

TerranearPMC Safety Share

Week of February 17, 2014 – OSHA's Hearing Conservation Program

According to the National Institute for Occupational Safety and Health (NIOSH), 4 million workers go to work each day in damaging noise. Ten million people in the U.S. have a noise-related hearing loss. Twenty-two million workers are exposed to potentially damaging noise each year.

OSHA's Occupational Noise Exposure standard requires employers to develop a Hearing Conservation Program (HCP) when any employee's exposure equals or exceeds an 8-hour time-weighted average of 85 decibels based on the A-weighted scale (dBA). This noise level is referred to as the OSHA action level (AL) and requires employers to develop and implement a noise monitoring program and to have hearing protection devices (i.e. ear plugs, ear muffs, etc.) available to employees. While under the requirements of OSHA, it is not mandatory to wear them, however, they must be worn when the employee eight-hour time weighted exceeds 90 dBA.

Many of us that work on government projects are required to follow a guideline that is a little more stringent (protective) than the OSHA hearing protection requirements. This is the American Conference of Governmental Industrial Hygienists or ACGIH. Through ACGIH requirements, employee noise exposure must be reduced (attenuated) to 85 dBA. While it was just mentioned that 85 dB is the OSHA AL, it is also the ACGIH threshold limit value (TLV) and therefore, if your project is required to follow ACGIH guidelines, reducing one's noise exposure, either through the use of engineering controls (mufflers, noise absorbent materials, mufflers, baffles, etc), administrative controls (reduced exposure time, staggered work shifts) or, as a last resort, using hearing protection devices, is required. If the 8-hour time-weighted average – without regard to ear plugs or muffs – cannot be reduced to less than 85 dBA, those affected employees must be enrolled in the company HCP.

As part of the HCP, within 6 months of an employee's first exposure at or above the action level, the employee must participate in a baseline audiogram. This is an evaluation to determine an employee's ability to hear the frequencies of 500, 1000, 2000, 3000 and 6000 Hertz. The baseline is then used as comparison for all subsequent audiograms.

Testing to establish a baseline audiogram must be preceded by at least 14 hours without exposure to workplace noise. Hearing protectors may be used as a substitute for the requirement that baseline audiograms be preceded by 14 hours without exposure to workplace noise.

At least annually after obtaining the baseline audiogram, a new audiogram for each employee exposed at or above the action level must be scheduled. Each employee's annual audiogram must be compared with that employee's baseline audiogram to determine if the audiogram is valid and if a standard threshold shift (STS) has occurred. A STS occurs when an employee's ability to hear the designated frequencies has been reduced by 10 decibels (based on an average of the test frequencies) in either ear.



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An audiologist, otolaryngologist, or physician must review problem audiograms and must determine whether there is a need for further evaluation. If a comparison of the annual audiogram with the baseline audiogram indicates an STS has occurred, the employee must be informed of this fact in writing within 21 days of the determination.

An annual audiogram may become the new or revised baseline audiogram when, in the judgment of the audiologist, otolaryngologist, or physician who is evaluating the audiogram; 1) the STS revealed by the audiogram is persistent, or 2) the hearing threshold shown in the annual audiogram indicates significant improvement over the baseline audiogram

Accurate record of all employee exposure measurements and audiometric test records must be maintained for the duration of the affected employee's employment, while noise exposure measurement records are to be retained for 2 years. All records must be provided upon request to employees, former employees, representatives designated by the individual employee, and OSHA. If the employer ceases to do business, employee records need to be transferred to the successor employer.

According to the National Institutes of Health, the following questions will help employees determine if they need to have their hearing evaluated by a medical professional:

1. Do you have a problem hearing over the telephone?
2. Do you have trouble following the conversation when two or more people are talking at the same time?
3. Do people complain that you turn the TV volume up too high?
4. Do you have to strain to understand conversation?
5. Do you have trouble hearing in a noisy background?
6. Do you have trouble hearing in a noisy background?
7. Do many people you talk to seem to mumble (or not speak clearly)?
8. Do you misunderstand what others are saying and respond inappropriately?
9. Do you have trouble understanding the speech of women and children?
10. Do people get annoyed because you misunderstand what they say?

Those who answer "yes" to three or more of these questions may want to see an otolaryngologist or an audiologist for a hearing evaluation.

**I have freed a thousand slaves. I could have freed a thousand more if
only they knew they were slaves**

Harriet Tubman (Abolitionist 1820 - 1913)

