



March 16, 2011

OSHA Docket Office
Docket No. OSHA-2010-0032,
U.S. Department of Labor, Room N-2625, 200 Constitution Avenue, NW.,
Washington, DC 20210

Re: Docket OSHA-2010-0032; Feasible Noise Control

The National Hearing Conservation Association (NHCA) is an internationally recognized association of professionals (audiologists, acoustical engineers, industrial hygienists, physicians and occupational health nurses) dedicated to hearing loss prevention. The NHCA has commented in the past in support of the efforts of the Occupational Safety and Health Administration (OSHA) to emphasize noise control as a principle and necessary approach to the reduction of hearing loss within the workplace. Although OSHA has withdrawn its proposal to return to the original interpretation of “feasible” in requirements for noise control, we encourage OSHA to continue to advocate for the safety and health of American workers by promoting this means of hearing loss prevention. There are many viable reasons for OSHA to renew its focus on noise control, despite the current climate of economic adversity.

The United States currently lags behind many industrialized nations in the implementation of effective noise controls. There appears to be a misconception that 29 CFR 1910.95 provides reasonable intervention to adequately protect noise exposed workers. In fact, these very interventions are based upon dated and often discredited methods for assessing the risk of permanent hearing damage from exposure to noxious levels of noise on the job. Agencies such as the National Institutes of Occupational Safety and Health (NIOSH), and professional organizations such as the American Congress of Governmental Industrial Hygienists and NHCA, have advocated for a more stringent standard for years. In 1998, NIOSH released a “Criteria for a Recommended Standard: Occupational Noise Exposure” that encouraged changes in the OSHA Standard to better conserve hearing by focusing on preventing occupational noise-induced hearing loss (DHHS (NIOSH) Publication No. 98-126). Unfortunately, OSHA has not implemented any of the NIOSH recommendations nor has OSHA made any changes to the Regulation since 1981 that would improve Loss Prevention effectiveness. However, while the rest of the industrialized world moves forward to more effective protective policies for their workers, we continue with a thirty year old standard which we have known for decades to be inadequate in preventing hearing loss. This comparatively less stringent standard has been reduced further in its efficacy by the implementation of a policy to disregard the requirement for noise controls until 10 decibels (dB) beyond the stated permissible exposure limit (or 10 times the sound energy and subsequent potential to do harm), and only then when noise controls are proven to be economically more feasible than a hearing conservation program.

By failing to enforce the requirement for noise controls until eight hour time-weighted average exposures reach 100 dBA, OSHA perpetuates the misconception that exposures up to this point are not hazardous. OSHA is widely regarded as an authority on occupational safety and health and its workplace standards set examples that transcend general industry into employees' homes and to their families as well as to peripheral professional fields (e.g.. medicine, audiology). Therefore, less than effective safety and health standards do not achieve the ultimate goal of fostering a culture of safety both on and off the job.

The apparent reason for not enforcing the noise control requirements as specified in the original standard was the argument that a hearing conservation program could as effectively protect noise exposed workers at a much lower cost than designing and implementing noise control measures. While an effective hearing conservation program may achieve this objective for some workers, a program designed to comply with the minimal requirements of the hearing conservation amendment to the noise standard may not. Employers who rely solely on hearing conservation to strategically prevent occupational noise-induced hearing loss often fall short of their intended goal leaving themselves at risk for Log 300 recordable hearing loss cases and costly worker compensation claims, not to mention their employees' risk of life altering hearing loss and tinnitus.

There is evidence that hearing conservation programs alone are not effectively preventing hearing loss and it continues to be a significant workplace illness. The Bureau of Labor Statistics (BLS) estimates some 28,000 workers suffered recordable hearing impairments in 2004, the first year hearing loss was recorded separately on the OSHA 300 log, and that number may be an underestimation. Companies may have underlying economic incentives to not record occupational hearing losses, such as perceived pressure from insurers and managers whose salary and bonuses may be based on their achieving a low number of OSHA recordable illnesses and injuries. Further, tinnitus prevalence rates range from 18% to 88% for today's noise-exposed workers, depending on the level, duration, and type of noise exposure.

Part of the difficulty in preventing hearing loss through hearing conservation programs alone is reliance on active and informed participation by employees to responsibly ensure their own safety. Even with sufficient training, workers may have difficulty in correctly identifying when sound is excessive or when hearing protection is not working effectively.

When properly fitted and worn, personal hearing protective devices have proven to provide adequate attenuation from workplace noise. However, research has demonstrated that for the most part, employees often do not wear their hearing protection properly and therefore do not achieve the projected level of attenuation (Noise Reduction Rating or NRR). In fact, the OSHA Field Operations Manual requires a 50% derating of the NRR when assessing hearing protection attenuation due to the recognized fact that the NRR does not provide an accurate estimate of attenuation in the field for many workers.

Noise control as a means of reducing employee exposure to workplace noise has advantages when compared to even properly worn hearing protection. It eliminates the possibility of error or negligence in selecting and properly using personal hearing protection on the job. Noise control also improves the signal-to-noise ratio of both speech and warning signals better than most hearing protection by targeting the frequency and intensity of the noise problem at hand. It is also possible that some hearing protectors may further decrease speech intelligibility thereby increasing difficulties of message comprehension that is often seen with the

associated with high frequency hearing loss typical of aging and noise-induced hearing loss. The majority of non-specialized hearing protectors provide greater attenuation at higher frequencies than at low frequencies resulting in decreased discrimination abilities for individuals with high frequency hearing loss as noted above and, in some instances, increased difficulty in sound localization. For these reasons, some workers may be reluctant to wear hearing protection due to the perception that their safety (i.e. the ability to hear on the job and/or awareness of critical sounds) may be compromised. Studies on the subject have repeatedly shown self-reported non-compliance with hearing protection policy, even in high noise workplaces.

While concerns regarding economic feasibility are valid, recent assessments of the cost of hearing conservation programs versus noise controls indicate that noise controls may provide return on investment (ROI) within a matter of years. In a podium presentation at the 2011 NHCA Annual Conference, Dennis Driscoll provided evidence of a projected ROI break-even point within 5 years for one company. In the interpretation of the regulation, “feasibility” should most assuredly be defined in terms of both economic impact and technological capability if it is felt that implementation of engineering controls would seriously impair a company's economic viability. However, as a long term strategy, noise controls may offer superior ROI when compared to the on-going costs associated with hearing conservation programs which include not only the obvious direct costs (OSHA mandated training, hearing protection, annual audiometric testing, reporting and record keeping) but also the indirect costs of decreased productivity, increased incidence of recordable hearing loss cases and the potential for significant increases in workers’ compensation costs for occupational hearing loss. In many states, workers' compensation laws require compensation for tinnitus and provision of hearing aids. The cost of hearing aids ranges from \$2000 - \$8000 for both ears with replacement recommended every three to four years over a worker’s lifetime.

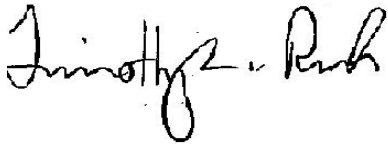
There is an additional under-recognized socioeconomic cost to employees, employers and society as a whole. Occupational noise-induced hearing loss negatively impacts the quality of life through interrupting and confusing interpersonal communications as well as impacting an individual’s safety, emotional and psychological health.. Exposure to excessive noise has also been linked to multiple physical ailments other than hearing loss including hypertension, myocardial infarction, insomnia, anxiety, and gastrointestinal disorders all of which take an unseen and largely unreported toll on noise exposed workers and their families. While hearing aids amplify sound in sophisticated ways, they cannot correct noise-induced hearing loss in the manner that eye glasses correct vision. The hearing loss and associated tinnitus are permanent and irreversible – but preventable!

Consistent with other OSHA regulations, which stress the primacy of engineering controls in reducing the risks associated with chemical exposure, noise controls should be also be foremost in the hierarchy of strategies to prevent occupational noise-induced hearing loss. 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 may be questionable, as it was implemented without required rule-making procedures. OSHA’s intended return to an accurate definition of ‘feasible’ would have been a return to the original objective of the regulation by bringing the noise control regulation in line with other hazardous exposure regulations.

The National Hearing Conservation Association is dedicated to the goal of reducing or eliminating preventable hearing loss in all sectors of society. In industrial settings, this may be best achieved by a comprehensive approach utilizing engineering and administrative noise controls in concert with an effective

hearing conservation program. While advances such as hearing protection fit testing and in-ear dosimetry have improved the ability of safety professionals to verify adequate fit and attenuation of personal hearing protective devices, reliance on hearing protection alone may be insufficient to adequately manage the risk of noise-induced hearing loss if little or no personal training is provided to the users and if enforcement policies are lax. Noise control should continue to be emphasized as a necessary and effective component of hearing loss prevention. We support OSHA's efforts to return to enforcement of the regulation as originally written and we encourage OSHA to continue to promote employee safety and health by providing outreach to employers on the availability and benefits of noise controls.

Sincerely,

A handwritten signature in black ink that reads "Timothy Rink". The signature is written in a cursive style with a large, stylized initial 'T'.

Timothy Rink, Ph.D.
President, National Hearing Conservation Association