

# SAFETY PROCEDURES

# HEARING CONSERVATION PROGRAM



# **Contents**

OBJECTIVE	3
AUTHORITY	3
POLICY	3
RESPONSIBILITIES	4
Safety Manger & Jobsite Superintendent Employee	
PROCEDURES	4
Monitoring Employee Notification Audiometric Testing Program	5
Hearing Protectors	6
Training Program Posting	7
Medical Monitoring Program	8

# **OBJECTIVE**

To establish for L.D. Docsa Associates, Inc. employees the following procedures, requirements, organizational responsibilities, guidance, safety and health precautions governing tasks involving personal and/or occupational exposure to noise.

The hearing conservation program shall apply whenever employee noise exposures equal or exceed an 8-hour time-weighted (TWA) sound level of 85 decibels measured on the A scale (slow response) or, equivalently, a dose of fifty percent as measured by noise dosimeters.

# **AUTHORITY**

By authority delegated from the Corporate President, the Safety Manager is responsible for the safety of all LDD facilities. Under this authority, policies are developed to provide a safe teaching, research, service, housing and recreational environment.

# **POLICY**

It is the policy of the LDD to reduce noise exposure in the workplace to the extent that it is reasonably practicable. In those situations where it is not feasible to reduce noise exposure by suitable engineering means, during exposure evaluation periods, and during implementation of engineering controls, either administrative controls or personal hearing protectors shall be used to ensure the protection of employees.

The Occupational Safety and Health Administration (OSHA) has promulgated regulations limiting employee exposure to noise.

# RESPONSIBILITIES

# Safety Manger & Jobsite Superintendent

The Safety Manager, along with the jobsite superintendent are responsible for:

- The administration of the Hearing Conservation Program
- Determines the need for hearing protection through conduction of noise surveys
- Provides initial and annual training
- Cooperates with the jobsites to assure compliance
- Assist in identifying employees who are required to participate in the Hearing Conservation Program by identifying potential areas of concern in their workspaces
- Provide a choice of hearing protection devices to those employees requiring them and insures that they are being worn.

#### **Employee**

The employee is responsible for complying with all requirements of this Program once it is established that he or she must participate. The employee must:

- Wear any required hearing protection
- Attend the required initial and annual training

# **PROCEDURES**

When employee noise exposures equal or exceed an 8-hour time-weighted average (TWA) sound level of 85 dBA, feasible administrative or engineering controls shall be utilized. If such controls fail to reduce 8-hour TWA exposures to less than 85 dBA, personal protective equipment shall be provided and used to reduce the exposure levels. Protective equipment shall also be used to lower

exposures to less than 85 dBA TWA until feasible administrative or engineering controls are implemented.

A hearing conservation program shall be implemented whenever employee noise exposures equal or exceed an 8-hour TWA sound level of 85 dBA.

# **Monitoring**

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 to identify employees for inclusion in the hearing conservation program and to enable the proper selection of hearing protectors.

Where circumstances 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 used to comply with the monitoring requirements of this paragraph.

Monitoring shall be repeated whenever a change in production, process equipment, or controls increases noise exposures.

#### **Employee Notification**

Each employee, whose noise exposure is monitored, shall be notified of the results of the monitoring.

# **Audiometric Testing Program**

All employees whose exposures are equal to or exceed an 8-hour TWA of 85 dBA shall be included in an audiometric examination program.

A 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 an 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.

#### **Hearing Protectors**

Hearing protectors shall be provided to all employees who are exposed to an 8-hour TWA of 85 dBA. Employees should be required to use hearing protectors in areas where noise levels exceed 85 dBA (8 hour TWA). Hearing protectors shall be worn as required by Section e.1.

Hearing protectors shall be worn by any employee who is exposed to an 8-hour time weighted average of 85 dBA or greater, and who:

 has not yet had a baseline audiogram established or has experienced a standard threshold shift.

Employees shall be given the opportunity to select their hearing protectors from a variety of suitable hearing protectors.

#### **Hearing Protectors Attenuation**

LDD shall evaluate hearing protection attenuation for the specific noise environments in which the protector will be used in accordance with 29 CFR 1910.95.

Hearing protector attenuation must be evaluated for specific noise environments. Hearing protectors must attenuate employee noise exposures at least to a TWA of 85 decibels and to 85 decibels or below for employees who have experienced a standard threshold shift (STS). It is recommended that, if possible, all hearing protectors be selected to attenuate noise below 85 dBA. Employees will be notified in writing within 21 days of determination of a STS. Hearing protection will be evaluated in the event of a STS.

Hearing protection must be worn by all employees who are exposed to noise above 85dBA. The hearing protector should reduce the noise level below an 8-

hr TWA of 85 dBA. All hearing protectors are assigned a noise reduction rating (NRR) which can be found on the individual package or box the hearing protectors came in. This NRR is based on a dBC scale, although most sound measurements are given in a dBA scale. To account for this difference, the NRR number must be reduced by a value of 7 to determine how much protection it will afford in the work environment.

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The equation is as follows: dBA' = dBA - (NRR - 7) where: dBA' = effective noise level for the hearing protector dBA = measured A-weighted noise level (sound level meter readings) NRR = noise reduction rating obtained on package If the noise of a piece of equipment is measured at 96 dBA, a hearing protector with a NRR of at least 18 would be needed: dBA' = dBA - (NRR - 7) 85 = 96 - (NRR - 7) NRR - 7 = 96 - 85, NRR = 11 + 7 NRR = 18.
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In a case where the hearing protector does not offer enough protection, earmuffs and plugs can be worn together. In this case, determine the effective NRR of the plugs and then add 5dBA. This number is then subtracted from the 8-hr TWA to determine the actual exposure at the employee's ear. Again, this number should be less than 85dBA.

Remember, hearing protectors must be worn properly to provide maximum protection.

#### **Training Program**

A training program must be established for all employees who are exposed to noise at or above an 8-hour time-weighted average of 85 decibels. This training program must be repeated annually for each employee included in the hearing conservation program.

The employees must be informed of the following.

- The effects of noise on hearing
- Physical damage of cochlea
- Location of high noise areas
- Off the job hearing hazards such as air boating, chain saws, gun fire, etc.
- Purpose of hearing protection devices and how they work.
- Instructions on selection, fitting, use and care of hearing protectors.
- The types and styles of hearing protection devices available and attenuation of the various types.
- Where to obtain hearing protectors.
- The purpose of audiometric testing and an explanation of test procedures.

# **Posting**

Areas where the noise level exceeds 85 dBA, must be posted with a warning and a requirement for the use of hearing protection.

#### **Medical Monitoring Program**

Participation in the Hearing Conservation Program is based on LDD employee job duties. When an employee fills a designated position, the medical monitoring procedures are as follows.

The Site Superintendent documents the "work in areas of excessive noise" for distribution to Safety Manager.