

"Compliance Matters"

HEARING CONSERVATION – PART I **OSHA REFERENCE 29CFR 1910.95**

The OSHA regulations on OCCUPATIONAL NOISE EXPOSURE require every employer to administer a continuing, effective hearing conservation program whenever employee exposures equal or exceed an 8 hour time-weighted average (TWA) sound level of 85 decibels measured on the "A" scale (slow exposure). This may be expressed as a TWA of 85dBA.

Noise is any unwanted sound. Sound is measured in two ways: loudness (measured in decibels) and tones (measured in hertz – HZ; low tones like a bass guitar and high tones like a flute).

HOW WE HEAR

The ear is composed of many delicate structures designed to carry sound waves to the brain. The hair cells in the inner ear are critically important because they stimulate the auditory nerve that transmits the impulses to the brain. These impulses are then translated by the brain into the "sounds" we actually hear. When these hair cells suffer damage due to excessive noise, the auditory nerve is no longer adequately stimulated. When this happens, the brain no longer receives the appropriate signals and our hearing is impaired.

Picture the ear's hair cells as grass in a lawn. An occasional stroll across the lawn will depress the grass with each step. By the next day, the leaves have revived and straightened out. However, with repeated walking in the same spot, the grass will no longer recover and eventually it will die. So too, the ear's hair cells will die if repeatedly exposed to excessive noise. Unlike the grass, there is no chance for recovery and it can not be corrected by surgery.

NOISE IN THE WORKPLACE

The first question normally asked is, "Are any of our employees exposed to noise levels at or above a TWA of 85dBA?" The answer for many maintenance shop operations is, "Probably". It obviously varies with the job or task and the equipment being used. Most employers are surprised to learn how much noise is generated by/in their shops.

Noise generated by air compressors, impact (air driven) tools, grinding equipment often exceeds the ACTION LEVEL. It is the employer's responsibility to determine if employees are exposed to occupational noise at 85dBA or greater – this is the OSHA ACTION LEVEL. Once it has been determined that the ACTION LEVEL has been reached, the employer must implement a HEARING CONSERVATION PROGRAM.

DETERMINING EXPOSURE

The preferred method of determining employee noise exposure is through the use of a dosimeter. This is a small (but expensive) device worn by the employee throughout his / her work shift. There are two or three options for getting this done: 1) Contact your insurance carrier's loss control department – some of them provide this service for a fee; 2) contact your safety equipment supplier – some of them provide this service and / or will rent the dosimeters, 3) contact a safety / health consulting firm who has an industrial hygienist on staff or available for this type of work.

REMEMBER – You will want accurate and documented data for the record. Certification of the data is extremely important.

THE NEXT STEP

If the noise measurements conclude there are employees exposed at or above the ACTION LEVEL – the employer must take specific “ACTION”. This requires a written Hearing Conservation Program addressing the OSHA requirements.

Noise measurements ranging from 85-89dBA require an employer to furnish a variety of hearing protectors at no cost to employees. (Employee use at these sound levels is voluntary.) If the employee has not had a baseline audiogram, wearing of the hearing protection is mandatory. It is also mandatory for any employee exposed to noise levels at 90dBA or above.

Next month “Compliance Matters” will discuss the OSHA requirements for a Hearing Conservation Program. Neither this issue nor next month's constitutes a ‘written program’.

FOR COMPLETE DETAILS OF THE REQUIREMENTS, READERS ARE ENCOURAGED TO CONSULT THE REGULATIONS IN 29CFR 1910.95.