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**NAU Hearing Conservation Program**

**OSHA 29 CFR 1910.95**

**I. Purpose**

It is the policy of NAU Environmental Health & Safety (EHS) to protect its employees from the hazards of excessive noise exposure on the job. The general objectives of this program are as follows:

1. To identify a population of employees exposed to noise, i.e., those whose typical exposure to workplace noise equals or exceeds the action level as set by OSHA, or a level equivalent to a continuous 8-hour exposure to 85 dB(A). If employees are exposed at or above 85 dBA, they must be incorporated into NAU’s Hearing Conservation Program.
2. To identify and demarcate work areas in which the sound level is sufficiently high to contribute substantially to an exposure at the level described above
3. To reduce workplace exposure to noise through the use of hearing protection devices (ear plugs or ear muffs).
4. To assess annually the hearing acuity of " exposed" employees, in order to detect very early noise-induced hearing loss, so that the progressive loss can be halted
5. To ensure that all "exposed" employees are trained in the effects of excess noise on human hearing, and that each employee is informed on the correct use of hearing protection devices

**II. Policy and Procedure**

A. Administration of Program

NAU EHS is responsible for administering this program to applicable departments.

B. Use of Engineering Controls

Where employee noise exposure exceeds the OSHA Permissible Exposure Limit (PEL) of 90 dB(A) on an eight hour time-weighted average, engineering or administrative controls will be used to reduce exposure. If such controls are not feasible, hearing protection devices (HPDs) will be provided and used to reduce exposures to below 90 dB(A).

C. Inclusion of Employees Into This Program

Employees exposed to noise levels equal to or exceeding an 8-hour time weighted average of 85 dB(A) will be included in the Hearing Conservation Program. Appendix A can be used by department heads/supervisors to compile a list of employees required to be in a Hearing Conservation Program.

D. Noise Monitoring

Noise measurements will be conducted to determine employee exposure to noise, and to identify those work areas and/or equipment that could contribute to noise exposure. NAU EHS and department heads/supervisors will maintain exposure and noise measurement records.

E. Labeling of Areas/Equipment

All areas with noise levels exceeding 85 dB(A) will be labeled thus to warn employees and visitors entering of the need for hearing protection:

**CAUTION**

**HEARING PROTECTION MUST BE WORN IN THIS AREA**

Stationary sources exceeding 85 dB(A) which are activated periodically, such as table saws, will have the following label affixed:

**CAUTION**

**HEARING PROTECTION MUST BE WORN WHEN THIS EQUIPMENT IS IN OPERATION**

Small, mobile high noise sources (exceeding 85 dB(A) such as weed trimmers and circular saws will be affixed with small stickers that warn the user to ear hearing protection.

Department heads/supervisors should retain an inventory of high noise areas and equipment and document in Appendix B.

1. Audiometric Testing

All employees assigned to jobs that require inclusion in the Hearing Conservation Program will receive a baseline audiogram within six (6) months of the first high noise exposure.

Audiograms can be conveniently performed on campus at NAU Audiology Services in the Communication Sciences, and Disorders Department located in the Health Professions Building (#66) in Room 327 (Phone 523-8110). Another medical entity that meets the minimum OSHA requirements for audiogram testing is Concentra Medical Center located at 1110 E. Route 66 in Flagstaff, Arizona (928-773-9695).

1. Each employee's annual audiogram will be compared to his/her baseline audiogram by qualified evaluator to determine if a Standard Threshold Shift (STS) has occurred. This comparison may be done by a technician. Audiograms will then be given at least annually and compared to the baseline audiogram to determine if a standard threshold shift (STS) has occurred.
2. A Standard Threshold Shift is defined by OSHA as a change in hearing threshold relative to the baseline of an average of 10dB or more at 2000, 3000, and 4000 Hz either ear.
3. In determining if a Standard Threshold Shift has occurred, an allowance can be made for the contribution of aging (presbycusis). The age correction values to be used are found in Appendix F of OSHA 1910.95.
4. The audiologist, otolaryngologist, or physician shall review problem audiograms and shall determine whether there is a need for further evaluation. The employer shall provide to the person performing this evaluation the following information:
5. A copy of the requirements for hearing conservation as set forth in the standard.
6. The baseline audiogram and most recent audiogram of the employee to be evaluated.
7. Measurements of background sound pressure levels in the audiometric test room as required in Appendix D (OSHA): Audiometric Test Rooms.
8. Records of audiometer calibrations
9. If the annual audiogram shows that an employee has suffered a standard threshold shift, the employer may obtain a retest within 30 days and consider the results of the retest as the annual audiogram.
10. Unless a physician determines that the standard threshold shift is not work related or aggravated by occupational noise exposure, the employer shall ensure that the following steps are taken when a standard threshold shift occurs:
11. Employees not using hearing protectors will be trained, fitted, and required to use hearing protectors if they are exposed to an 8 hour TWA average sound level of 85 decibels or greater.
12. Employees already using hearing protectors shall be retrained, refitted, and required to use hearing protectors and provided with hearing protectors offering greater attenuation if necessary.
13. The physician will inform the employee, in writing, within 21 days of this determination, of the existence of a permanent Standard Threshold Shift. A copy of the STS letter will also be sent to the employee's supervisor.
14. The physician or supervisor will counsel the employee on the importance of using hearing protectors and refer the employee for further clinical evaluation if necessary.
15. Persistent significant threshold shifts must be entered on the OSHA 300 Log if determined to be work related.
16. If subsequent audiometric testing of an employee whose exposure to noise is less than an 8-hour TWA of 90 decibels indicates that a Standard Threshold Shift is not persistent, the physician:
17. Shall inform the employee of the new audiometric interpretation.
18. May discontinue the required use of hearing protectors for that employee.

Employees must have a termination audiogram upon leaving NAU. NAU EHS and/or the testing entity will keep all audiogram records on file.

G. Hearing Protection

Hearing protection will be worn:

1. By all employees with noise exposures exceeding an eight hour time weighted average (TWA) of 90 dBA.
2. When employees operate equipment that produces noise exceeding 85 dB(A)
3. When employees or visitors enter areas where the noise level exceeds 85 dB(A)

Hearing protection devices must provide adequate attenuation as to reduce exposures to below 85 dB(A). NAU ORC will ensure the adequacy of hearing attenuation by complying with Appendix B in OSHA 29 CFR 1910.95. The manufacturer’s noise reduction rating (NRR) will be applied to Appendix B calculations accordingly. Refer to Appendix D of this HCP for manufacturer’s information concerning hearing protective devices and their respective NRRs.

Custom hearing protection (earplugs) is available through the Northern Arizona Speech-Language-Hearing Clinic in Building 66 and can be contacted at 523-8110. These hearing protective devices are custom made to fit the size and shape of an individual’s ears. This promotes a comfortable and proper fit that should help minimize the amount of sound pressure hitting the ear drum. An ear mold impression appointment is necessary to make impressions that will be sent to the manufacturer.

1. Training

All employees in the Hearing Conservation Program will receive training annually. This training will cover (1) effects of noise on hearing (2) purpose of hearing protection (3) types of hearing protection (4) selection, use, fitting and care of hearing protectors (5) purpose and procedures for audiometric testing.

Training is provided through any one or a combination of the following modes:

1. Stand-up presentations by EHS staff
2. Video-based training
3. Online, text-based training through the EHS website

Appendix C can be used by department heads/supervisors to retain all training records for employees in the Hearing Conservation Program.

**III. Specific Responsibilities**

A. NAU Department Heads/Supervisors

* Notify EHS when new noise sources are introduced
* Minimize noise through use of engineering controls
* Offer a variety of hearing protectors
* Work with the Industrial Hygienist to ensure workers receive training and audiograms
* Administer and maintain this program

B. Supervisors

* Ensure workers use hearing protection when required

C. NAU EHS

* Conduct noise monitoring and notify affected employees of their exposure
* Provide training services
* Recommend appropriate hearing protection
* Audit this departmental program periodically
* Conduct audiograms, evaluate results, and notify the affected employee within 21 days of determination of an STS
* Retain audiograms and related medical records for at least seven (7) years beyond the employee's employment

D. Employees

* Attend training and receive audiometric testing
* Wear appropriate hearing protection when required and minimize noise exposure outside of work

**APPENDIX A**

**LIST OF EMPLOYEES IN HEARING CONSERVATION PROGRAM**

**APPENDIX B**

**INVENTORY OF HIGH NOISE AREAS**

**INVENTORY OF HIGH NOISE EQUIPMENT**

**APPENDIX C**

**TRAINING RECORDS**

**APPENDIX D**

**Hearing Protective Devices & Noise Reduction Ratings**