

HEARING CONSERVATION



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1. INTRODUCTION

Written in 1983, the OSHA Hearing Conservation Standard (29CFR1910.95 -Occupational Noise Exposure) requires that employers implement a hearing conservation program for employees exposed to excessive levels of noise, since professional and medical studies have shown that certain levels of noise can produce irreversible damage to an individual's hearing. Several factors contribute to hearing loss or damage in industrial settings, especially the loudness of the sound and the length of employee exposure time. Working daily in a noise level that is equal to or greater than an average of 85dB (decibels) over an 8- hour work period is hazardous to that person's ability to hear. (Action Level)

Thus, the following guidelines have been established, and **H2 Enterprises, LLC (H2)** will maintain an ongoing, effective hearing conservation program when employee noise exposures exceed the action level of 85dB on an 8-hour time- weighted average basis.

- Monitor the workplace and/ or employees to identify noise levels that equal or exceed the "action level" of 85dB on an 8- hour time-weighted average basis.
- Post appropriately worded warning signs that indicate where high noise areas are present.
- Provide affected employees with education and training, which promotes and ensures the conservation of hearing.
- Provide a choice of hearing protectors approved by the Director, HSE and instruction in the use, care and maintenance of these devices.
- Provide regularly scheduled, specific types of hearing tests for employees exposed to noise levels at or above the "action level".
- Maintain employee medical records from hearing tests and noise exposure monitoring performed in the workplace.

The individual responsible for the Hearing Conservation Program at **H2** is the Director, HSE.

2. MONITORING

The work environment at the different project locations provides an unlimited source of unseen sound waves to which our ears continuously respond. In compliance with the OSHA Hearing Conservation Standard, monitoring is periodically conducted by **H2** using a calibrated Sound Level Meter. The results will be filed at the **H2** Offices in and affected individuals will be appropriately notified of their recorded exposures.

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Monitoring will be repeated whenever specific environments are encountered, whereupon changes in processes or equipment increase noise exposures such that additional employees are exposed above the action level, hearing protectors provided no longer provide adequate protection, employee's loud-noise complaints are registered, or hearing test results indicate provided protection is inadequate.

3. POSTING SIGNS

Monitoring results which indicate that a location equaled or exceeded the 85dB - 8 hour TWA "action level" will be identified with signs stating the following:

NOTICE: Hearing Protection Must Be Worn in This Area

These signs can often be found placed in various Client workplace locations. If an employee enters an area not signed, and the perceived noise level indicates that it may be above the 85Db - 8 hour TWA, then that individual should practice the following guideline. If normal conversation levels cannot be heard or understood within 3 feet of a coworker due to the surrounding noise environment, then assume that level to exceed the identified action level, and take appropriate measures to either leave that area immediately, or wear appropriately rated hearing protection devices.

When a **H2** employee enters an assigned project location, they will comply with the Client's Hearing Conservation Program that identifies any work area where the noise exposure levels would be equal to or greater than 85dB for an 8-hour TWA.

4. EDUCATION AND TRAINING

All employees of **H2** who may be exposed to noise levels exceeding 85dB in an 8-hour time weighted average will receive the following annual training as conducted by **H2**. Training will be updated consistent to changes in any PPE or work practices, and as a minimum, will cover the following:

- The effects of noise on hearing.
- The purpose of hearing protectors, their advantages and disadvantages, the degree to which they reduce noise, and the selection, fitting, and care of protectors most suitable for the work environment.
- The purpose and procedures for hearing (audiometric) tests.

This training will be documented, recorded and the information maintained by the Director, HSE at the Main Offices, and a copy of the training procedure will be posted in the workplace.

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5. CONTROLS

Loud, excessive noise exposure will be effectively reduced whenever practicable and feasible by implementing engineering controls such as:

- Proper design of new machines.
- Modification of present machines to reduce noise output.
- Perform routine maintenance and upkeep of equipment.
- Install noise suppression devices such as baffles or mufflers.
- Erect or install sound barrier equipment or materials.

Or, by the implementation of administrative controls such as:

- Limit exposure times by hours per employee
- Job schedule changes or shift rotation.
- Increase working distance between noise levels and employees.

When engineering or administrative controls are unable to be implemented that would effectively reduce workplace noise exposure levels below 85dB for an 8-hour TWA, then all identified employees will be provided a selection of proper fitting and attenuating hearing protection devices at no cost. These devices may include, but are not limited to the following:

- enclosure (acoustical-property helmet).
- aural (ear inserts like earplugs), formable, molded, or custom molded.
- super aural (canal caps on a spring-tension band).
- circumoral (ear-muffs or cup devices).

Hearing protection devices shall be replaced by employees as required. Foam plugs are designed to be disposable, whereas ear muffs can be cleaned, disinfected and maintained. The sound level monitoring that is conducted will determine which hearing protection devices will be provided, based on the appropriate (NRR) noise reduction rating assigned to each piece of equipment.

Each respective Project Safety Coordinator shall monitor and ensure that all employees identified in this Hearing Conservation Program wear the assigned hearing protectors at all required times.

6. AUDIOMETRIC TESTING

Employees who are identified as having 8-hour time weighted average noise exposures at or above 85 decibels shall be offered an audiogram at no cost to that individual. An audiogram is a

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hearing test used as an important tool for the prevention of hearing loss, since it detects changes in hearing ability before it is too late. Hearing tests can be used to determine:

- If a hearing loss or change exists.
- How much of a hearing loss or change has occurred ?
- Which frequencies of hearing are affected (low or high).
- The type of hearing loss (outer, middle or inner ear).
- What effect the loss had on the ability to hear & understand speech.

Within 6 months of an employee's first identified exposure at or above the action level, **H2** shall establish a valid baseline audiogram against which future audiograms can be compared, or it will be conducted at the time of a new-hire employment physical.

A pure-tone hearing test will be performed by a certified audiologist service that uses an audiometer to transmit single tones at standard frequencies to earphones which you wear in an enclosed booth. Your hearing threshold is compared to an established "zero reference level" and any recording below this level would indicate that a "standard threshold shift" (hearing loss) has occurred.

To assure validity and accuracy of this type of test, you will be required to avoid exposure to workplace or home noise for at least 14 hours prior to taking the test. Hearing protection devices may be used to meet this requirement, and high noise levels (above 85dB) are to be avoided during this time.

An annual audiogram shall be obtained within one year of the baseline, and annually thereafter, for each employee exposed at or above the action level. The annual audiogram is then compared to the baseline audiogram to determine the accuracy of the audiogram or if hearing loss or change has occurred.

If it has been determined that any **H2** employee demonstrates a standard threshold shift (hearing loss) equal to or greater than 10dBA in either ear when exposed to sound levels at 2,000 3,000 and 4,000 Hertz, that employee will be notified within 21 days by the organization performing this testing. **H2** has the right to retest this employee within 30 days and use the new test results as the annual audiogram for that employee.

In the event an identified employee is found to have experienced a standard threshold shift (hearing loss), that employee shall be re-evaluated, or refitted and retrained in the proper use, selection, care and maintenance of substantially higher-rated hearing protection. Medical evaluation may also be included.

7. RECORD KEEPING

All training concerning the Hearing Conservation Program shall be dated, signed by the affected employees, and placed in the Safety Files. Audiometric test records shall include the

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employee's name, job classification, date of test, examiners name, date of last acoustic calibration of audiometer, and the employee's most recent noise exposure assessment.

All test records shall be retained for the duration of the affected employee's employment, and shall be made available to any respective requesting employee by completing the appropriate medical records request form.

8. NON-OCCUPATIONAL NOISE EXPOSURE

Employees must understand that all noise exposures have the potential to demonstrate an accumulative effect, that is, the damage to your hearing ability adds up. It is seldom noticed because the resulting damage is not usually painful and takes time to develop. A false sense of security is experienced and the employee thinks that they may have escaped damage.

Sound levels experienced off the job can be as loud or louder as those found in the work environment. Recreational activities, hobbies, and home improvement projects can contribute significant noise level exposures.

- Woodworking equipment/powered-tools
- Chain saws
- Lawn mowers
- Weed whips/spin-trim devices
- Motorcycles
- Drag-racing
- Wet-bike/ jet-bike riding
- Gun-shooting
- Loud stereos - home/ car

Then add these sound levels experienced to a work-day with no protection in place and the potential to lose your hearing ability can be realized even sooner in your lifetime. The sensory hair cells located in your inner ear need a significant time of "quiet" so they can provide optimum performance for you to listen selectively, hear danger signals, or enjoy pleasurable sounds the world must offer.

9. WARNING SIGNALS

If you are personally experiencing any of the following items listed below, then it may be an indication of a potential hearing loss:

- difficulty hearing consonants like "S's" and "T's" in conversation.

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- people around you say you shout, or talk too loud.
- you must turn up volume controls on the TV or radio.
- high frequency sounds like whistles, telephone rings are faint.
- soft sounds like a baby's or woman's voice are not heard.
- you have a constant ringing in your ears (tinnitus).

10. CONCLUSION

Even though you are losing your ability to hear by the natural aging process, you can still control other environmental or workplace factors that can affect this rate of loss. Follow the guidelines established in this written program, notice the posted areas and be aware of the un-signed areas, wear the properly selected and provided hearing protection devices on the job as well as off the job, and you can significantly increase your ability to hear during your course of employment at **H2**.

Non-compliance by any **H2** employee with any part of this described program will result in disciplinary action as outlined in **H2's** Corrective Action and Disciplinary Program found in this manual.