



Understanding the Need for Noise Control

OSHA has recently declared their intent to interpret their noise control standard in the manner originally intended. As with many changes which will affect industry, this has been met with some alarm, in part due to the difficult economic conditions, and in part due to a cultural misperception of how damaging sound can be, when noise controls will be required, and why these controls are needed.

The Background:

Initially, noise control was required if feasible whenever sound exposures exceeded 90 dBA (TWA). The Hearing Conservation Amendment was added in 1983 to improve safety, especially when noise control was inadequate, unfeasible, or not required due to lower noise levels (i.e. TWA of 85-90 dBA). However, OSHA adopted an interpretation of the standard which allowed a comparatively lenient, cost/benefit approach to the noise control aspect.

Despite a regulation that required noise control as the primary response, penalties were issued only when exposure was considerably more severe, hearing protection was deemed inadequate, or the cost of controls was actually lower than the cost of the hearing conservation program. Hearing conservation programs, meant to be an additional defense measure to improve safety, became for many the primary or even the only approach used to reduce hearing damage in the workplace.

The Return to Noise Control:

In October 2010, after years of urging from organizations associated with hearing health and occupational safety, OSHA made the announcement that they planned to return to enforcing noise control requirements as originally described in 29 CFR 1910.95. Specifically, in cases where employees have a time-weighted average exposure of 90 dBA (the permissible exposure limit), noise controls (engineering or administrative) must be implemented if feasible. It should be noted that in 1981, this was only 19% of the manufacturing workforce; current estimates are even lower

'Feasible' is defined as 'capable of being done'; OSHA has indicated that they will look at both technological and economic capability. If there is a technological means of reducing noise, but the cost would be threatening to the company's financial well-being, it may be considered unfeasible. Companies can still rely solely on hearing conservation programs when exposure does not exceed the PEL, but when sound levels are more damaging, noise control options will need to be assessed and implemented if feasible.

Why is OSHA Doing This?

Why is it important to utilize noise control, instead of relying on annual testing, hearing protection, and education alone? It reduces the risk of human error: accidental or deliberate negligence, miscommunication, misinterpretation, etc. While a successful hearing conservation program can significantly reduce the risk of noise-induced hearing loss, it

requires active, diligent, and on-going participation on the part of employers, supervisors, and every employee to be effective. It places substantial burden on the employees to ensure their own safety, which requires that they be aware of risks, and utilize hearing protection devices correctly and consistently.

Employees and even supervisors are not trained safety professionals; they may not be aware if HPD is fit inaccurately, not attenuating adequately, or even required in certain situations. They may not be sufficiently aware of issues such as the debatable value of the Noise Reduction Rating in assessing attenuation. They may be concerned that the hearing protection prevents them from hearing safety alerts, or reduces their ability to tell where sounds are coming from. They may feel like they don't have to participate; sometimes employees sabotage their hearing protection, slip earbuds into their muffs, or refuse to use HPD outright.

Education and use of hearing protection devices, on and off the job, will continue to be an important part of hearing safety. Training employees in the use and need for hearing protection helps to create a safety behavior that will hopefully be taken to their home and recreational activities, improving their overall odds of preventing hearing loss. But in the workplace, reducing the noise or avoiding the exposure is a crucial first step toward effectively preventing noise induced hearing loss.

Why is This so Important?

The difficulty with gauging the benefits of noise control lies largely with the difficulty of gauging the social, psychological, and physical costs of hearing loss and other effects of noise exposure. Noise is an unseen hazard, with unseen effects on hearing and communication, safety, physical health, and long term quality of life. Hearing loss has been associated with depression, social isolation, and even premature onset of Alzheimer's disease. Tinnitus (ringing in the ears) is a common symptom of noise damage; the effects can range from mild annoyance to extreme depression and anxiety. Exposure to excessive noise has been linked to physical issues such as heart disease and hypertension, ulcers, and colitis. Working in high noise levels can decrease concentration, increase stress, and affect safety by making audible alerts harder to distinguish. These are invisible but hefty burdens; they are borne primarily by the employee, but also affect the employee's family and friends, co-workers, and employer.

What Does it Mean for the Employer?

Simply enough, it means that noise control will need to be actively addressed when a company finds it has employees exposed to the equivalent of 90 dBA (TWA). Some companies already do this by purchasing quieter equipment, isolating or limiting use of extremely noisy equipment, or utilizing various engineering controls to reduce the noise from current equipment. Companies that implement noise control as part of overall hearing conservation see advantages beyond improved safety; there can also be long-term financial benefits.

If levels can be reduced below OSHA's action level of 85 dBA (TWA), employers are no longer required to have a hearing conservation program; with some thoughtful investment and effort at the beginning of the process, they avoid the on-going cost, in money and time, of annual testing and training, while making a significant step forward in ensuring employee safety. Some thoroughly diligent companies still offer hearing conservation as a wellness benefit; they should be applauded for their dedication.

By utilizing noise controls, the employer may see a reduced incidence and degree of compensable hearing loss, and reduced risk of recordable hearing loss. In many states, workers' compensation laws require compensation for tinnitus and provision of hearing aids; the latter may be expected to cost \$2000-8000 for both ears, with replacement recommended every 3-4 years, for the rest of the employee's life. Preventing even one case of compensable hearing loss may save thousands in hearing aids alone. Additionally, as work in excessive noise has been tied to increased absenteeism and decreased productivity, benefits may be experienced in these areas as well.

OSHA's move in returning to the original intent of their noise control regulation may seem sudden, dramatic, or unnecessary; after all, for over 25 years we've gotten by on less, and treated the increased risk to employees' health and well-being as an acceptable cost. But making a habit of negligence cannot justify that negligence. This is not a sudden course change, but a long-awaited return to better practices. Many businesses have already taken it upon themselves to implement feasible noise controls; they do this because it's written into the regulation (even if it hasn't been enforced), because there may be long-term cost savings, because it makes sense from the standpoint of safety, and because it creates a better work environment for employees, while helping to protect their health.

If it's feasible to do better, for the employee and the company...isn't it time we did?

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