The University of Memphis

Hearing Conservation Program

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Purpose

The purpose of the Hearing Conservation Program is to ensure employees at the University of Memphis, are protected from exposure to excessive noise hazards while at work. Eliminating the hazard or implementing engineering controls are the first line of defense against noise hazards at the University; however, where neither of these controls are feasible or completely effective in controlling the hazard, PPE will be required. This Program has been developed and implemented in accordance with 29 CFR 1910.95.

Scope and Application

This Program applies to all University of Memphis employees whose noise exposures equal or exceed an 8-hour time-weighted average (TWA) sound level of 85 decibels (dBA) and any exposure over 90 dBA while performing their work activities. These employees must be enrolled in this Hearing Conservation Program.

The hearing protection portion of this Program also applies to all University of Memphis employees who are exposed to noise in excess of the OSHA permissible exposure limits (PELs) as outlined in the table below. When feasible engineering and/or administrative controls do not reduce the noise level to or below these PELs, proper hearing protection devices must be used. It is recommended that employees follow this program when exposed to noise levels in excess of the NIOSH recommended exposure limits (RELs). Both OSHA PELs and NIOSH RELs are outlined in the table below.

Duration per day (hours)	Sound Level dBA	
	Required (OSHA PELs)	Recommended (NIOSH RELs)
8	90	85
4	95	88
2	100	91
1	105	94
½	110	97
¼ or less	115	100

The costs associated with training, hearing protection equipment, and audiometric testing shall be borne by the employees' department.

Responsibilities

Environmental Health and Safety Personnel (EH&S)

EH&S personnel shall:

- Develop, periodically review, and update this program;
- Identify and monitor work areas, processes, or tasks that require hearing protection;
- Identify employees who may be exposed to excessive noise levels and thus required to be enrolled in the program and/or audiometric testing;
- Identify and establish a written agreement with an audiometric testing clinic for occupationally exposed employees;
- Assure calibration and servicing of monitoring equipment;
- Assist affected departments in complying with this program by serving as a source of regulatory and safety information;
- Assist in recommending noise control measures, including appropriate types of hearing protection;
- Monitor hearing protection use;
- Ensure enrollment of affected employees in audiometric testing;
- Arrange for and/or conduct training;
- Maintain records of noise measurements, employee training, and audiometric testing.

Chairs/Directors/Supervisors

Chairs, directors of activities, and supervisors in departments included in this Program are responsible for ensuring that the Hearing Conservation Program is implemented in their departments. In addition to being knowledgeable about the program requirements for their own protection, supervisors must also ensure that the program is understood and followed by the employees under their charge. Chairs, directors, and supervisors must:

- Ensure that covered employees (including new hires) have received appropriate initial training, annual re-training, and medical surveillance;
- Annually update EH&S on employees who may be exposed to excessive noise levels
- Ensure the availability of appropriate hearing protection;
- Be aware of tasks requiring the use of hearing protection;
- Enforce the proper use of hearing protection when necessary;
- Monitor work areas and operations to identify excessive noise hazards; and
- Coordinate with EH&S on how to address noise hazards/other concerns regarding the program.

Employees

Employees shall:

- Use hearing protection when and where required;
- Use safe work practices;
- Maintain appropriate hearing protection by storing and cleaning properly;
- Attend initial and annual training on noise and hearing protection;
- Participate in annual audiometric testing; if required
- Inform supervisor or EH&S of any noise hazards that they feel are not adequately addressed in the workplace and of any other concerns that they have regarding the Program; and

- Comply with all provisions of this program.

Program Elements

Noise Surveys / Monitoring

Environmental Health and Safety shall obtain representative noise monitoring with a sampling strategy to identify employees to be included in this Program. When information indicates that any employee's exposure may equal or exceed an 8-hour time-weighted average of 85 dBA, a monitoring program shall be implemented.

Monitoring shall be repeated when any changes occur in production, process, equipment, or controls that might render the hearing protection equipment inadequate or require additional employees to be included in this Program. Employees' noise exposures shall be reassessed as needed. Employees exposed at or above the action level shall be notified of monitoring results in a timely manner.

Audiometric Testing

All employees whose exposures are equal to or exceed an 8-hour TWA of 85 dBA shall be included in an audiometric examination program. The baseline audiogram shall be performed within 6 months of an employee's first exposure at or above 85 dBA TWA.

Annual audiometric testing shall be performed for each employee exposed at or above the 8-hour TWA of 85 dBA and in accordance with 29 CFR 1910.95.

The audiometric test data shall be evaluated in accordance with 29 CFR 1910.95. If the threshold shift is determined to be work related, the affected employees shall be informed in writing within 21 days of test data receipt. In addition, Audiometric test data which reveals a standard threshold shift shall be recordable on the annual OSHA 300 log of work-related injuries and illnesses.

Hearing Protection

Hearing protection shall be provided to all employees who are exposed to an 8-hour TWA of 85 dBA or if the employee requests hearing protection voluntarily. Employees shall be required to use hearing protection in areas where noise levels exceed 85 dBA. Employees shall be given the opportunity to select their hearing protection from a variety of suitable hearing protection determined by EHS Department.

Training

EHS shall provide training to hearing protection users and their supervisors on the contents of this Hearing Conservation Program, their responsibilities under it, and on the OSHA Noise Standard.

Training shall cover the following topics:

- The University of Memphis Hearing Conservation Program
- The OSHA Noise Standard
- The effects of noise on hearing
- The purpose, advantages, disadvantages, and attenuation levels of various types of hearing protection
- The purpose and procedures of audiometric testing.

Affected employees shall be retrained annually. Hearing conservation training shall be conducted and documented by EHS.

Program Evaluation

EHS shall conduct periodic evaluations of the workplace to ensure that the provisions of this Program are being implemented. The evaluations shall include regular consultations with employees who use hearing protection and their supervisors, site inspections, noise monitoring (where possible and necessary), and a review of records. Problems identified shall be noted in an inspection log and addressed by EHS. These findings shall be reported to the Director of EHS; the report shall list plans to correct deficiencies in the Program and target dates for the implementation of those corrections.

Documentation and Recordkeeping

An electronic copy of this Program is available on the Environmental Health and Safety website. Copies of the OSHA standard are available during normal working hours in Scates Hall 316A for review by all employees.

Copies of training and audiometric test records are maintained in Scates Hall 316A. Records shall be updated as new employees are trained, as existing employees receive refresher training, and following annual audiogram tests.

Audiometric test data which reveals a standard threshold shift shall be recordable on the annual OSHA 300 log of work-related injuries and illnesses.

Equipment and Areas with noise levels at or above 85 dBA:

AC Motor	Diesel Powered Fan
Air Compressors	Fume Hood Fan Pipe
Air Releases (transmission mains)	Generators
Air Tools	Grinders
Air Vent Fan	Ground Blower
Backhoe	Hedgers
Boiler Rooms	Lawn/Yard Mowers
Centrifugal Pump i	Mechanical Rooms
Chain Saws	Pressure Booster
Chemical Sprayers	Pumps
Chiller Rooms	Water pump
Concrete Saw	Weed-eaters
Cut-Off Saw (pipe saw, chop saw)	
Drills (impact)	

*This is not a comprehensive list. PPE is required if you are working in any area or utilizing any equipment that cause a noise exposure at or above 85 dba.

Definitions

Action Level	An 8-hour time-weighted average of 85 decibels measured on the A-scale, slow response, or equivalently, a dose of 50%. Slow response records sound levels at 1 second intervals and makes data easier to read.
Audiometric Testing	Exams that measure the sensitivity of a person's hearing threshold in decibels as a function of frequency.
Baseline Audiogram	An audiogram obtained after 14 hours of quiet and against which future audiograms are compared.
Decibel (dB)	Unit of measurement of sound level.
Decibel A-weighted (dBA)	The A weighted is the scale used for most occupational noise measurements. The A weighting approximates the range of human hearing by reducing the effects of lower and higher frequency noises with respect to the medium frequencies.
Hearing Protection	Any device that can be worn to reduce the level of sound entering the ear.
Noise	Unwanted sound.
Permissible Exposure Limit (PEL)	Exposure limit published and enforced by OSHA as a legal standard, 90 dBA 8-hr TWA.
Recommended Exposure Limit (REL)	Exposure limited published and recommended by NIOSH (National Institute for Occupational Safety and Health) as the best practice, 85 dBA 8-hr TWA.
Standard Threshold Shift (STS)	A change in hearing threshold, relative to the most recent audiogram for that employee, of an average of 10 dB or more at 2000, 3000, and 4000 hertz in one or both ears and sustained within 30 days with a follow-up audiogram.
Time-Weighted Average (TWA) sound level	That sound level, which if constant over an 8-hour exposure, would result in the same noise dose measured in an environment where noise level varies.