

a copy of the plan on the mine bulletin board.

If, on the other hand, the operator abates a violation of the applicable dust standard by transferring the part 90 miner to another position at the mine, the operator is not required to submit a dust control plan to the district manager for approval.

As under existing paragraph (b), the operator would be required to include details on the control measures that were implemented to reduce the dust and abate the violation, as well as any other provisions required by the district manager. The plan must also include the specific time, place and manner that the control measures would be used. Failure to do so would constitute a violation of this section.

Section 90.301 Respirable Dust Control Plan; Approval by District Manager; Copy to Part 90 Miner

The proposed rule retains the existing provisions of § 90.301, which specifies the criteria MSHA would use to approve the operator's dust control plan. Since MSHA would assume sampling of Part 90 miners for compliance purposes, the following phrase was inserted towards the end of paragraph (a): * * * "the results of MSHA sampling and." Also, the proposed rule would add the word "continuously" to paragraph (a)(1) for consistency with § 90.300(a), and replace the phrase "MSHA may take respirable dust samples to determine whether" in paragraph (b) with "MSHA will monitor the continued effectiveness of" to reflect MSHA's assumption of sampling for compliance purposes.

V. Health Effects

A. Introduction

For as long as miners have taken coal from the ground, many have suffered respiratory problems due to their occupational exposures to respirable coal mine dust. Long-term retention of coal mine dust in the lung causes chronic lung diseases including coal workers' pneumoconiosis (CWP), silicosis, and chronic obstructive pulmonary disease (COPD) (e.g., chronic bronchitis, emphysema, and airways obstruction). Coal workers' pneumoconiosis occurs in two stages: simple and complicated pneumoconiosis. Simple CWP is categorized into three levels of severity: 1, 2, and 3. Miners with simple CWP, especially the more advanced categories, have a substantially increased risk of developing complicated pneumoconiosis (more typically known as progressive massive fibrosis (PMF)). Progressive massive

fibrosis can cause significant loss of lung function and give rise to respiratory symptoms (e.g., breathlessness, wheezing), and lead to disability and premature mortality. Overall, coal miners are at risk of increased morbidity and premature mortality arising from all of the chronic diseases associated with coal mine dust exposure.

Elimination or reduction of coal mine dust exposure is the only effective way to prevent or minimize occupational lung disease among coal miners. However, routine screening affords the potential to prevent further development of disease among those, who despite dust control measures, still develop CWP. Pursuant to 42 CFR part 37, the National Institute for Occupational Safety and Health (NIOSH) operates a program for underground coal miners designed to detect early CWP. This screening program for CWP is termed the Coal Workers' X-ray Surveillance Program (CWXSP).

In 1998, MSHA estimated that there were approximately 45,000 underground coal miners and 39,000 surface coal miners (Mattos, 1999). A small percentage of the mining involved anthracite coal, the highest rank coal, while most involved bituminous coal which is a medium rank coal.

There are complementary data sources, described below, which provide estimates of the prevalence of occupational respiratory disease among coal miners. Together these data demonstrate the progress over the last thirty years in the reduction of occupational respiratory disease among coal miners, as well as the need for further action to reduce occupational lung disease.

In accordance with 30 CFR part 50, both surface and underground coal mine operators must report any known cases of occupational illnesses to MSHA. Under this requirement, mine operators reported 224 cases of coal workers' pneumoconiosis in 1998 (Mattos, 1999). Of these, 138 cases occurred among coal miners who worked underground, while the remaining 86 cases occurred among surface coal miners (Mattos, 1999). There were also 14 cases of silicosis, eight in underground mines, reported to MSHA in 1998 in accordance with 30 CFR part 50 (Mattos, 1999).

In the 1990s, MSHA conducted a one-time medical screening and surveillance program in various regions of the country. This program was designed to help more coal miners, especially surface coal miners, learn whether or not they had CWP, and to provide a more accurate estimate of the

prevalence of simple CWP and PMF among these coal miners. Through this special program, MSHA tried to minimize obstacles that may prevent some miners from participating in respiratory diagnostic procedures. Nine geographical groups of miners were encouraged to participate in this x-ray program that was independent of the CWXSP (MSHA, Internal Chart, 1999). The study groups included eight active surface coal mining communities in Pennsylvania, Kentucky and West Virginia, as well as Poteau, Oklahoma and Gillette, Wyoming. A ninth group included underground miners in Kentucky. The process was designed to encourage miner participation by providing for a greater degree of anonymity than may be available under the NIOSH x-ray program. Across the eight surface groups surveyed, the prevalence rate of CWP among participants was 5.6% (130/2,305). The CWP prevalence rate among the participating underground Kentucky miners was 9.2% (37/404).

Due to the different outreach initiatives number and type of participants in these various subgroups, relative to the population of today's coal miners, these data may not be representative of the overall prevalence of CWP among today's coal miners.

The Secretary of Labor's Advisory Committee on the Elimination of Pneumoconiosis Among Coal Workers (Dust Advisory Committee, 1996) recommended that the CWXSP for pneumoconiosis include surface coal miners and independent contractors and that it increase underground coal miners' participation to at least 85 percent. In response, MSHA and NIOSH implemented the Miners' Choice Health Screening Program (Miners' Choice) in October 1999. The Miners' Choice program and Coal Workers' X-Ray Surveillance Program (CWXSP) identify cases of simple and complicated pneumoconiosis, including coal workers' pneumoconiosis and silicosis—hereafter referred to as "CWP." All of the Miners' Choice x-rays were processed using the same procedures and criteria used in the CWXSP in accordance with the requirements of 42 CFR part 37.

MSHA and NIOSH are conducting preliminary analyses of the first three years of the Miners' Choice program. These data and analyses are being handled, conducted, and reported pursuant to the DOL's and DHHS's respective Information Quality