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VP-5 MINING COMPANY V. SOL (MSHA)  
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August 18, 1993

VP-5 MINING COMPANY	:	
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v.	:	Docket Nos. VA 92-112-R
	:	VA 92-113-R
SECRETARY OF LABOR, MINE SAFETY	:	VA 92-114-R
AND HEALTH ADMINISTRATION (MSHA)	:	VA 92-115-R

BEFORE:  Holen, Chairman; Backley, Doyle and Nelson, Commissioners

DECISION

BY THE COMMISSION:

This contest proceeding arises under the Federal Mine Safety and Health Act of 1977, 30 U.S.C. 801 et seq. (1988)("Mine Act" or "Act"). The issues are whether the presence of an accumulation of methane behind stoppings along the bleeder entries of a gob(Footnote 1) in a longwall section presented an imminent danger and whether VP-5 Mining Company ("VP-5") was complying with its ventilation plan in accordance with 30 C.F.R. 75.316.(Footnote 2) This case arose when an inspector of the Department of Labor's Mine Safety and Health

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1 "Gob," in the context of this case, refers to the "space left by the extraction of a coal seam..." Bureau of Mines, U.S. Department of the Interior, Dictionary of Mining, Mineral, and Related Terms, at 497 (1968)(DMMRT). "Bleeder entries" are "panel entries driven on a perimeter of block of coal being mined and maintained as exhaust airways to remove methane promptly from the working faces to prevent buildup of high concentrations either at the face or in the main intake airways." DMMRT at 112.

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2 At all pertinent times, section 75.316 provided, in part:

A ventilation system and methane and dust control plan and revisions thereof suitable to the conditions and the mining system of the coal mine and approved by the Secretary shall be adopted by the operator and set out in printed form.... Such plan shall be reviewed by the operator and the Secretary at least every 6 months.

Section 75.316 was identical to section 303(o) of the Mine Act. The Secretary's ventilation standards have been revised effective August 16, 1992; ventilation plan provisions are now at sections 75.370 -.372.

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Administration ("MSHA") issued two imminent danger orders and two citations to VP-5 after he determined that an area within the gob contained an explosive accumulation of methane. Commission Administrative Law Judge Gary Melick affirmed the orders and citations. 14 FMSHRC 1033 (June 1992)(ALJ) For the reasons set forth below, we affirm the imminent danger orders but vacate the citations.

## I.

### Factual and Procedural Background

The VP-5 mine liberates more than 20 million cubic feet of methane per day. The gob, known as the East Gob, is an inaccessible area resulting from the mining of seven longwall panels. The panels are each 4,800 feet long and, taken together, are about 6,800 feet wide. The gob is ventilated primarily by air that enters the gob along the longwall panel, flows through the gob, and exits through connector entries ("connectors") into bleeder entries. Air also exits through bore holes to the surface. This ventilation system is designed to dilute and render harmless any methane liberated at the longwall face or emitted in the gob.

As mining has progressed, development entries have been established using a continuous mining machine in advance of each longwall panel. Each development entry consists of four individual entries, and serves as the headgate entry when the longwall equipment is moved into the panel and then as the tailgate entry when the longwall is moved into the next panel. Connectors link each entry to the bleeder entries. Stoppings were constructed across many of the connectors and a few of the stoppings were equipped with regulators.(Footnote 3) The development entries are consecutively numbered and, at the time the citations and orders were issued, the headgate was in the No. 9 development entry and the tailgate was in the No. 8 entry.

On March 25, 1992, MSHA Inspector Carl Duty inspected the mine pursuant to section 103(i) of the Mine Act, 30 U.S.C. 813(i).(Footnote 4) He measured the methane in the bleeder entries and determined that the methane level was less than 3% at all locations. Inspector Duty then took methane readings in each of the 32 connectors, about 2 feet from the stoppings, using a Rikon methane monitor. In some stoppings the regulators were open. The methane readings he obtained for development entries 1 through 6 ranged between 1.5% and 4.2%. The highest reading he obtained in each set of development entries was 3.2% for No. 1, 4.0% for No. 2, 4.1% for No. 3, 3.5% for No. 4, 3.5% for No. 5 and 4.2% for No. 6. Gov. Ex. 2. The inspector also took bottle samples of the air. Laboratory analysis of the bottle sample taken at the No. 6 Development

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3 A regulator is a door, of any size, located in a stopping. The regulator can be opened or closed as needed. See DMMRT, at 910.

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4 Section 103(i) provides, in part, that mines liberating more than one million cubic feet of methane per day shall be inspected by an authorized representative of the Secretary at least once "during each five working days at irregular intervals."

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showed 4.13% methane, 20.01% oxygen and .107% ethane. Gov. Ex. 3. Duty believed the measurements indicated that an explosive mixture of methane was accumulating in the gob and backing up to the longwall face. He believed that, because the methane in the gob could be ignited, an imminent danger existed. Accordingly, he issued an order under section 107(a) of the Mine Act, 30 U.S.C. 817(a), withdrawing miners from the longwall section. (Footnote 5)

Inspector Duty also issued a citation under section 104(a) of the Mine Act, 30 U.S.C. 814(a), because he believed that the operator was not controlling methane in the gob as required by the mine ventilation plan. Later that day, Inspector Duty found the methane levels to be less than 3% at the same locations and he terminated the order.

On March 26, Inspector Duty returned to the mine and took methane readings at the same locations. The highest methane readings he obtained in each set of development entries were 3.0% for No. 1, 4.5% for No. 2, 3.8% for No. 3, 4.8% for No. 4, 4.6% for No. 5 and 5.2% for No. 6. Gov. Ex. 13. The inspector issued another imminent danger order and a citation alleging a

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5 Section 107(a) of the Mine Act provides, in pertinent part:

If, upon any inspection or investigation of a coal or other mine which is subject to this [Act], an authorized representative of the Secretary finds that an imminent danger exists, such representative shall determine the extent of the area of such mine throughout which the danger exists, and issue an order requiring the operator of such mine to cause all persons, except those referred to in section [104(c)], to be withdrawn from, and to be prohibited from entering, such area until an authorized representative of the Secretary determines that such imminent danger and the conditions or practices which caused such imminent danger no longer exist.

The order and citation both stated:

The bleeder system was not functioning properly in that the methane content at the bleeder connectors from [the] No. 2 development through No. 6 development ranged from 4.0 percentum at the No. 2 development to 4.2 percent at the No. 6 development. This is a significant increase in the amount of methane that is normally observed in these connectors indicating that the methane content in these areas are not being controlled.

Gov. Exs. 4 & 11.

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violation of section 75.316.(Footnote 6)

VP-5 filed notices of contest of the citations and orders and a hearing was held before Judge Melick on April 15, 1992. The judge credited the testimony of MSHA's witnesses that explosive concentrations of methane and ready ignition sources were present in the gob. 14 FMSHRC at 1040. On this basis, the judge concluded that "within the framework of the undisputed evidence, there was clearly an imminent danger..." 14 FMSHRC at 1041.

With respect to the citations, the judge concluded that the operator violated paragraph 10 of its ventilation plan because the methane content in the gob was not being adequately controlled. 14 FMSHRC at 1037-38. He found that the term "control" in paragraph 10 is ambiguous and may be subject to different interpretations. He also determined that the record contained insufficient evidence to draw any inferences as to MSHA's prior interpretation of this term. The judge affirmed the citations on the basis of the operator's own policy of shutting down the longwall whenever the methane level in the connectors reaches 4%. The judge determined that VP-5 recognized, as evidenced by its policy, that methane in the gob is not being adequately controlled when the methane level in the connectors reaches 4%. He concluded that VP-5's practice "establishes the meaning [of the term control] intended by the parties." 14 FMSHRC 1038.

The Commission granted VP-5's Petition for Discretionary Review of the judge's decision.

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6 The order stated:

The bleeder system was not functioning properly in that 4.5 to 5.2 percentum of methane was present in the bleeder connectors from No. 2 development to No. 6 development. Permanent type stopping[s] were being erected in the bleeder connectors that prevent the air from being coursed through the gob area as approved by ventilation plan for this mine.

Gov. Ex. 15. The citation stated:

The bleeder system was not functioning properly in that 4.5 to 5.2 percentum of methane was present in the bleeder connectors from No. 2 development to No. 6 development. The approved ventilation plan was not being complied with in that permanent type stoppings were being erected in the bleeder connectors at the top of the No. 2 through No. 7 developments that prevents the gob area from being ventilated as approved by the MSHA District Manager.

Gov. Ex. 16.

II.

Disposition of the Issues

A. Imminent Danger Orders

Section 3(j) of the Mine Act defines an imminent danger as "the existence of any condition or practice in a coal or other mine which could reasonably be expected to cause death or serious physical harm before such condition or practice can be abated." 30 U.S.C. 802(j). Congress made clear that an imminent danger is not to be defined "in terms of a percentage of probability that an accident will happen." S. Rep. No. 181, 95th Cong., 1st Sess. 38 (1977), reprinted in Senate Subcommittee on Labor of the Committee on Human Resources, 95th Cong., 2nd Sess, Legislative History of the Federal Mine Safety and Health Act of 1977 at 626 (1978). Instead, the focus is on the "potential of the risk to cause serious physical harm at any time." Id. Congress intended to give inspectors "the necessary authority for the taking of action to remove miners from risk." Id.

The Commission adopted this reasoning in *Rochester & Pittsburgh Coal Co.*, 11 FMSHRC 2159, 2163 (November 1989), where it noted that "the U.S. Courts of Appeals have eschewed a narrow construction and have refused to limit the concept of imminent danger to hazards that pose an immediate danger." (citations omitted). The Commission noted further that the courts have held that "an imminent danger exists when the condition or practice observed could reasonably be expected to cause death or serious physical harm to a miner if normal mining operations were permitted to proceed in the area before the dangerous condition is eliminated." Id., quoting *Eastern Associated Coal Corp. v. Interior Bd. of Mine Op. App.*, 491 F.2d 277, 278 (4th Cir. 1974). The Commission adopted the Seventh Circuit's holding that an inspector's finding of an imminent danger must be supported "unless there is evidence that he has abused his discretion or authority." 11 FMSHRC at 2164, quoting *Old Ben Coal Corp. v. Interior Bd. of Mine Op. App.*, 523 F.2d 25, 31 (1975).

VP-5 argues that the judge failed to recognize that the Secretary offered no evidence as to the levels of methane and oxygen in the gob. VP-5 maintains that the Secretary and the judge improperly assumed that the quantity of methane and oxygen in the connectors, in the amounts measured by the inspector, indicated that there was an explosive mixture of methane in the gob. It contends that the inspector's measurements were not probative of the conditions in the gob. The Secretary contends that the judge correctly determined that the gob contained an explosive mixture of methane.

The Commission is bound by the substantial evidence test when reviewing an administrative law judge's factual determinations. 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 a conclusion." See, e.g., *Rochester & Pittsburgh*, 11 FMSHRC at 2163, quoting *Consolidation Edison Co. v. NLRB*, 305 U.S. 197, 229 (1938). The judge evaluated the evidence as to the "three ingredients necessary for a methane ignition or explosion, i.e. fuel, adequate oxygen and an ignition source." 14 FMSHRC at 1040. The methane and

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oxygen measurements in the connectors are not in dispute. The inspector measured methane concentrations as high as 4.2% on March 25. Bottle samples revealed that there was about 4.13% methane and .107% ethane. On March 26, the inspector measured methane levels as high as 5.2% and bottle samples confirmed the presence of 4.8% methane and .113% ethane. MSHA presented evidence, not disputed by VP-5, that methane in the presence of ethane can provide fuel for an ignition or explosion at levels below 5%. The bottle samples show that the oxygen concentration was 20.01% on March 25 and 19.89% on March 26. It is undisputed that this level of oxygen is sufficient to support an ignition or explosion.

The inspector inferred that, because he obtained methane readings above 4.0% in the connectors, there were explosive concentrations of methane in the fringe area of the gob. (Footnote 7) VP-5's mine manager testified that these readings did not indicate the level of methane and oxygen in the fringe areas of the gob. The judge did not address how the methane/ethane/oxygen mixture in the connectors proved that there was an explosive mixture in the gob, but he credited the inspector's testimony. The record contains sufficient evidence to reasonably conclude, as did the judge, that the measurements of methane taken by the inspector in the connectors indicates that a large quantity of explosive methane was present in the fringe area of the gob. The inspector issued the imminent danger orders in large part because he had normally encountered about 3.0% to 3.5% methane in these connectors and he believed that the higher readings indicated that methane was building up in the fringe area of the gob.

VP-5 also challenges the judge's finding that ignition sources existed that could have ignited methane. VP-5 contends that conditions at the longwall face could not have ignited methane in the gob and notes that the judge did not make specific findings on this point. VP-5 also argues that the Secretary presented no evidence that a roof fall could have ignited methane in the gob. The Secretary argues that there is record support for the judge's findings.

The judge did not rely on the longwall face as an ignition source in reaching his conclusion that an imminent danger existed. 14 FMSHRC at 1040-41. He found that the undisputed testimony of Clete Stephan, MSHA's expert on mine ignitions and explosions, established that ignitions can be triggered by frictional heat from rocks sliding against one another during a roof fall. 14 FMSHRC at 1040. The judge also found that roof falls could be expected to occur in the fringe areas of the gob. Id. He concluded that "frictional heat" was an undisputed ignition source and based his imminent danger finding on the potential that a roof fall in the gob could propagate a mine fire or explosion.

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7 Several of the Secretary's witnesses stated that the fringe areas adjacent to the connectors in a gob are subject to hazardous methane concentrations. The interior of the gob apparently does not present an ignition hazard because the methane concentrations are so high that there is insufficient oxygen to propagate a fire or explosion.

Stephan testified that "rock falls, if they generate enough heat, or energy, can ignite methane." Tr. 191. He stated that the Pocahontas coal formation is overlaid by massive sandstone beds that contain quartzite and that very little energy would be required to ignite the methane/ethane/oxygen mixture that was present in the gob. Tr. 194-95. He stated that the energy released by a roof fall in an area containing quartz crystals is sufficient to ignite methane. Id. Stephan testified that the conditions on the fringes of the gob are such that roof falls are highly likely. Tr. 197.

An MSHA accident investigation report, issued as a result of a methane ignition at the VP-5 Mine in 1991, indicates that the mine roof contains "shale and laminated sandstone." Gov. Ex. 8; see also Gov. Ex. 9. The report states that methane "was ignited by sparks generated from the cutting bits of the continuous mining machine striking a sandstone roll." Id. Sandstone, including laminated sandstone, contains quartz crystals.(Footnote 8) Thus, substantial evidence supports the judge's finding that frictional heat was a potential ignition source in the gob.(Footnote 9)

VP-5 also argues that the Secretary failed to establish that any existing hazard presented a danger that was imminent. It argues that the Secretary did not prove that the hazardous condition had a "reasonable potential to cause death or serious injury within a short period of time." VP-5 Br. 17, quoting Utah Power & Light Co., 13 FMSHRC 1617, 1622 (October 1991). The Secretary met his burden of demonstrating that the hazard present in the gob was imminent. The Secretary's evidence makes clear that the inspector reasonably concluded that the conditions in the fringe area of the gob presented an impending hazard requiring that the longwall be shut down immediately. Tr. 41-43, 196-97. We conclude that substantial evidence supports the judge's imminent danger findings.(Footnote 10)

#### B. Citations

VP-5 contends that it fully complied with the Mine Act and the Secretary's safety standards because, pursuant to its ventilation plan, it provided sufficient ventilation in the gob to carry the methane away from the working areas of the mine through the bleeder entries. It maintains that the

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8 Sandstone is defined as a "cemented or otherwise compacted detrital sediment composed predominantly of quartz grains...." DMMRT at 961.

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9 With regard to the order issued on March 26, the judge also concluded that miners working in the bleeders could have ignited the methane. Because we conclude that substantial evidence supports the judge's finding that frictional heat from a roof fall could have ignited the methane, we do not reach this issue.

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10 In Island Creek Coal Co., 15 FMSHRC 339 (March 1993), the Commission affirmed an administrative law judge's decision that vacated imminent danger orders issued as a result of methane measurements taken adjacent to a gob. The evidence offered by the Secretary in support of the imminent danger orders differed in Island Creek and the instant case. We have based our decision in each case on the evidence presented to the judge.



presence of methane in the bleeder entries at a level of less than 3% demonstrates that its ventilation controls were working. VP-5 argues that explosive mixtures of methane are to be expected in the gob because large quantities of methane are liberated at the longwall face but that the presence of methane in the gob does not, by itself, violate its ventilation plan.

The Secretary contends that levels of methane of 4% or more in the connectors establishes that the mine's ventilation system was not adequately controlling the level of methane in the gob. The Secretary argues that the presence of explosive levels of methane in the gob demonstrated that VP-5 was not complying with its ventilation plan.

The ventilation plan provision alleged to have been violated states: "Bleeder entries, bleeder systems, or equivalent means will be used in all active pillaring areas to ventilate the mined areas from which pillars have been ... extracted so as to control the methane content in such areas." Gov. Ex. 12 (emphasis added).(Footnote 11) In reaching his conclusion that VP-5 violated its ventilation plan, the judge relied on VP-5's internal policies. The judge found that "when methane levels reach 4 percent in the bleeder connectors there has been recognition in VP-5 company policy and practice that the methane in the gob is not adequately controlled." 14 FMSHRC at 1038. He determined that this "policy and practice is entirely consistent with the Secretary's" interpretation of the ventilation plan. Id. The judge found that this evidence "establishes the meaning intended by the parties" and he concluded that VP-5 violated its ventilation plan. Id.

The Commission has held that, in plan violation cases, "the Secretary must establish that the provision allegedly violated is part of the approved and adopted plan and that the cited condition or practice violates the provision." Jim Walter Resources, 9 FMSHRC 903, 907 (May 1987). VP-5's witnesses explained, without contradiction, that, under its policy, the longwall is shut down when the level of methane entering the bleeders is greater than 4% in order to stop the liberation of additional methane at the longwall face. VP-5 established this policy because of a concern that, if high levels of methane enter the bleeders, the methane might not be sufficiently diluted in the bleeders to meet the requirement that air coursed through the gob contain no more than 2% methane at the point where it enters the main returns. 30 U.S.C. 863(z)(2).(Footnote 12) On March 25, Inspector Duty measured about 1.8% methane at that location.

Section 303(z)(2) of the Mine Act requires gob areas to be ventilated by bleeder entries. This provision states that "such ventilation shall be

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11 This provision was taken directly from 30 C.F.R. 75.316-2(e), which was promulgated by the Secretary of the Interior on November 20, 1970. 35 Fed Reg. 17890. Under the Secretary's new ventilation standards, bleeder systems are covered by section 75.334.

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12 At the time the citations were issued, this requirement was set forth in the Secretary's safety standards at 30 C.F.R. 75.329. Under the Secretary's new standards, this requirement is set forth at 30 C.F.R. 75.323(e).

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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). The provision of the ventilation plan taken from section 75.316-2(e) is designed, in large measure, to implement this language in the statute. The clear intent is to ensure that methane in the gob is forced into the bleeders and away from active workings. The Secretary admitted in his brief that the "purpose of bleeder entries is to dilute and carry away methane liberated by the gob so that the methane level is less than 2.0% before it goes into the main return." S. Br. 2. Nothing in the Mine Act, the Secretary's regulations or the ventilation plan indicates that methane must be diluted to a specific level before the air ventilating the gob enters the connectors.

VP-5 presented evidence that the gob was being ventilated in accordance with the mine's ventilation plan. Richard Ray, VP-5's ventilation expert, testified that the disputed plan provision requires that methane in the gob be moved into the bleeders so that it can be diluted and carried away. VP-5 conducted a pressure quantity ventilation survey, which it believes established that a satisfactory quantity of air was moving through the gob and adjacent bleeders on March 25 and 26. Tr. 285-90. Inspector Duty could not state what concentration of methane in the connectors would indicate that methane in the gob is being controlled as required by the plan, saying only that "[t]here's no set number" but 4% was too high. Tr. 45-47. The Secretary does not dispute that explosive levels of methane are often present in a gob. Tr. 203-04. The methane readings obtained by the inspector indicate low levels of methane in the connectors closest to the longwall face, the Nos. 7 and 8 development entries (Gov. Exs. 2 and 13), indicating that the methane was moving away from the face into the bleeders, as expected, and was not backing up to the face as feared by the Inspector.(Footnote 13)

Paragraph 10 of the ventilation plan cannot be fairly read to include a requirement that methane be diluted to a concentration of less than 4% before it leaves the gob. The company's longwall shutdown policy does not introduce such a requirement into the ventilation plan. We conclude that substantial evidence is lacking for the judge's finding that VP-5's policy established that methane was not being adequately controlled if a concentration of more than 4% is detected in the connectors and that the Secretary failed to prove that the company violated its ventilation plan.

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. If the Secretary believes that this particular mine requires special provisions

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13 The record indicates that Inspector Duty took his methane readings in a different location than the operator does in implementing this policy. The inspector measured the methane about 2 feet from the stoppings while the company measures for methane at the mouth of the connectors, where the connectors intersect with the bleeder entries, some 50 to 60 feet away. Tr. 33, 108-09, 274-76. The methane concentrations may be different at these locations.

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concerning methane in the gob, he should seek amendment of the mine's ventilation plan to address that issue.

III.

Conclusion

For the foregoing reasons, we affirm the judge's imminent danger findings, reverse his conclusion that VP-5 violated its ventilation plan and vacate citation Nos. 3800173 and 3800175.

Arlene Holen, Chairman

Richard V. Backley, Commissioner

Joyce A. Doyle, Commissioner

L. Clair Nelson, Commissioner