

**FEDERAL MINE SAFETY AND HEALTH REVIEW COMMISSION**

1730 K STREET NW, 6TH FLOOR  
WASHINGTON, D.C. 20006

June 20, 1986

CONSOLIDATION COAL COMPANY	:	
	:	
v.	:	Docket No. WEVA 82-209-R
	:	
SECRETARY OF LABOR,	:	
MINE SAFETY AND HEALTH	:	
ADMINISTRATION (MSHA)	:	
	:	
	:	
SECRETARY OF LABOR,	:	
MINE SAFETY AND HEALTH	:	
ADMINISTRATION (MSHA)	:	
	:	Docket No. WEVA 82-245
v.	:	
	:	
CONSOLIDATION COAL COMPANY,	:	
	:	
	:	
UNITED MINE WORKERS OF AMERICA,	:	
Intervenor	:	

BEFORE: Backley, Doyle, Lastowka and Nelson, Commissioners

DECISION

BY THE COMMISSION:

This case presents a question of major importance in the enforcement of the Federal Mine Safety and Health Act of 1977, 30 U.S.C. § 801 et seq. (1982), concerning overexposure to respirable dust in coal mines: What are the appropriate criteria for determining whether a violation of 30 C.F.R. § 70.100(a), based upon designated occupation sampling results obtained pursuant to 30 C.F.R. § 70.207, is of such nature as could significantly and substantially contribute to the cause

and effect of a mine health hazard. 1/ In the hearing on the merits before Commission Administrative Law Judge James A. Broderick, Consolidation Coal Company ("Consol") admitted that it violated the standard, but denied that the violation was significant and substantial within the meaning of section 104(d)(1) of the Mine Act. 30 U.S.C. § 814(d)(1). See n. 3, infra. Judge Broderick determined that the violation was properly designated as significant and substantial, and assessed a civil penalty of \$150. 5 FMSHRC 378 (March 1983)(ALJ). We granted Consol's petition for discretionary review, permitted the participation of several amici curiae, and heard oral argument. 2/

We conclude that the test first set forth in Cement Division, National Gypsum Co., 3 FMSHRC 822 (April 1981), with certain adaptations appropriate in the context of this exposure-related health standard, is applicable in determining whether a violation of section 70.100(a), based upon designated

1/ 30 C.F.R. § 70.100(a) provides:

Each operator shall continuously maintain the average concentration of respirable dust in the mine atmosphere during each shift to which each miner in the active workings of each mine is exposed at or below 2.0 milligrams of respirable dust per cubic meter of air as measured with an approved sampling device and in terms of an equivalent concentration determined in accordance with § 70.206 (Approved sampling devices; equivalent concentrations).

30 C.F.R. § 70.207 provides in part:

(a) Each operator shall take five valid respirable dust samples from the designated occupation in each mechanized mining unit during each bimonthly period beginning with the bimonthly period of November 1, 1980. Designated occupation samples shall be collected on consecutive normal production shifts or normal production shifts each of which is worked on consecutive days. The bimonthly periods are:

January 1	-	February 28 (29)
March 1	-	April 30
May 1	-	June 30
July 1	-	August 31
September 1	-	October 31
November 1	-	December 31.

2/ The following amici curiae participated in review proceedings before the Commission: the American Mining Congress, Emery Mining Corporation, the United Steelworkers of America, the International Chemical Workers Union, and the Council for the Southern Mountains.

occupation sampling results in excess of the specified limit, is significant and substantial. On the bases discussed below, we affirm the judge's finding of a significant and substantial violation.

I.

Consol operates the Blacksville No. 1 Mine, in Monongalia County, West Virginia. On January 20-24, 1982, pursuant to the designated occupation sampling requirements of the Department of Labor's Mine Safety and Health Administration ("MSHA"), Consol collected five respirable dust samples for the continuous miner occupation in section 026-0, a mechanized mining unit. The samples were collected with an approved sampling device operated by a certified person. As required by 30 C.F.R. § 70.209(a), Consol submitted the samples to MSHA for analysis. The operator included a request that MSHA check the samples for contamination, rock dust, and oversized particles. MSHA's weight analysis of the samples revealed respirable dust concentrations of 8.1, 0.4, 5.1, 6.3 and 0.7 milligrams of respirable dust per cubic meter of air (mg/m<sup>3</sup>). The average concentration for the five samples was 4.1 mg/m<sup>3</sup>. MSHA did not microscopically examine the samples for contamination, rock dust, or oversized particles.

On the basis of these test results, an MSHA inspector issued a citation to Consol under § 104(a) of the Mine Act, 30 U.S.C. § 814(a), alleging that miners had been exposed to an average respirable dust concentration of 4.1 mg/m<sup>3</sup> in violation of section 70.100(a). The inspector, following MSHA enforcement policy guidelines, designated the violation as significant and substantial. 3/ The citation was terminated

3/ Section 104(d)(1) of the Mine Act provides:

If, upon any inspection of a coal or other mine, an authorized representative of the Secretary finds that there has been a violation of any mandatory health or safety standard, and if he also finds that, while the conditions created by such violation do not cause imminent danger, such violation is of such nature as could significantly and substantially contribute to the cause and effect of a coal or other mine safety or health hazard, and if he finds such violation to be caused by an unwarrantable failure of such operator to comply with such mandatory health or safety standards, he shall include such finding in any citation given to the operator under this chapter. If, during the same inspection or any subsequent inspection of such mine within 90 days after the issuance of such citation, an authorized representative of the Secretary finds another violation of any mandatory health or safety standard and finds such violation to be also caused by an unwarrantable failure of such operator to so comply, he shall forthwith issue an order requiring the operator to cause all persons in the area affected by such violation, except those persons referred to in subsection (c) of this section to be withdrawn from, and to be prohibited from entering, such area until an authorized representative of the Secretary determines that such violation has been abated.

30 U.S.C. § 814(d)(1) (emphasis added).

when five valid samples collected on five consecutive production shifts revealed an average respirable dust concentration equal to or less than the 2.0 mg/m<sup>3</sup> permissible exposure level of section 70.100(a). Consol contested the citation and a hearing was held.

Before the administrative law judge, Consol conceded a violation of 30 C.F.R. § 70.100(a). The primary focus of Consol's argument and the judge's decision was on whether the violation was of such nature as could significantly and substantially contribute to the cause and effect of a coal mine health hazard. In upholding the MSHA inspector's finding, the judge relied in part on the Commission's National Gypsum test for determining the existence of a significant and substantial violation of a safety standard and on the detailed medical evidence presented by the parties. 5 FMSHRC at 388-90. 4/

The judge found that chronic bronchitis and black lung disease, technically known as coal workers' pneumoconiosis ("pneumoconiosis"), can result from cumulative exposure to respirable dust in coal mines. 5 FMSHRC at 381-382. Chronic bronchitis, which can be disabling, is an inflammation of the bronchial tubes that results in a chronic productive cough and loss of lung function. 5 FMSHRC at 381. Pneumoconiosis, as the judge stated, is:

a lung disease caused by the deposition of coal dust on the human lung and the body's reaction to it. The dust accumulates in the small airways and the macrophagia of the lungs are unable to clear it. Continuous exposure to coal dust may cause the condition to spread and to involve most parts of the lung. In some individuals the condition may progress to progressive massive fibrosis which involves the destruction of alveoli and distortion of the remaining lung tissue.

Id. 5/ Evaluating the medical evidence, the judge found that the over-exposure in this case to an average respirable dust concentration of 4.1 mg/m<sup>3</sup>, in and of itself, would not cause or significantly contribute to chronic bronchitis or pneumoconiosis. 5 FMSHRC at 389. However, he

---

4/ The judge also concluded that, in appropriate instances, an inspector may make a significant and substantial finding in a section 104(a) citation. 5 FMSHRC at 388. The Commission resolved this issue subsequently in Consolidation Coal Co., 6 FMSHRC 189 (February 1984). The judge's conclusion is consistent with the Commission's holding in Consolidation Coal and, therefore, we affirm the judge's decision in this regard and limit our discussion to the remaining issues raised on review.

5/ Simple pneumoconiosis is asymptomatic and diagnosed by X-ray examination. Complicated pneumoconiosis, or progressive massive fibrosis, is more severe and typically causes symptoms of chronic cough and shortness of breath. 5 FMSHRC at 381.

also found that cumulative instances of exposure to a 4.1 mg/m<sup>3</sup> concentration of respirable dust could cause or significantly contribute to development of these diseases. Id. The judge reasoned that each unit of overexposure is an important factor in contributing to either disease. 5 FMSHRC at 389-90. He also noted that the overexposure in this case was more than twice the allowable maximum dust level--a "substantial overexposure" in his view. 5 FMSHRC at 389 n. 4. The judge concluded that each episode of overexposure significantly and substantially contributes to the health hazard of contracting chronic bronchitis or pneumoconiosis, diseases of a reasonably serious nature. 5 FMSHRC at 389-90.

## II.

We first discuss the proper test for determining whether a violation of section 70.100(a) is significant and substantial, evaluate Consol's assertions that MSHA's dust sampling methods are fatally flawed, and then apply our test to the facts of the present case.

In National Gypsum, the Commission held:

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

3 FMSHRC at 825. Consonant with the Mine Act's significant and substantial phraseology and the Act's overall enforcement scheme, we stated:

[A] violation "significantly and substantially" contributes to the cause and effect of a hazard if the violation could be a major cause of a danger to safety or health. In other words, the contribution to cause and effect must be significant and substantial.

3 FMSHRC at 827 (footnote omitted). See also U.S. Steel Mining Co., 6 FMSHRC 1834, 1836 (August 1984); Consolidation Coal Co., 6 FMSHRC 34, 37 (January 1984); Mathies Coal Co., 6 FMSHRC 1, 3-4 (January 1984). Thus, the violation must be a major cause of a danger to safety or health. 6/

6/ Although the language of National Gypsum speaks to the hazards created by violations of both mandatory safety and health standards, it is important to note that until now the Commission has had occasion to review application of the test only in cases involving violations of mandatory safety standards. See, e.g., Mathies Coal Co., 6 FMSHRC at 3 n. 4. In applying and interpreting the test as it here relates to a violation of 70.100(a), a health standard, we imply no change in the test as applied to violations of mandatory safety standards.

Prior to the Commission's National Gypsum decision, the Secretary of Labor's enforcement policy was to regard all violations of mandatory standards as significant and substantial, except violations that were technical in nature or that posed only a remote risk of injury. Subsequent to National Gypsum, the Secretary altered his enforcement policy with regard to significant and substantial violations. MSHA, Policy Memorandum (May 6, 1981). The revised policy recapitulates the Commission's National Gypsum test regarding safety standard violations. With respect to violations involving health standards, however, the Policy Memorandum provides:

[V]iolations involving mandatory health standards which limit exposure to or require protection from harmful airborne contaminants, toxic substances or harmful physical agents should be designated as "significant and substantial." MSHA believes that noncompliance with this type of health standard involves a reasonable likelihood of injury or illness which will be reasonably serious. The use of personal protective equipment (PPE), however, should be taken into account. Although the use of PPE may not constitute compliance with health standards that set an exposure limit, the use of PPE by miners affected by the violation is relevant to determining whether any injury or illness is reasonably likely to occur.

MSHA's Policy Memorandum makes clear that the use of personal protective equipment by miners affected by the violation is relevant to its determination of whether any injury or illness is likely to occur. MSHA's Policy Memorandum also states that violations of mandatory health standards that do not involve an exposure-related standard, or are only technical, will not be treated by MSHA as significant and substantial violations.

As the above-quoted portions of MSHA's Policy Memorandum indicate, the Secretary's enforcement approach does not precisely parallel National Gypsum with respect to an exposure-related health hazard. As explained below, however, in the particular context of the control of respirable dust in coal mines some departure is justified because of fundamental differences between a typical safety hazard and the respirable dust exposure-related health hazard at issue.

An examination of the statutory text and the legislative history of the Mine Act reveals a clear congressional understanding of the unique nature of the exposure-related health hazards of respirable dust and the control of those hazards. Indeed, prevention of pneumoconiosis and other occupational illnesses is a fundamental purpose underlying the Mine Act. Congress' concern is first expressed in section 2 of the Act:

[T]here is an urgent need to provide more effective means and measures for improving the working conditions and practices in the Nation's coal or other mines in order to prevent death and serious physical harm, and in order to prevent occupational diseases originating in such mines [.]

30 U.S.C. § 801(c) (emphasis added). Section 201(b) of the Act, 30 U.S.C. § 841(b), describes the coverage and intent of the interim mandatory health standard regarding respirable dust concentrations. That section stresses the prevention of any disability from pneumoconiosis or any other occupation-related disease:

Among other things, it is the purpose of this subchapter to provide, to the greatest extent possible, that the working conditions in each underground coal mine are sufficiently free from respirable dust concentrations in the mine atmosphere to permit each miner the opportunity to work underground during the period of his entire adult working life without incurring any disability from pneumoconiosis or any other occupation-related disease during or at the end of such period.

30 U.S.C. § 841(b).

The respirable dust standard involved in the present case, section 70.100(a), is taken directly from section 202 of the Mine Act, 30 U.S.C. § 842, which, in turn, was carried over without significant change from the 1969 Coal Act. These statutory sections set interim mandatory health standards, which the Secretary has adopted. When these standards limiting miners' exposure to respirable dust in coal mines were drafted in 1969, Congress recognized a direct relationship between reductions of respirable dust in the mine atmosphere and corresponding reductions in the incidence of disabling respiratory disease in coal miners. See, e.g., S. Rep. No. 411, 91st Cong., 1st Sess. 14-17 (1969), reprinted in Senate Subcommittee on Labor, Committee on Labor and Public Welfare, 94th Cong., 1st Sess., 1 Legislative History of the Federal Coal Mine Health and Safety Act of 1969, at 141-43 (1975) ("1969 Legis. Hist."). See also 1969 Legis. Hist. 355-58; H. Rep. No. 563, 91st Cong., 1st Sess. 15-20 (1969), reprinted in 1969 Legis. Hist. 1045-50; 1969 Legis. Hist. 1195-99. With regard to its ultimate decision to adopt a 2.0 mg/m<sup>3</sup> respirable dust standard, Congress recognized that in a dust environment below approximately 2.2 mg/m<sup>3</sup>, there would be virtually no probability of a miner's contracting complicated coal workers' pneumoconiosis, even after 35 years of exposure at that level. H. Rep. No. 563, supra, at 18, reprinted in 1969 Legis. Hist. 1048; 1969 Legis. Hist. 1197-98. The legislative history also reflects awareness that a standard at or below 2.2 mg/m<sup>3</sup> would produce no danger of miners developing disabling disease. Id.; 1969 Legis. Hist. 1277.

Thus, we find in the Mine Act an unambiguous legislative declaration in favor of preventing any disability from pneumoconiosis or any other occupation-related disease. We also find repeated observations in the legislative history that a respirable dust standard at or below 2.2 mg/m<sup>3</sup> would produce no danger of miners developing disabling disease. To emphasize Congress' desire for a fixed ceiling on exposure levels, the section-by-section summary of the Conference Report states:

In all cases, the standard is keyed to each individual miner. The air he breathes, wherever he works in the mine, must not contain more respirable dust during any working shift than the standard permits.

1969 Legis. Hist. 1606 (emphasis added). Congress plainly intended the 2.0 mg/m<sup>3</sup> standard it adopted to be the maximum permissible exposure level in order to achieve its goal of preventing disabling respiratory disease. Also, Congress clearly intended the full use of the panoply of the Act's enforcement mechanisms to effectuate this congressional goal, including the designation of a violation as a significant and substantial violation. It is against the background of Congress' firm intent to prevent respiratory disease by setting permissible levels of miners' exposure to respirable dust that we turn to the question of the proper test for determining whether a violation of section 70.100(a), based upon excessive designated occupation samples, is a significant and substantial violation.

In Mathies Coal Co., supra, the Commission further discussed the elements that establish, under National Gypsum, whether a violation of a mandatory safety standard is significant and substantial:

[T]he Secretary ... must prove: (1) the underlying violation of a mandatory safety standard; (2) a discrete safety hazard--that is, a measure of danger to safety--contributed to by the violation; (3) a reasonable likelihood that the hazard contributed to will result in an injury; and (4) a reasonable likelihood that the injury in question will be of a reasonably serious nature.

6 FMSHRC at 3-4 (footnote omitted).

Adapting this test to a violation of a mandatory health standard, such as section 70.100(a), results in the following formulation of the necessary elements to support a significant and substantial finding: (1) the underlying violation of a mandatory health standard; (2) a discrete health hazard--a measure of danger to health--contributed to by the violation; (3) a reasonable likelihood that the health hazard contributed to will result in an illness; and (4) a reasonable likelihood that the illness in question will be of a reasonably serious nature.



In the present case, as in all cases in which the "significant and substantial" issue is being addressed, the underlying violation of a mandatory standard (element one), is established. Here, Consol conceded the violation. We find that the second element, a measure of danger to health posed by the violation, is established also. The miner in the sampled designated occupation was exposed to an excessive average concentration of respirable dust, i.e., 4.1 mg/m<sup>3</sup>, more than twice the maximum permissible level set by Congress to eliminate the probability of miners contracting disabling respiratory diseases. Indeed, any exposure above the 2.0 mg/m<sup>3</sup> level, based upon designated occupation sampling results, giving rise to a section 70.100(a) violation will satisfy this element.

The third element, a reasonable likelihood that the health hazard contributed to will result in an illness, presents a more difficult conceptual issue. In addressing this element we are mindful that, as discussed previously, Congress recognized that miner exposure in excess of the maximum level set in the respirable dust standard would produce disabling pneumoconiosis and other occupation-related diseases in a statistically significant portion of the coal mining workforce. Congress established the 2.0 mg/m<sup>3</sup> respirable dust standard, which the Secretary has adopted, as the best available means of preventing disabling respiratory diseases. In adopting this standard, Congress chose not to distinguish between susceptible and non-susceptible individuals, choosing instead a universal prophylactic approach to the problem of causation. This approach reflected Congress' attempt to assure that all miners, regardless of their physical predisposition or the length of time that they have worked in coal mines, would be uniformly protected from the incremental health hazards presented by repeated overexposures to respirable dust in coal mines.

We recognize that the development and progress of respiratory disease is due to the cumulative dosage of dust a miner inhales, which in turn depends upon the concentration and duration of each exposure, and that proof of a single incident of overexposure does not, in and of itself, conclusively establish a reasonable likelihood that respirable disease will result. There is no dispute, however, that overexposure to respirable dust can result in chronic bronchitis and pneumoconiosis. The effects of the health hazards associated with overexposure to respirable dust usually do not cause immediate symptoms--as noted, simple pneumoconiosis is asymptomatic. This factor makes precise prediction of whether or when respiratory disease will develop impossible. Likewise, it is not possible to assess the precise contribution that a particular overexposure will make to the development of respiratory disease. In sum, the present state of scientific and medical knowledge, as exemplified by the present record, do not make it possible to determine the precise point at which the development of chronic bronchitis or pneumoconiosis will occur or is reasonably likely to occur.

Thus, the development of respirable dust induced disease is insidious, furtive and incapable of precise prediction. Yet, as set forth above, reduction in the incidence of such diseases is one of the fundamental

purposes of the Mine Act. Accordingly, given the nature of the health hazard at issue, the potentially devastating consequences for affected miners, and strong concern expressed by Congress for eliminating respiratory illnesses in miners, we hold that if the Secretary proves that an overexposure to respirable dust in violation of section 70.100(a), based upon designated occupation samples, has occurred, a presumption arises that the third element of the significant and substantial test--a reasonable likelihood that the health hazard contributed to will result in an illness--has been established.

The fourth element of the significant and substantial test, a reasonable likelihood that the illness in question will be of a reasonably serious nature, is not seriously disputed. Congress noted not only the economic losses to the nation caused by respirable dust induced diseases, but also the "immeasurable cost of human pain and suffering." S. Rep. No. 411, supra, at 17, reprinted in 1969 Legis. Hist. 143. Further, the judge found that complicated pneumoconiosis entails the destruction of the lungs' air exchange capabilities and distortion of the remaining lung tissue. Progressive massive fibrosis also significantly impairs the functional capacity of the lungs through extensive internal scarring, contracture of the lungs with compensatory emphysema, and loss of the vasculature. Progressive massive fibrosis commonly causes shortness of breath and cough, and can cause progressive pulmonary impairment and early death. The above facts support a conclusion that there is a reasonable likelihood that illness resulting from overexposure to respirable dust will be of a reasonably serious nature.

We recognize that the essence of the above discussion of each of the four elements of the significant and substantial test would be the same in all instances where the Secretary proves a violation of section 70.100(a) based upon designated occupation samples. Therefore, rather than requiring the Secretary to prove anew all four elements in each case, we hold that when the Secretary proves that a violation of 30 C.F.R. § 70.100(a), based upon excessive designated occupation samples, has occurred, a presumption that the violation is a significant and substantial violation is appropriate. We further hold that this presumption that the violation is significant and substantial may be rebutted by the operator by establishing that miners in the designated occupation in fact were not exposed to the hazard posed by the excessive concentration of respirable dust, e.g., through the use of personal protective equipment. 7/

Thus, with these adaptations, we extend the application of the National Gypsum test to the determination of whether a violation of section 70.100(a), based upon excessive designated occupation samples, is significant and substantial.

---

7/ MSHA's policy memorandum, quoted supra, recognizes that the use of personal protective equipment will ordinarily preclude a significant and substantial finding in connection with violations of 30 C.F.R. § 70.100(a).

### III.

We next address Consol's contention that, in general, MSHA's sampling and testing procedures for respirable dust are not sufficiently accurate to warrant designating violations of section 70.100(a) as significant and substantial. Consol argues that the judge was incorrect in assuming that the 4.1 mg/m<sup>3</sup> average concentration of the five respirable dust samples existed for the entire bimonthly reporting period. We do not agree. MSHA's designated occupation respirable dust sampling regulation, section 70.207 (n. 1, supra), divides the calendar year into six distinct bimonthly periods. By establishing a series of fixed periods for sampling, as opposed to providing for a series of periodic samples, the standard evidences an intent that the five respirable dust samples taken during each bimonthly period will be viewed as representative of the mine atmosphere for that particular period. Perhaps other sampling methodology could be devised, but we cannot conclude that the bimonthly method chosen by the Secretary is unreasonable or otherwise impermissible. The judge correctly interpreted the standard and properly held that the 4.1 mg/m<sup>3</sup> average concentration of the five respirable dust samples exemplified the mine atmosphere over the course of the entire bimonthly sampling period.

Consol also argues that the variability encountered in the sampling procedure produces results that are not representative of the mine atmosphere; that mistreatment or malfunction of sampling devices may lead to collection of more dust than intended; that sampling devices collect materials other than respirable coal dust; that sampling devices may collect non-respirable, oversized dust particles; and that the dust samples that are collected do not reflect individual miner exposures.

In American Mining Congress v. Marshall, 671 F.2d 1215 (10th Cir. 1982), the Tenth Circuit considered MSHA's designated area sampling regulations, substantially the same regulations at issue here. There, the American Mining Congress challenged the Secretary's regulations on both substantive and procedural grounds, alleging that the Secretary had acted in an arbitrary and capricious fashion in promulgating the regulations. The Tenth Circuit dismissed the petition for review, holding that the Secretary's promulgation of the respirable dust sampling program was not arbitrary and capricious. On review, Consol offers variations of the arguments advanced and rejected in the standards promulgation case. It attempts to distinguish those arguments challenging the test results for purposes of issuing a citation from those designating the violation as significant and substantial.

We adopt the initial perspective that all sampling methods fall short of perfection and are designed to provide best estimates of actual conditions. As the Tenth Circuit aptly observed:

Since measurement error is inherent in all sampling, the very fact that Congress authorized a sampling program indicates that it intended some error to be tolerated in enforcement of the dust standard.

AMC v. Marshall, 671 F.2d at 1256.

The Mine Act does not require the Secretary to ensure the accuracy of respirable dust samples collected by the operator. That responsibility rests with the operator. 30 U.S.C. § 842(a). By prescribing the manner in which samples shall be collected and transmitted, the Secretary has attempted to minimize the errors inherent in the sampling process. See 30 C.F.R. Part 70, Subpart B. Among other things, these safeguards include multiple shift sampling, 30 U.S.C. § 70.207; certification of persons collecting samples, 30 C.F.R. §§ 70.202 and 70.203; periodic recalibration of sampling devices, 30 C.F.R. § 204; and periodic examination, testing, and maintenance of sampling devices, *id.* The results obtained under MSHA's respirable dust sampling program may not perfectly represent atmospheric conditions encountered in the mine. However, if the operator complies with the mandated collection procedures, the result obtained should be reasonably representative of the mine atmosphere. At the hearing there was considerable testimony offered to show that mistreatment and malfunction can affect a sampling device's ability to produce accurate results. The judge recognized this fact, but found that there was no evidence in the record indicating that either of these deficiencies had occurred. 5 FMSHRC at 380. The judge's finding is supported by substantial evidence. In the absence of the necessary showing of actual deficiencies, further consideration of this challenge is unwarranted.

In the Mine Act, Congress deferred to the Secretary's expertise and granted him authority to designate approved sampling devices and to define what constitutes concentrations of respirable dust. 30 U.S.C. § 842(a). The Secretary has followed the wording of the Mine Act in his regulations, referring to "respirable dust" and "respirable coal mine dust." See 30 U.S.C. § 842; 30 C.F.R. Part 70. It is argued that the Secretary's use of these terms does not draw a distinction between respirable coal dust and other benign types of respirable dust. Apparently, this wording was used because Congress relied on studies based on the Mine Research Establishment ("MRE") instrument in establishing the 2.0 mg/m<sup>3</sup> respirable dust standard. The MRE device was not designed to differentiate among different dust types and an amalgamated approach is therefore reflected in the 2.0 mg/m<sup>3</sup> respirable dust standard. It is also noteworthy that the respirable dust standard addresses any disability from any other occupation-related disease, and that some of these diseases, chronic bronchitis for instance, can be caused by any type of respirable dust.

A similar rationale applies to the argument concerning oversized particles. Some particles larger than 10 microns behave aerodynamically like smaller particles and are subject to collection by the sampling device. Tr. 275-80. This action occurs in the MRE instrument as well as other devices approved by the Secretary. Thus, owing to its genesis, the 2.0 mg/m<sup>3</sup> standard reflects a certain number of these oversized particles in that limit.

The Secretary's respirable dust analysis procedures provide for a visual check for oversized particles when a sample reveals a weight gain of greater than 6 mg (an MRE equivalent result of 8.6 mg/m<sup>3</sup>). This

examination cutoff point was established on the basis of studies showing that samples with less than a 6 mg weight gain have a low statistical probability of having enough oversized particles present to affect that sample's validity. Tr. 281-86. Thus, we find a reasonable relationship between the weight gain cutoff point and the validity of the sample. Whether this policy always should prevail over an operator's specific request that a suspect sample be inspected visually for oversized particles remains an open question. In this case, however, Consol failed to articulate to MSHA, or later to prove, other sufficient grounds to bring the accuracy of the samples into question.

On the basis of the foregoing, particularly the strength of the Tenth Circuit's decision in AMC v. Marshall, we reject Consol's sampling procedure challenges and conclude that MSHA's general sampling and testing procedures for respirable dust are sufficiently accurate to designate violations of section 70.100(a) as significant and substantial. In addition, an operator is not precluded from proving that the accuracy of the sampling or testing results in a particular instance was compromised, thereby defeating the allegation of a violation as well as a significant and substantial finding. Consol presented no persuasive evidence in this regard in this case.

#### IV.

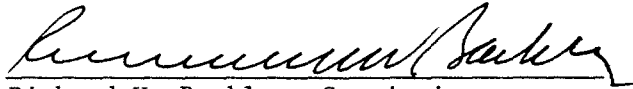
Finally, we analyze under the criteria approved earlier in this decision whether Consol's violation of the respirable dust standard was significant and substantial.

Consol has admitted that it violated section 70.100(a) based upon the excessive designated occupation sampling results at issue. Accordingly, a prima facie case that this violation was significant and substantial was established by the Secretary. Consol did not assert or prove that no miners were exposed to the hazard. We note that the record is devoid of any references to the use of personal protective equipment by the miners involved here. Accordingly, the significant and substantial nature of the violation is established.

V.

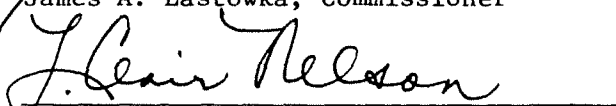
Based on the facts presented by this case, we conclude that Consol's violation of the mandatory respirable dust standard at issue was of such nature that it could contribute significantly and substantially to the cause and effect of a mine health hazard and affirm the judge's holding to that effect.

On the foregoing bases, the judge's decision is affirmed. 8/

  
Richard V. Backley, Commissioner

  
Joyce A. Doyle, Commissioner

  
James A. Lastowka, Commissioner

  
L. Clair Nelson, Commissioner

8/ Chairman Ford did not participate in the consideration or disposition of this matter.

Distribution

Robert M. Vukas, Esq.  
Consolidation Coal Company  
1800 Washington Road  
Pittsburgh, PA 15241

Anna Wolgast, Esq.  
Office of the Solicitor  
U.S. Department of Labor  
4015 Wilson Blvd.  
Arlington, VA 22203

Timothy Biddle, Esq.  
Adrienne J. Davis, Esq.  
Crowell & Moring  
1100 Connecticut Ave., N.W.  
Washington, D.C. 20036

Henry Chajet, Esq.  
Michael Duffy, Esq.  
American Mining Congress  
1920 N Street, N.W.  
Suite 300  
Washington, D.C. 20036

J. Davitt McAteer, Esq.  
Center for Law & Social Policy  
1751 N Street, N.W.  
Washington, D.C. 20036

Mary-Win O'Brien, Esq.  
United Steelworkers of America  
Five Gateway Center  
Pittsburgh, PA 15241

Mary Lu Jordan, Esq.  
UMWA  
900 15th St., N.W.  
Washington, D.C. 20005

Salvatore J. Falletta, Esq.  
International Chemical Workers Union  
1655 West Market St.  
Akron, Ohio 44313

Administrative Law Judge James A. Broderick  
Federal Mine Safety & Health Review Commission  
5203 Leesburg Pike, 10th Floor  
Falls Church, VA 22041