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Richard W. Niemeier, Ph.D.
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4676 Columbia Parkway
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Dear Dr. Niemeier:

In response to your letter of June 28, 1993 regarding the NIOSH draft document, I would like to submit the following general comments followed by the answers to your eight questions.

With the current exposure standard of 2 mg/m^3 for respirable coal mine dust, pneumoconiosis has been greatly diminished and may with those levels be essentially eliminated. The silica level of 0.1 mg/m^3 should be adequate, especially when the coal dust is reduced as a result of the silica levels. Mandatory surveillance of surface coal miners without documentation of a disease process for them is a misuse of scarce occupational health resources. NIOSH also must be careful that they remain within the realm of their regulatory directive and not wander into MSHA's area.

If a coal miner has pneumoconiosis caused by exposure to coal dust, then that person should be transferred to a less dusty area. The transfer should be required; it should not be at the discretion of the affected employee. If the intent of the standard is the prevention of disease and morbidity as well as mortality, the operator must be notified of the excessive exposure so the miner can be removed before extensive disease develops. If the dust standards are reduced to the proposed levels without the use of personal protective equipment and administrative controls, it will be impossible to reduce the exposure in the mine. COPD has too many etiologies to be a consideration for removal.

In answer to your questions, I submit the following:

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

No recent individual data is available since only area and designated occupation samples are collected in the coal mines; therefore, the dust sampled levels are not related to an individual. Individuals respond differently to bituminous vs. anthracite coal. This also needs to be taken into account when exposure limits are set. Additionally, to the best of my knowledge, there is minimal data to show that there is a problem among surface coal miners with respect to coal dust and pneumoconiosis. Since many miners smoke and smoking is known to cause pneumoconiosis, exclusive of any other factor, smoking must be taken into consideration when determining if an individual has pneumoconiosis from coal dust, or smoking, or whether it is a combination. The fact that simple pneumoconiosis can be caused by smoking alone must be given significant consideration before changing any standard. Also there must be a distinction made between coal dust and coal mine dust.

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

With present technology the RELs would be feasible if, in addition to engineering controls, administrative controls and personal protective equipment were utilized. Engineering controls alone cannot reduce the dust levels below 1 mg per cubic meter consistently. It is even more difficult to reach and maintain the proposed levels for coal dust when silica is evaluated with coal dust and the coal dust is reduced by the amount of silica in the sample.

3. **Should the proposed international definition of respirable dust be recommended as the criteria for sampling respirable coal mine dust and respirable crystalline silica?**

Since there is a correlation between the sampling procedures, either definition is acceptable.

4. **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?**

4. (Continued)

If more than one type of device is approved, there should be performance criteria. In addition, there must be a relationship established between metal and the material now being used so that data can be compared in order to determine whether improvements in the sampling unit are needed.

5. **Is the recommended sampling strategy reasonable on the basis of both statistical validity and practical considerations for controlling respirable dust in the coal mine environment?**

Single sample strategy is not acceptable. Dynamic, ever changing conditions in a coal mine require that multiple samples be taken at multiple locations to provide statistical validity. Selected sampling areas must be limited to those areas where employees work. There may be areas in the mine that might have higher dust concentrations, but such areas are not representative of employee exposure.

6. **Is the inclusion of spirometry tests in the medical surveillance program justifiable for the prevention of chronic obstructive lung disease in underground and surface coal miners?**

Many factors other than coal dust can effect the pulmonary function tests. Smoking, allergies and chemicals, to name a few, can have an adverse effect on spirometry. Biological monitoring has to be focused to determine that a specific agent causes a specific effect. This is certainly not the case with spirometry. Therefore it should not be used to diagnose lung disease when the cause may not be work related or may have multiple causes.

7. **Is the transfer of miners with evidence of Coal Workers' Pneumoconiosis (CWP) or Chronic Obstructive Pulmonary Diseases (COPD) to low dust areas of the mine medically justifiable at the recommended concentrations of respirable coal mine dust or respirable crystalline silica?**

At the present standards, we are not aware of data to indicate that miners with evidence of CWP who have transferred to low dust areas (1.0 mg/m^3 or less) have been adversely affected by exposure in those

7. (Continued)

low dust areas. Accordingly, there is no justification to reduce the standard further.

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

(No comment)

Very truly yours,

J. J. Schwerha, M.D.

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