

HEARING CONSERVATION GUIDELINES

OVERVIEW

The Occupational Safety and Health Administration (OSHA) requires that employers implement a Hearing Conservation Plan whenever employee noise exposures exceed an eight-hour, time-weighted average (TWA) of 85 decibels (dBA). Listed below are some examples of dBA measurements:

- Office – 45 dBA
- Stadium Noise – 84-89 dBA
- Backup Generator – 95 dBA
- Lawn Mower or Fan Room – 90 dBA
- Jet Engine – 140 dBA

SCOPE

These guidelines apply to all full-time, part-time, and temporary employees and contractor employees.

REQUIREMENTS

A work survey should be conducted by a qualified professional to identify potentially hazardous noise levels. If the survey indicates that the OSHA-established criteria are met, then a written Hearing Conservation Program must be developed. At present, OSHA has set a threshold of an 8-hour TWA of 85 dBA or greater. The basic elements of a Hearing Conservation Program include:

- Recognizing and identifying the noise hazard
- Evaluating the noise hazard
- Establishing noise level zones
- Audiometric testing program

- Employee notification procedure
- Selecting the proper hearing protection
- Training program
- Recordkeeping program

RESPONSIBILITIES

In order to have a successful Hearing Conservation Program, each of the elements mentioned above must be considered:

Recognizing and identifying the noise hazard – Noise is one of the most widely and frequently experienced problems in the work environment. Noise can affect an individual by causing temporary or permanent hearing loss. Additional issues may include:

- Tinnitus – a constant or periodic ringing or roaring in the ears
- Inability to hear alarms and safety warnings
- Stress, poor concentration, headaches, etc.
- Altered biological functions, such as heart rate

Evaluating the noise hazard – Noise measurement surveys must be conducted to determine those employees at risk and the processes, machinery, etc. that are producing sound level readings in accordance with the OSHA-established criteria:

- At or above the Action Level of 85 dBA 8-hour TWA
- At or above the Permissible Exposure Level of 90 dBA 8-hour TW

Establishing noise level zones – When the noise measurement surveys indicate areas with noise levels above 85 dBA, some steps that can be taken to reduce occupational exposure include:

Engineering controls:

- Lubricating and maintaining equipment to eliminate rattles and squeaks
- Isolating noise producing equipment from individuals
- Mounting machines on rubber pads to reduce vibration
- Choosing quieter machines when replacements are needed
- Installing sound barriers around noisy equipment
- Reducing sound by controlling output
- Using sound-absorbing pads, ceiling materials, etc.

Administrative controls:

- Reducing the time an individual is exposed to high noise levels
- Operating noisy equipment during time periods when fewer people are exposed
- Locating noisy equipment a suitable distance from employees

Personnel protective measures:

- Wearing approved hearing protection, i.e., ear plugs or earmuffs

Audiometric testing program – All employees who are exposed to the noise levels as established by OSHA shall be tested to establish a baseline. Annual audiometric testing must then be conducted to determine if any change in hearing has occurred. Employee noise exposures must be computed without regard to any attenuation provided by the use of hearing protectors.

Employee notification– Employees who are exposed to noise levels as established by OSHA must receive notification regarding:

- Noise monitoring results
- Details of the Hearing Conservation Program
- Engineering and/or administrative controls to reduce noise levels
- Hearing protection devices that are available

Selecting the proper hearing protection – Hearing protection devices should be chosen based on the noise level to which the employee may be exposed. Hearing protection devices cover or go into the ears to block noise. Never use cotton, stereo headsets, or other makeshift hearing protectors. Listed below are the three main types of hearing protection devices:

Earplugs are inserted in the ear canal to seal noise out. They may be pre-molded or custom-molded, re-usable or one-use or one-week-use disposables. Proper training must be provided on the use of earplugs, as they are frequently inserted ineffectively or incorrectly.

- Earmuffs, with a headband and cushioned plastic cups that cover each ear, are the best protectors. They may feel bulky or uncomfortable in hot weather, however, and in tight quarters, they can be an added problem.
- Both earmuffs and earplugs used together may be needed in some high noise areas.

TRAINING

Training program – All employees who are exposed to noise levels above those established by OSHA's Hearing Conservation Level must be trained in the following:

- Effects of noise on hearing
- Safe levels of noise
- Purpose of hearing protection devices
- Instructions on the use, care, and maintenance of hearing protection devices and equipment
- Purpose of audiometric testing and an explanation of the test procedures

RECORDKEEPING

Recordkeeping program – The following records must be maintained:

- Employee noise exposure measurements
- Audiometric test records
- Records on the content of the training and the attendees

DOCUMENTATION

Documentation – The following records must be maintained:

- Audiometric tests and the name and qualifications of the examiner
- Noise level measurements and/or personal noise dosimetry records
- Training provided, the materials used, and the attendees
- An up-to-date OSHA 300 Log, which has new recording criteria for occupational hearing loss
- Written copy of the Hearing Conservation Plan

Please contact David.Templeman@cbs.com for additional information.