DEPARTMENT OF LABOR

Mine Safety and Health Administration

30 CFR Parts 56, 57, 62, 70 and 71

RIN 1219-AA53

Occupational Noise Exposure; Correction

AGENCY: Mine Safety and Health Administration, Labor.

ACTION: Final rule, correction.

SUMMARY: This document corrects the preamble to the final rule for health standards for occupational noise exposure published elsewhere in today’s Federal Register.


Correction

MSHA is publishing elsewhere in this issue of the Federal Register a final rule on health standards for occupational noise exposure. This document adds text inadvertently left out of the preamble. Certain text that should have been included under the heading “Section 62.130 Permissible exposure level” was inadvertently omitted. The text should have followed this paragraph:

Although many commenters may prefer to use hearing protectors in lieu of engineering or administrative controls to protect miners from noise overexposures, MSHA has concluded that the scientific evidence does not support this position, and that the approach taken in the final rule best protects miners from further noise-induced hearing loss.

The text to be added reads as follows:

MSHA noted earlier in this discussion that it had conducted a study of the noise reduction values of hearing protectors in the actual mining environment. The inability to accurately predict the noise reduction provided by a hearing protector to an individual miner led to MSHA’s decision to reject the use of hearing protectors as the primary means of reducing a miner’s noise exposure to the permissible exposure level. Not only do engineering and administrative controls best protect miners from noise-induced hearing loss, they increase the protection afforded by a hearing protector.

One commenter requested that MSHA provide a definition of an engineering noise control. MSHA addresses engineering controls in significant detail under the discussion of feasibility in Part VI of this preamble.

Several commenters wanted MSHA to recognize the noise-cancellation ear muff as an engineering noise control. Noise-cancellation ear muffs are hearing protectors that are designed to generate sound that cancels harmful noise signals under the cup of the ear muff. MSHA has not found any data substantiating a standardized method of evaluating the efficacy of noise-cancellation ear muffs in a manner similar to engineering controls. Also, noise-cancellation ear muffs in the active mode cannot be evaluated using the American National Standards Institute (ANSI) method for evaluating hearing protectors. Noise-cancellation ear muffs are not engineering controls, and the final rule does not accept them as such but does recognize them as hearing protectors, where an NRR value has been assigned under EPA regulations.

Some other commenters believed that the use of operator cabs, which are engineering controls that allow the miner to work within a protective sound enclosure, creates a safety hazard, especially in low-seam underground mines. Although the Agency has limited experience with noise-control cabs in underground mines, MSHA has had extensive experience with the use of cabs in underground mines to provide protection from falling objects, including roof falls. This experience demonstrates that equipment cabs can be safely used in the underground mine environment. In any case, MSHA would not expect a mine operator to use a cab as an engineering control if it created a safety hazard. As a practical matter, the final rule provides mine operators with significant flexibility in choosing among various noise controls, and does not compel the use of one type of control over another.

Many commenters believe administrative controls create unnecessary problems for mine operators. Some of their concerns include restrictions in labor contracts, the limited numbers of qualified miners who can be rotated in and out of a job, and the difficulty in tracking rotated miners. MSHA has concluded that the effectiveness of administrative controls, when they are feasible, compels their application prior to allowing mine operators to use personal hearing protectors to control their miners’ noise exposures.

Regarding the feasibility of noise controls, the American Portland Cement Alliance commented that there are several operational areas where it is particularly difficult and expensive to control noise, for example raw and finish ball mills, crusher and screening areas, and concentrator and blower rooms. In one example, the commenter estimated that it would cost "hundreds of thousands of dollars" in manpower, materials, lost production and equipment, to retrofit rubber liners in the interior walls of the mills. The commenter also noted that alternative means of milling would cost between 3- and 10-million dollars per ball mill. Section VI of this preamble discusses the feasibility of a permissible exposure level for the mining industry, and, in addition, the feasibility of complying with the permissible exposure level for a particular operator. Regarding noise controls which may be feasible for particular operators of milling operations, the Agency intends to adhere to the enforcement guidelines set forth in volume IV of its existing program policy manual because the permissible exposure level in the final rule remains unchanged from the existing noise standards. The program policy manual indicates that frequently, mining personnel are exposed to noise levels of up to 114 dBA from milling operations, and that engineering noise controls may be feasible for such operations. Such controls include: resiliently backed liners; acoustically treated control booths; full or partial topless enclosures around mill equipment or employee work locations; and acoustic baffles suspended above enclosures. In order to determine which control or combination of controls are feasible and effective to reduce the noise exposure of employees working in mills, it is usually necessary to do a time study to pinpoint the locations and noise sources contributing to the employee's overexposure. In some situations an acoustically treated booth may be all that is needed, in others more extensive treatments may be necessary. Administrative controls may also be feasible to limit employee exposure to particularly noisy areas of a mill.

Control booths can be constructed and acoustically treated by mine operators or can be purchased from commercial sources. Resiliently backed liners can be put on chutes, bins and other drop or impact points to reduce noise from these sources. In situations where numerous employees are exposed to the noise, full or partial topless enclosures around the mill may be feasible. Dependent upon the noise reduction required to lower an employee's exposure to the permissible exposure level, acoustical absorptive material may be needed within or above the enclosure. Acoustical baffles suspended above such enclosures has proven to be an effective method of reducing the overall noise levels.

The cost for such enclosures is dependent on the type of materials utilized in its construction and the
overall size of the enclosure. In three demonstrations of this technology, total material costs have ranged between $3500 and $7000. MSHA intends to assess, on a case-by-case basis, whether engineering and administrative controls are feasible at a particular mine that is experiencing an overexposure.


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