The ALJ further found that the methane-concentration readings at MPL B1 would have revealed a deficiency in the bleeder system had it not been for leakage of fresh air into the bleeder entries lowering the readings. *Id.* at 748. Two MPL B1 readings at the action level, he said, meant that the system had been “max’ed out.” *Id.* at 748 (internal quotation marks omitted). Plateau had “failed to recognize the effect of the leakage when it established its action level for MPL B1.” *Id.* at 749. Although the ALJ acknowledged that § 75.323(e) does not require the 2.0% regulatory limit to be met as the air exits the gob, he said that “if

the mixing occurs thousands of feet [away] as a result of air leaking into the bleeders from an intake air course, a mine operator has no means of determining whether it is properly ‘controlling’ the air passing through the gob” *Id.*

In addition, the ALJ stated that “the increasing difference” between the methane concentrations at MPLs 7 and 8 and those at MPL B1 indicated that airflow from the gob “was becoming a smaller percentage of the total airflow at MPL B1.” *Id.* at 750. “Quite simply,” he concluded, “methane was accumulating in the gob more rapidly than the ventilation system was able to dilute and move it into the bleeders.” *Id.*

Finally, the ALJ found that the Secretary had established that an explosion of accumulated methane had triggered the subsequent explosions during the accident. This evidence, he found, helped to establish a violation of § 75.334(b)(1).

The ALJ addressed the question of notice as follows:

A mine operator may violate section 75.334(b)(1) even though it is fully complying with the approved ventilation plan. First, the mine operator has better knowledge of the conditions that will be encountered when mining commences. More importantly, because an underground coal mine is a dynamic environment, a mine operator must be constantly vigilant when monitoring the conditions underground and it must make changes to its ventilation system as conditions warrant. I agree with the Secretary that Plateau should have been on notice that its bleeder system was not functioning properly on July 31, 2000.

Id. at 746. The ALJ did not again explicitly address the issue of notice, although in the summary of his findings and conclusions he stated that “the evidence presented was not based on speculative post-ignition investigative assumptions, theories, and conclusions.” *Id.* at 756 (internal quotation marks omitted). “In order to comply with the standard,” he continued, “Plateau should have reacted to the increased methane levels and [the] reduced ventilation through the gob by making changes to its ventilation system before the first gob vent borehole was reached.” *Id.* at 757. He did not state what changes should have been made, but he asserted that Plateau possibly could have “achieved compliance by decreasing the rate of production.” *Id.*

B. Decision of the Commission

The ALJ’s decision was appealed to the Commission. The Commission summarized Plateau’s arguments before it as follows:

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. 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. 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) could exist even if the operator complied with its ventilation plan. 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.

Plateau Mining Corp., 28 FMSHRC 501, 508–09 (Aug. 2006) (internal citations omitted).

Four commissioners heard the appeal. They split evenly on whether substantial evidence supported the ALJ’s finding of a § 75.334(b)(1) violation, thereby allowing the ALJ’s decision to stand. For convenience, we refer to the commissioners in favor of affirming as the affirming commissioners and to the commissioners in favor of vacating and remanding as the dissenting commissioners. In several respects, however, the Commission’s decision was unanimous. All commissioners reaffirmed the Commission’s holding in an earlier case that implicit in § 75.334(b)(1) is a requirement that “‘a bleeder system must effectively ventilate the area within the bleeder system and protect active workings from the hazards of methane accumulations.’” *Id.* at 509, quoting *RAG Cumberland Res. LP*, 26 FMSHRC at 647. The Commission explained that the regulation expresses the effectiveness requirement in general terms “to be broadly adaptable to myriad circumstances.” *Id.* at 510 (internal quotation marks omitted). But because of this generality, a mine operator cannot be punished for a violation unless it has proper notice that it is violating the regulation. The Commission explained:

[S]uch broad statements must afford reasonable notice of what is required or proscribed. 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.” 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. 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.

Id. (citations, footnotes, and internal quotation marks omitted)

All the commissioners also agreed that compliance with the mine-specific ventilation plan does not preclude a violation of § 75.334(b)(1). *See id.* at 511; *id.* at 520 (opinion of affirming commissioners); *id.* at 531 (opinion of dissenting commissioners). An affirming commissioner explained the relationship between the regulation requirement and ventilation plans:

Ventilation regulations and ventilation plan provisions were designed to recognize that mine ventilation is a dynamic process. The provisions of 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. . . . [A]n 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.

Id. at 511.

Two commissioners, Duffy and Suboleski, voted to vacate the ALJ's decision and remand the case. In their view the ALJ had tried to rescue the Secretary from her unsupported theory of liability by concocting another theory contradicted by the Secretary's own witnesses. The overview section of their opinion states:

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.

Id. at 523.

The dissenters took issue with the ALJ's reliance on the evidence regarding the mine fan and the regulator doors. They argued as follows: That the fan was operating at full capacity did not mean that the full capacity was insufficient. Likewise, evidence of a decrease in the air volume sweeping the gob did not establish that there was insufficient air, because “[d]ecreased flow is not the same as insufficient flow.” *Id.* at 527. Moreover, the ALJ's finding of insufficient air was contrary to uncontradicted testimony from two of the Secretary's witnesses, Mr. Urosek and Mr. Wirth. Also, the ALJ's conclusion that gob airflow was becoming a smaller percentage of total airflow was based on a mathematical error. In light of these mistakes, the ALJ's finding that methane was accumulating too rapidly in the gob was unwarranted.

In addition, the dissenting commissioners rejected the ALJ's criticism of Plateau for its response to the elevated readings at MPL B1. They did not believe that the evidence showed that Plateau should have taken any additional action. Plateau had reacted as its protocol required, by temporarily ceasing production. It could not have made other changes to its ventilation system because major changes to an MSHA-approved ventilation plan require approval. According to

the dissenters, Plateau could not have investigated the cause of the exceedance at MPL B1 because the methane levels there dropped when production ceased. They thus “fail[ed] to see what Plateau would have investigated.” *Id.* at 528–29 n.9.

The dissenting commissioners further contended that the evidence was insufficient to support a finding that Plateau had notice that its system was in violation of § 75.334(b)(1). The case, they said, “turns on whether the Secretary can establish that a reasonable operator familiar with the conditions in the mine . . . would have made adjustments to the bleeder system,” but “if the Secretary and the [ALJ] 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 75.334(b)(1).”¹ *Id.* at 524. The dissenters believed that the methane readings at MPLs 7 and 8 were better indicators of conditions in the gob than MPL B1 because the air at MPLs 7 and 8 was closer to the gob and had been mixed with fewer sources of other air; and they noted that those readings did not reveal any problem with the system. They concluded that “it is difficult to ascertain how a

¹This statement is apparently based on the dissenting commissioners’ perception that faulty distribution was the only theory that the Secretary presented at the hearing. The dissenters are correct that the Secretary’s primary theory related to distribution, but certain lines of questioning at the hearing indicate that the Secretary also may have been pursuing the theory that the mine had a limited ventilating potential.

reasonably prudent operator would have known that there was a violation of the regulation.” *Id.* at 532.

Commissioner Young, joined by Commissioner Jordan, said that substantial evidence supported the ALJ’s conclusions. Like the ALJ, Commissioner Young found it significant that the mine fan was running at capacity and the regulator doors were wide open. He agreed with the ALJ that the leakage of fresh air into the bleeder entries meant that the readings at the § 75.323(e) measuring point (MPL B1) were “artificially low,” *id.* at 511, and “were a critical indicator that the bleeder system was ineffective,” *id.* at 516. He disputed the dissenters’ assertion that the ALJ should have placed primary importance on the readings at MPLs 7 and 8, stating that the MPL B1 location had “inherent significance” because its limit was established by regulation. *Id.* at 516 n.5. He did not address the mathematical error that the dissenting commissioners described.

Commissioner Young also agreed with the ALJ that a reasonably prudent mine operator would have known that the mine was operating at its maximum ventilation capacity and would have recognized a disruption in the system’s effectiveness because of the elevated § 75.3232(e) readings. In support of this conclusion, he pointed to the testimony of two of Plateau’s witnesses, mine manager Kerry Hales and mining engineer Steven Jones. Commissioner Young described their testimony:

Jones and Hale[s] testified that they were aware of an increasing trend in methane in late July. 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 would have alleviated the “methane problem.” Hales testified that the increasing trend in methane was of particular concern because the fan was at full capacity. Hales and Jones testified that the operator’s only option was to slow down or cease production to let the methane bleed off. Nonetheless, even with this information, the operator increased production and did not take the corrective action required.

Id. at 517–18 (citations omitted). Considering this evidence, Commissioner Young concluded, Plateau’s notice argument must be rejected.

VI. ANALYSIS

Because the Commission split two-to-two on the issue, there is no opinion of the Commission on the existence of a § 75.334(b)(1) violation, and the ALJ’s affirmance of the § 75.334(b)(1) citation was allowed to stand. We therefore review the ALJ’s findings of fact to determine whether they are supported by “substantial evidence.” 30 U.S.C. § 816(a)(1). We review *de novo* the ALJ’s legal conclusions. *See Olson v. FMSHRC*, 381 F.3d 1007, 1011 (10th Cir. 2004).

A. Effectiveness Requirement of 30 C.F.R. § 75.334(b)(1) and Relationship Between § 75.334(b)(1) and Ventilation Plans

Plateau argues on appeal, as it did before the ALJ and the Commission, that § 75.334(b)(1) does not address the *adequacy* of a bleeder system. Plateau also renews its argument that it could not be in violation of § 75.334(b)(1) because it was in compliance with its approved ventilation plan. The two arguments are

closely related: under Plateau’s interpretation, § 75.334(b)(1) sets no standards for the bleeder system because all the specific requirements are contained in the mine’s ventilation plan. According to Plateau, § 75.334(b)(1) merely establishes “the general requirement that a bleeder system is to be used” and describes “how it is to function.” Pet’r Br. at 48. A mine that used a bleeder system that to any degree controls air in the worked-out area and dilutes and moves methane-air mixtures away from active workings and into a return air course would be in compliance with § 75.334(b)(1). The standards for a bleeder system’s effectiveness, Plateau argues, come from the mine-ventilation plan required under § 75.370 and the specific methane limits set in § 75.323. Because the requirements of § 75.334(b)(1) are so minimal under Plateau’s interpretation, any mine operating a bleeder system according to its ventilation plan would already have satisfied that paragraph.

Plateau’s interpretation, though not an implausible reading of § 75.334(b)(1), is at odds with the interpretation of the Secretary and the Commission. The Commission reaffirmed in this case its previous holding in *RAG Cumberland Res. LP*, 26 FMSHRC at 647, that “[a]lthough 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.”

The Commission below further explained that a mine operator can be out of compliance with § 75.334(b)(1) even though it fulfills all the conditions of its mine ventilation plan because “mine ventilation is a dynamic process,” 28 FMSHRC at 511, and the provisions of the ventilation plan may not be able to address every contingency. For an operator to violate the regulation, however, it must be on notice of the problem—that is, it must be shown that a “reasonably prudent person familiar with the mining industry and the protective purposes of the standard” would realize the “specific prohibition or requirement of the standard.” *Id.* at 510 (quoting *Ideal Cement Co.*, 12 FMSHRC at 2416). In the circumstances of this case, the affirming commissioners expressed the test as whether a reasonably prudent person “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.” *Id.* at 517. And the dissenting commissioners adopted essentially the same test: “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.” *Id.* at 523.

An agency’s interpretation of its own regulation is ordinarily controlling unless “plainly erroneous or inconsistent with the regulation.” *See Auer v. Robbins*, 519 U.S. 452, 461 (1997) (internal quotation marks omitted). One exception to the general rule was recognized by the Supreme Court in *Gonzales v.*

Oregon, 546 U.S. 243, 257 (2006), which held that *Auer* deference is not applicable when an agency has promulgated a regulation that merely parrots or paraphrases the statutory language. The Court stated: “An agency does not acquire special authority to interpret its own words when, instead of using its expertise and experience to formulate a regulation, it has elected merely to paraphrase the statutory language.” *Id.* In such a case, the question becomes whether the agency’s position is a permissible interpretation of the statute. *See id.* at 258.

To determine whether the *Gonzales* exception applies here, we examine the history of § 75.334(b)(1). The Federal Coal Mine Health and Safety Act of 1969 established for underground coal mines certain interim mandatory safety standards that were to remain in effect until the Secretary of the Interior promulgated standards that would supersede them. *See* Pub. L. No. 91-173, § 301, 83 Stat. 765 (codified as amended at 30 U.S.C. § 861). (The Federal Mine Safety and Health Amendments Act of 1977 transferred this authority to the Secretary of Labor, *see* Pub. L. 95-164, § 301, 91 Stat. 1290). One such interim provision was 30 U.S.C. § 863(z), which established standards for ventilation by bleeder systems. It provided that worked-out areas:

shall be ventilated by bleeder entries or by bleeder systems or equivalent means, or be sealed When ventilation of such areas is required, such ventilation shall be maintained so as continuously to dilute, *render harmless*, and carry away methane and other explosive

gases within such areas and to protect the active workings of the mine from the hazards of such methane and other explosive gases.

30 U.S.C. § 863(z)(2) (emphasis added). The initial regulation promulgated to supersede the statutory standard (codified at the time at 30 C.F.R. § 75.329) copied the statutory language verbatim. *See* Mandatory Safety Standards, Underground Coal Mines, 35 Fed. Reg. 17890, 17906 (Nov. 20, 1970). That regulation was amended and recodified at § 75.334(b)(1) in 1992. *See* Safety Standards for Underground Coal Mine Ventilation, 57 Fed. Reg. 20868, 20919–20920 (May 15, 1992). The current regulation’s language is similar to that of the statute:

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.

30 C.F.R. § 75.334(b)(1). The relevant differences are that the phrase “render harmless” is omitted from the regulation, and the regulation elaborates that the methane-air mixtures be directed into a return air course or to the surface of the mine.

Although the wording of the statute and the regulation that has superseded it are quite close, the differences, which are central to the issue before us, suggest the “expertise and experience” of the agency, making *Auer* deference appropriate. Indeed the commentary accompanying the promulgation of the 1992 regulations,

see 57 Fed. Reg. 17890 *ff*, clearly evidence the application of experience and expertise. The omission from the regulation of the “render harmless” language appears to be in recognition of the impossibility of rendering methane-air mixtures completely harmless. The regulation therefore tempers the rigid and impractical statutory language. At the same time, however, the interpretation of the regulation by both the Secretary and the Commission clarifies that the regulation does not totally negate the command of the original statute—in fact, no new mandatory safety standard may reduce the protection afforded miners by an existing standard, *see* 30 U.S.C. § 811(a)(9)—but merely limits it to requiring what a reasonably prudent person would know to be possible and necessary for safety.

In short, the concern underlying the *Gonzales* exception to *Auer* deference does not apply here. Turning, then, to whether the interpretation by the Secretary and Commission satisfies *Auer*, we do not hesitate in concluding that it does. It is neither “plainly erroneous [n]or inconsistent with the regulation.” *Auer*, 519 U.S. at 461 (internal quotation marks omitted). Unlike *Plateau*, we do not see why § 75.334(b)(1) must be read as nothing more than an introductory placeholder, with all substantive content deferred to the subsequent provisions; it is quite reasonable to read it as establishing a baseline of safety that a mine operator must meet at all times in case unanticipated conditions render the subsequent provisions inadequate to ensure the effectiveness of the system. The Third

Circuit recently reached the same conclusion. *See Cumberland Coal Res., LP v. Fed. Mine Safety & Health Review Comm'n*, 515 P.3d 247 (3rd Cir. 2008) (compliance with an approved ventilation plan is not a defense to a violation of § 75.334(b)(1)).

B. Evidence of § 75.334(b)(1) Violation

The ALJ's factual findings regarding the occurrence of a § 75.334(b)(1) violation are conclusive if they are supported by substantial evidence. *See* 30 U.S.C. § 816(a)(1) ("The findings of the Commission with respect to questions of fact, if supported by substantial evidence on the record considered as a whole, shall be conclusive.").

Substantial evidence is such evidence that a reasonable mind might accept as adequate to support the conclusion reached by the decisionmaker. Substantial evidence requires more than a scintilla but less than a preponderance. The possibility of drawing two inconsistent conclusions from the evidence does not prevent an administrative agency's findings from being supported by substantial evidence. Thus, we may not displace the agency's choice between two fairly conflicting views, even though the court would justifiably have made a different choice had the matter been before it *de novo*.

Zoltanski v. FAA, 372 F.3d 1195, 1200 (10th Cir. 2004) (citation, brackets, and internal quotation marks omitted). Still, a reviewing court must "take into account whatever in the record fairly detracts from [the] weight" of the evidence that supports the finding. *Universal Camera Corp. v. NLRB*, 340 U.S. 474, 488 (1951).

To establish a violation of § 75.334(b)(1), the Secretary must prove two elements: first, that the bleeder system was not functioning effectively, and second, that the mine operator had notice. We need not address the first element, because we hold that there was insufficient evidence of the second.

To establish notice, the Secretary must prove that a reasonable operator would have known that the bleeder system was not functioning effectively and that additional actions were necessary for safety. The ALJ did not discuss the issue of notice, making only the conclusory statement: “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. We therefore must assume that the facts that the ALJ found to support a violation of the safety standard are the same facts that would have put Plateau on notice of a problem.

First, the ALJ found that because the mine fan was running at full speed and the regulator doors were wide open, the ventilation system was apparently stretched beyond its capacity. But these facts do not support the conclusion that Plateau should have been on notice of an inadequate ventilation system. As the dissenting commissioners put it, “because the fan could not do more does not indicate it was not doing enough.” 28 FMSHRC at 526 n.5. Plateau’s witnesses explained that the burden on the ventilation system was expected to reach its peak at that time (because the borehole had not yet been reached) and that Plateau had chosen to run at the maximum so as to maintain airflow levels *above*

requirements. Running the fan at capacity and keeping the doors wide open was therefore no indication that anything unexpected was occurring.

Relatedly, the ALJ emphasized the importance of ensuring that enough air sweeps the gob. He found that the amount of air sweeping the gob “actually decreased” as methane levels increased. 25 FMSHRC at 747–48. But, again, as the dissenting commissioners noted, “[d]ecreased flow is not the same as insufficient flow.” 28 FMSHRC at 527. It is undisputed that airflow was expected to decrease during the early stages of mining. There is no explanation why Plateau should have believed that the decrease was too steep: the quantity and velocity of air were exceeding the requirements of the ventilation plan—a plan thoroughly reviewed and ultimately approved by MSHA personnel, including John Urosek, the ventilation-division chief at MSHA’s national headquarters. Indeed, Mr. Urosek himself testified that airflow had been sufficient.

Also on the subject of airflow, the ALJ found that the increasing difference between the methane concentrations at MPLs 7 and 8 and those at MPL B1 indicated that airflow from the gob was becoming a smaller percentage of the airflow at MPL B1. According to his analysis, this revealed that methane was accumulating in the gob faster than the system could remove it. 25 FMSHRC at 750. But his analysis was wrong. To be sure, he was correct that as methane concentrations at MPLs 7 and 8 rose between July 29 and July 31, the difference between the concentrations measured at MPLs 7 and 8 and those at MPL B1 also

grew. But as the calculations by the dissenting commissioners demonstrated, the difference between the readings at MPLs 7 and 8 and those at MPL B1 would grow as readings at MPLs 7 and 8 rose regardless of whether the percentage of air at MPL B1 that had passed through MPLs 7 and 8 “decreased, remained constant, or even modestly increased.” 28 FMSHRC at 530 & n.11. Because the air passing through MPLs 7 and 8 mixed with streams of fresher air before arriving at MPL B1 (as the ALJ fully recognized), any rise in levels at MPLs 7 and 8 would be reflected as a lesser increase at MPL B1. Obviously, and contrary to the ALJ’s reasoning, these data did not provide notice to Plateau that something was amiss.

In addition, the ALJ found the increase in the amount of methane liberated at the face and in the gob to be significant—and problematic. This increase in methane liberation was to be expected, however; in fact, the levels of liberated methane were lower than the predictions Plateau had submitted to MSHA for that stage of mining. Also, concentrations of methane at MPLs 7 and 8 were well below Plateau’s action levels, and MSHA never asserted that the concentrations at those locations were too high. Indeed, the concentrations of methane had not even reached as high as the post-action safety level—the level at which production could *resume* after production had halted because an action level had been reached. Without more, the rising methane levels did not constitute notice to Plateau of an ineffective bleeder system.

The ALJ found that the methane readings at MPL B1 in particular indicated a problem with the system. But when the methane levels at MPL B1 exceeded Plateau's action level—as happened twice, approximately 20 hours before the accident—Plateau acted in conformity with its protocol by waiting for the methane concentrations to return to acceptable levels before restarting production. The protocol already accounted for the occasional exceedance of the action level—the very point of establishing an action level is to trigger a response before higher levels are reached—and nothing happened that called into question the adequacy of that response. Moreover, as MSHA's own ventilation expert testified, one or two exceedances of the 2.0% regulatory limit itself—and Plateau had only one—do not necessarily mean that changes to the system are required. Unavoidable sudden releases of methane may cause spikes in the methane concentrations, and although these should not trigger regular exceedances, an isolated occurrence does not prove that the system is ineffective.

Further, the ALJ relied upon the evidence of leakage of fresh air into the bleeder system between MPLs 7 and 8 and MPL B1 to conclude that the readings at MPL B1 should have indicated a problem to Plateau. According to the ALJ, without the leakage the readings at MPL B1 “would have revealed” a problem with the bleeder system. 25 FMSHRC at 748. The Secretary's witnesses never addressed, however, whether Plateau should have known about the leakage of fresh air before or during mining on the D-3 panel or whether the leakage was

merely understood after the accident as evidence of a flawed system.

Revealingly, Mr. Urosek testified that the leakage “tells *us*” that the system was overextended, R. Vol. 4 at 602 (emphasis added); he did not state that it would have put Plateau on notice at the time. The ALJ did not explain how a reasonable operator would have known of the leakage and understood its significance when MSHA apparently failed to appreciate the point when reviewing the plan.

And even if Plateau had known that the readings at MPL B1 would have been higher without the fresh-air leakage, the ALJ failed to explain why, in light of the normal readings at MPLs 7 and 8, these readings would have caused concern to a reasonable operator. Considering that all the air exiting the gob passed through MPLs 7 and 8—before traveling more than 8,000 feet and being mixed with air from other sources on its way to MPL B1—the ALJ gave no reason to treat the readings at MPL B1 as a better measurement of gob conditions than the readings at MPLs 7 and 8. Commissioner Young contended that the readings at MPLs 7 and 8 did not necessarily provide a “materially more accurate picture of methane in the gob” given that the air exiting the gob was diluted by another stream of air before passing through MPLs 7 and 8, *see* 28 FMSHRC at 516 n.5; but the fact remains that the air leaving MPLs 7 and 8 was even further diluted—and delayed—on its way to MPL B1.

Nor did the affirming commissioners provide a reasonable explanation of how Plateau was on notice. Commissioner Young placed great weight on the

statements by Plateau's witnesses Mr. Hales and Mr. Jones. But those statements do not support a finding of notice. Although Hales and Jones acknowledged that the system was running at full capacity, they never testified that the ventilation system had been pushed *beyond* its capacity or that the system was not performing as required or expected. Jones, a staff mining engineer, testified that he had been watching the rise in methane levels after July 26 and that through July 31 the mine had not reached a stage that warranted a change in the system. The increase in methane was not alarming, he said, because the size of the gob was also increasing. He did not feel that any action was necessary because they were still "way above [the] requirements on the face." R. Vol. 4 at 802. He did not specifically remember whether he had been aware of the two exceedances of the action level at MPL B1, and he testified that had he been aware of them, he would have been concerned that the levels were "close to what we could handle in the ventilation system." *Id.* at 803. But he maintained that they "had not exceeded" that level. *Id.* Hales, the mine manager, likewise testified that on the day of the accident, methane levels were "a little high" but "in requirements," and that he "didn't see any warning." *Id.* at 752. Both testified that Plateau's only option, given that maximum capacity had been reached, would have been to cease or slow

production.² This is not evidence that the ventilation system's capacity had been exceeded or that Plateau should have known that it had been.

To be clear, the fact that Plateau was operating its bleeder system in compliance with its ventilation plan does not itself preclude a finding of a § 75.334(b)(1) violation. Conditions not anticipated by the plan may arise that would alert the reasonably prudent mine operator that an out-of-plan response is necessary. But the absence of any occurrence not anticipated by the MSHA-approved plan indicates that there was nothing that should have put Plateau on notice that additional action was necessary.

VII. CONCLUSION

Because substantial evidence does not support the ALJ's finding that the regulation's notice requirement was satisfied, we reverse the decision of the ALJ.

²Commissioner Young faulted Plateau for continuing to increase its production rate on July 31, 28 FMSHRC at 518, and the ALJ also suggested that Plateau could have "achieved compliance by decreasing the rate of production," 25 FMSHRC at 757. Neither explains why slowing the rate of production is preferable to stopping production when an action level is reached, particularly given the unusual feature of continuous monitoring, which allowed the mine operator to respond promptly to changes.