



<b>Subject:</b> Hearing Conservation Program	<b>Date:</b> 12/8/22
<b>EH&amp;S Program:</b> Occupational Safety	<b>Next Review:</b> 12/8/25
<b>Scope:</b> University Wide	<b>Original:</b> 1997

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### Policy:

Workers with occupational noise exposures will be included in a Hearing Conservation Program, which is maintained by Environmental Health & Safety. Departments must arrange for audiometric testing and provide hearing protection as required. Supervisors must ensure that hearing protection is worn in designated locations.

### Definitions:

**Action Level:** Employee exposure to occupational noise that triggers the implementation of the Hearing Conservation Program (workplace noise levels that is equal to or exceeds an 8-hour Time Weighted Average [TWA] of 85dBA).

**Ceiling Limit:** Exposure to continuous, varying, intermittent or impulsive noise shall not exceed 140 dBA.

**Recommended Exposure Limit (REL):** 85 decibels (dBA) as an 8 hour time-weighted average (TWA).

**Standard Threshold Shift [STS]:** A change in the employee's hearing threshold of an average of 10 decibels [dB] or more at 2000, 3000, and 4000 hertz [Hz] in either ear, relative to the baseline audiogram.

### Procedures:

#### A. Monitoring

1. All workplaces suspected of having noise levels that may exceed the action level are to be monitored by the Department of Environmental Health and Safety to accurately identify employees who receive daily noise doses at or above the action level.
  - a. Where circumstances such as high worker mobility, significant variations in sound level, or a significant component of impulse noise make area

monitoring generally inappropriate, representative personal sampling shall be provided.

- b. Noise levels must be re-measured whenever any change relating to noise production is suspected of increasing, at or above the action level, or the attenuation provided by the selected hearing protectors is rendered inadequate.
- c. Noise levels must also be remeasured to determine the effectiveness of any engineering controls that are installed.
- d. Monitoring may be accomplished by an area survey technique in which sound level meter readings are combined with estimates of the length of exposure of individuals to particular sound levels in order to calculate an 8 hour Time Weighted Average (TWA), or may be measured by personal sampling method by the use of noise dosimeters.
- e. Areas in which noise levels are measured, monitoring may be observed by affected employees or their representatives
- f. Exposure to impulsive or impact noise should not exceed 140 dBA peak sound pressure level

**Average Sound Exposure Levels Needed to Reach the Maximum Allowable Daily  
Dose of 100%**

<b>Time to reach 100% noise dose</b>	<b>Exposure level per NIOSH REL</b>
8 hours	85 dBA
4 hours	88 dBA
2 hours	91 dBA
60 minutes	94 dBA
30 minutes	97 dBA
15 minutes	100 dBA
7 minutes and 30 seconds	103 dBA
3 minutes and 45 seconds	106 dBA
1 minute and 53 seconds	109 dBA
56 seconds	112 dBA
28 seconds	115 dBA
14 seconds	118 dBA
7 seconds	121 dBA
3 seconds	124 dBA
1 second	127-129 dBA
<1 second	130-140 dBA

## **B. Audiometric Testing**

1. All employees must have a baseline audiogram taken within six months of their first exposure at or above the action level. Employees with continuing exposures at or above the action level are to have annual audiograms.
  - a. Baseline audiograms must be preceded by at least 14 hours without exposure to workplace noise; however, hearing protection may be used as a substitute for this requirement.
  - b. Baseline audiograms should also be preceded by at least 14 hours without high levels of non-occupational noise.
  - c. Annual audiograms must be obtained during paid working hours.

## **C. Hearing Protection**

1. Hearing Protectors must be made available to all workers exposed at or above the action level. The use of hearing protectors is mandatory for those exposed at or above the Permissible Exposure Limit (PEL), and for those exposed at or above the action level who either incur an STS (Standard Threshold Shift) or who have been exposed in excess of six months without having had a baseline audiogram.
  - a. Hearing protectors must reduce exposure to 90 dBA, or to 85 dBA for those exhibiting an STS (see section E).
  - b. The employee's department must provide a variety of suitable hearing protection from which employees may choose. This requires the availability of at least one type of plug and one type of muff.
  - c. The hearing protectors are to be supplied to employees at no cost, and replaced as necessary. The University is not expected to pay for an unlimited supply of protectors or to replace devices that are lost or damaged due to employee negligence.

## **D. Training**

1. Employees exposed at or above the action level will be trained at least annually regarding the effects of noise on hearing; the purpose, advantages, disadvantages and attenuation of hearing protection being offered; the selection, fitting, and care of protectors; and the purpose and procedures of audiometric testing.

## **E. Recordkeeping**

1. Noise exposure records must be retained for two years, but data older than two years should not be discarded unless re-monitoring has been performed. Audiometric test records are to be retained for the duration of the employee's service at the University.
2. Changes in employees hearing acuity that exceed an average of 10 dB or more at 2000, 3000, and 4000 Hz in either ear, relative to the baseline audiogram, are considered to be a Standard Threshold Shift (STS). Any STS is to reported on a CS-13 form and DOSH 900 (OSHA Form 200).

## **F. Noise Reduction**

1. The reduction or elimination of noise producing sources and/or employee exposure should be sought through administrative (e.g., modified work schedule) and/or engineering controls.

## **G. Responsibilities**

1. The Department of Environmental Health and Safety will be responsible for the coordination of the overall program, with specific responsibility for:
  - a. Assessing the need for hearing protection and identifying employees who should be included in the Hearing Conservation Program through monitoring.
  - b. Developing a representative sampling strategy for those in the Hearing Conservation Program
  - c. Calibration of instruments used to measure employee noise exposure to ensure measurement accuracy
  - d. Selection of the types of hearing protection to be provided to University employees.
  - e. Providing initial training and written instructions for care, use and maintenance of hearing protection.
  - f. Conducting periodic inspections and evaluation to determine the continued effectiveness of the program.
  - g. Notifying employees exposed at or above an 8-hour TWA of 85 dBA
  - h. Maintain copies of all records relating to workplace monitoring and audiometric testing. Audiograms will be held in those employee records maintained by the Department of Environmental Health and Safety for forty years.

## 2. Departmental Responsibilities

- a. Actual implementation of the program is the responsibility of the individual department in which exposed employees work. These responsibilities include:
  - 1) Establish an employee audiometric testing program through a medical provider.
  - 2) Supplying copies of audiometric testing results to the Department of Environmental Health and Safety.
  - 3) Purchase of hearing protection devices as recommended by the Department of Environmental Health and Safety.
  - 4) Coordination of employee training schedules with the Department of Environmental Health and Safety.
  - 5) Enforcement of the proper care and usage of assigned hearing protection.

## 3. Employee Responsibility

- a. To use the hearing protection provided in accordance with the instructions and training received.

Forms: NA

Policy Cross Reference: NA

Relevant Standards/Codes/Rules/Regulations/Statutes:

29 CFR 1910.95 *Occupational Noise Exposure*

"Criteria for a Recommended Standard: Occupational Noise Exposure".

<https://www.cdc.gov/niosh/docs/98-126/>

References and Resources: NA