

In Support of Feasible Noise Control

Why isn't a hearing conservation program sufficient?

- With an HCP, the burden of compliance is placed on employees, who are not trained safety professionals, and may not be successful, even if willing.
- An HCP requires active participation and sustained, diligent effort by everyone at all times in order to protect everyone. This is at best optimistic. Annual testing and education may not be sufficient to convince employees to diligently use HPD. Studies on the subject have repeatedly shown significant self-reported non-compliance even in high noise.
- High ambient noise affects employee awareness of alarm signals and peripheral hazards. Hearing protection reduces the level of both the noise and the signal. Hearing protectors may have adverse effects on the ability to localize sound, which increases the likelihood of accidents. Some employees are hesitant to use HPD, due to concern about compromising safety. Difficulty perceiving important environmental cues may be compounded by hearing loss.
- The HCP focuses on measures we know to be faulty (i.e. the Noise Reduction Rating) and limits widely acknowledge to be too lenient (90 dBA PEL, 5 dB exchange rate). OSHA has publicly acknowledged that the 90-dBA average level still leaves some risk of hearing loss. NIOSH estimates that these limits will result in a 30% hearing handicap over the course of a working lifetime.
- Research has repeatedly shown that employees do not receive the amount of protection indicated by the Noise Reduction Rating (NRR). Even de-rating the NRR does not correlate with real-world performance. Actual attenuation can be significantly lower than the estimated or rated attenuation. For some employees, effective attenuation is zero.
- A hearing conservation program is not meant to eliminate the need for effective noise controls. It is meant to supplement these controls.
- The BLS estimates some 125,000 workers suffered recordable hearing impairments since 2004, but this number may be a gross underestimation. Companies have economic incentives not to record because of pressure from insurers and managers and there is considerable evidence that compliance with the recording rule is lacking.

Implementing noise controls will have a huge impact on American industries. We cannot afford a loss of industry/ jobs/ profitability.

- Controls are not required for every piece of equipment producing sound over 90 dBA. This has been a common misconception. They are only required when employee exposure to that equipment will exceed a 90 dBA time-weighted average. In 1981 OSHA estimated that some 19% of the workers in manufacturing were exposed above 90 dBA; current estimates are approximately 10%. These are the only employees affected by the policy change.

- HCPs may be less expensive in the short term (although OSHA's enforcement policy suggests that sometimes, noise control is actually less expensive) but in the long run, compensation costs, decreased productivity, increased absenteeism, increased recordable STS with subsequent changes to insurance costs all factor into the cost of letting employees manage their own protection with an HCP.
- Companies are not limited to engineering controls. Administrative controls are also a viable option, as long as they achieve the desired effect of limiting employee noise exposure. Administrative controls focus on limiting the duration of employee exposure, rotating equipment use to reduce cumulative sound level, etc. These amount to changes in procedure.
- In many states, workers' compensation laws require compensation for tinnitus and provision of hearing aids; cost of hearing aids ranges from \$2000-8000 for both ears, with replacement recommended every 3-4 years, for the rest of the employee's life.
- It should be noted that hearing aids do not replace damaged hearing; they amplify sound in sophisticated ways, but that sound must pass through the damaged auditory system.
- Premature hearing loss has an impact on the individual and our society; it affects safety, emotional and psychological health, communication, and quality of life.
- Workplace noise has been linked to multiple physical ailments, including hypertension, myocardial infarction, insomnia, anxiety, and gastrointestinal disorders (ulcers, colitis).
- Tinnitus prevalence rates can range from about 18% to 88% of noise-exposed workers, depending on the level, duration, and type of noise exposure. The effects can range from mild annoyance to extreme depression and anxiety.
- OSHA is defining 'feasible' in terms of the economic impact as well as technological capability; if implementation seriously impairs a company's viability, it is economically unfeasible.
- In a publication titled "Technology for a Quieter America", the National Academy of Engineering stated that the "100 dB OSHA Directive ... effectively devastated the market for quiet machinery and equipment." Revoking this policy may spur new industries.
- The US lags behind the other industrialized nations in the implementation of effective noise control. There is an under-recognized socioeconomic impact associated with this negligence, paid by employers and employees.

OSHA shouldn't treat noise any differently than it treats other hazards.

- The current enforcement policy for the noise standard is the only OSHA health or safety standard that deviates from the primacy of engineering and administrative controls.

- As a *de facto* change in the standard, the legality of the more lenient enforcement policy is questionable.
- OSHA's intended return to an accurate definition of 'feasible' is a return to the original intent of the regulation, bringing noise regulation in line with other hazardous exposure regulations.

100 dBA isn't much worse than 90 dBA.

- Because noise is measured using a logarithmic scale (the decibel), a seemingly small 10 dB step is in fact an increase of *10 times* the sound energy. In other words, 100 dBA is ten times worse than 90 dBA. Although there has been debate about this in the past, recent research confirms that the equal energy model is more consistent with the biological outcome of exposure.
- By failing to enforce the requirement for noise control until time weighted average exposure reaches 100 dBA, OSHA perpetuates the misconception that this level of sound is not hazardous. As OSHA is widely regarded as an authority on safety and health, they set an example that reverberates outside of general industry. These negligent safety practices are exported from the workplace into employees' homes, to their families, to peripheral fields (i.e. medicine and audiology) and to the mainstream.