



August 11, 1993

SEP 14 1993

Dr. Richard W. Niemeier
National Institute for Occupational
Safety and Health
Robert A. Taft Laboratories
4676 Columbia Parkway
Cincinnati, OH 45226-1998

Dear Dr. Niemeier:

Thank you for your letter of June 28 and for the opportunity to comment on the draft document entitled *Criteria for a Recommended Standard: Occupational Exposure to Respirable Coal Mine Dust*. I have a number of comments to make. However, I will address only those areas where my background and knowledge enable me to make valid comments and where I feel inclined to make a statement or statements. The specific comments are outlined below with the questions as headings.

Is the derivation of the Recommended Exposure Limit (REL) supported by the scientific data?

I have some reservations about the REL derivation. First, the lack of silica data presents a problem, particularly when considering anthracite miners. Anthracite mines are quite different than bituminous mines and the higher prevalence of disease in anthracite may be due to silica exposure. This can be due to several characteristics of anthracite mines:

- (1) Anthracite mines use mining methods that are quite different from bituminous mines.
- (2) Anthracite mines often drive their development openings (adits, haulage gangways, and monkey gangways) through rock to provide more stability over time in the openings.
- (3) The surrounding geologic sediments are predominantly quartzites which are very high in silica.

Second, the NIOSH study appears to cover many mines with significant dust exposure before the 2.0 mg/m³ regulations were

instituted. It is not clear to me that this is valid. The pre-regulation concentrations may have affected the results.

Finally, the NIOSH studies have followed miners in greatly reduced numbers since the study began. This may have introduced significant errors in the results. For example, what if only miners with diseased lungs felt they had sufficient incentive to continue in the surveillance program. Wouldn't that seriously affect the results?

Are the RELs for respirable coal mine dust and respirable crystalline silica technically feasible?

It is clear that the recommended RELs will not be achievable in a number of conditions. In particular, mines with longwalls will not be able to achieve the RELs any time in the near future. For longwalls, a totally automated section would be required before most sections would satisfy the recommended standards.

Should improvements in the coal mine dust personal sampling unit (CMDPSU), including all-metal construction to minimize charge effects, be recommended? Should performance criteria be developed for the approval of more than one type of sampling device?

Yes, improvements should be made in personal sampling units. There has been a need for such improvements for years. I am therefore in favor of more research and development in this area. I have no strong feelings concerning more than one type of sampling device. However, each type must be reliable and accurate and provide a sampling expense that is within reason.

Are there additional issues that need to be considered in the development of this criteria document?

Yes, it is necessary to consider the costs and benefits of the regulations. I believe that it is proper for all regulations of this type to strike a carefully considered balance between costs and benefits. In addition, I do not believe that CWP can be wiped out regardless of the money spent unless personal controls (for example, cessation of smoking and use of airstream helmets) are required.

Our society has approached all its major public policy decisions (e.g., the level of expenditures to reduce traffic deaths, the level of police protection, the acceptable level of air pollution, etc.) on a practical basis. I, for one, would like to see more police protection. However, I realize that better protection of all our citizens would incur much greater costs to society. These costs would be both monetary costs (salaries for police officers) and human costs (loss of police officers' lives). I therefore recognize the need to compromise in this type of decision-making.

In summary, I am not in favor of the proposed changes in the dust regulations at the present time. I am concerned that the results of the new regulations would be disappointing. The questions that remain are significant. It is my hope that the many questions that remain would be better answered before proceeding.

I would be happy to respond to any questions you may have regarding my response. Thanks again for the opportunity to comment.

Sincerely yours,

A handwritten signature in cursive script that reads "Jan M. Mutmanský". The signature is written in black ink and is positioned above the typed name and title.

Jan M. Mutmanský
Professor of Mining Engineering

