



# TOSHA INSTRUCTION

TENNESSEE DEPARTMENT OF LABOR & WORKFORCE DEVELOPMENT  
DIVISION OF OCCUPATIONAL SAFETY & HEALTH

**DIRECTIVE NUMBER:** CPL-TN 04-00-002  
(CPL-TN 2.502 with changes)

**EFFECTIVE DATE:** September 16, 1999

**SUBJECT:** Local Emphasis Program - Noise

**TO:** TOSHA Personnel  
**FROM:** Robert B. Cooper, Chief, Standards & Procedures  
**THRU:** John D. Winkler, Administrator  
**SUBJECT:** Local Emphasis Program - Noise  
**DATE:** September 16, 1999

A. **PURPOSE:** This instruction establishes a Local Emphasis Program (LEP) for Noise. This LEP is established to reduce exposures to noise and prevent occupational hearing loss in employees throughout the State of Tennessee.

B. **DOCUMENTS REFERENCED:**

1. TOSHA Field Operations Manual (FOM), Tennessee Occupational Safety and Health Plan – Part V, (March 29, 1996).
2. TOSHA Instruction CPL 2.25; January 31, 1995; Subject: Scheduling System for Programmed Inspections.
3. TOSHA Instruction CPL 2-0.51J; March 8, 1999; Subject: Enforcement Exemptions and Limitations Under the Federal Appropriations Act.
4. TOSHA Instruction CPL 2-2.39A; September 1, 1994; Recording Hearing Loss.
5. OSHA Instruction TED 1.15A; January 20, 1999; OSHA Technical Manual, Section III – Chapter 5, Noise Measurement.
6. OSHA Instruction CPL 2-2.35A; December 19, 1983; Subject: 29 CFR 1910.95(b)(1), Guidelines for Noise Enforcement; Appendix A
7. OSHA Instruction ADM 1-1.31; September 20, 1993; Chapter XXIV, OSHA-92, Noise Survey Report.

8. OSHA Instruction ADM 1-1.29; November, 1996; Chapter XXIII, Noise Survey Report, Consultation-92.

C. BACKGROUND:

1. Occupational exposure to noise levels in excess of the current Tennessee OSHA standards places hundreds of thousands of workers at risk of developing hearing impairment, hypertension, and elevated blood pressure levels. Noise induced hearing loss continues to be one of the leading occupational illnesses in Tennessee. The National Institute for Occupational Safety and Health's (NIOSH) National Occupational Exposure Survey (NOES) estimates that 15 percent of workers exposed to noise levels of 85 dBA or higher will develop hearing impairment.
2. Elevated noise levels pose an additional threat of injury or death to workers by reducing communication between employees and between supervisors and workers and by reducing the effectiveness of audible warning devices. Several recent studies have documented an apparent association (synergistic effect) between worker exposures to solvents and occupationally related hearing loss.
3. There are a variety of administrative and engineering control techniques documented in the literature to reduce the overall worker exposure to noise.
  - a. The proper use of hearing protection is the first line of defense.
  - b. Annual audiometric testing provides an ongoing evaluation of the effectiveness of a Hearing Conservation Program (HCP).
  - c. Engineering controls reduce the amount of sound energy released by the noise source, or divert the flow of sound energy away from the receiver, or protect the receiver from the found energy reaching them. For example, types of noise controls include proper maintenance of equipment, revised operating procedures, equipment replacements, acoustical shields and barriers, equipment redesign, enclosures, and administrative controls.

D. POLICY:

1. All health and safety compliance personnel shall be instructed to be diligent in their efforts to identify worksites where high noise levels are possible. Every observation of such operations shall be handled as follows.

- a. Referrals: Regardless of whether or not a violation is observed, whenever a CSHO measures, observes or receives any other notice of an operation where high noise levels are possible (including nonformal complaints, other government agency referrals, and reports from members of the public) the CSHO shall:
  - (1) Make note of the equipment used and work operation, including any apparent violations or hazards (not wearing hearing protection, or not performing audiometric testing).
  - (2) Note the location of the work area, worksite and the company name and address, if known.
  - (3) Contact the Area Office Supervisor for a decision as to whether an intervention or inspection is required.
  
- b. All worksites where high noise levels are possible that are brought to the attention of the Area Supervisors shall be inspected as follows:
  - (1) If the worksite has had a comprehensive inspection or has been inspected for hearing conservation within the preceding five (5) years, the results of the inspection shall be considered along with the current observations of the CSHO.
  - (2) If the worksite has not been inspected within the five (5) years, the Area Office Supervisor will schedule an inspection. The Area Office Supervisor has the option to not schedule an inspection when circumstances indicate that an one should not be conducted.
  - (3) Programmed inspections will be scheduled using Standard Industrial Classification (SIC) Codes where TOSHA's historical data indicates that Compliance actions have been necessary to correct violations of 29 CFR 1910.95. Establishments will be identified through the Workman's Compensation Database, BLS Data, Tennessee Manufacturer's Guide, and the TOSHA Compliance Database. Those Primary and Secondary SIC Codes will include:
    - (a) 2421 – Saw Mills & Planning Mills, General
    - (b) 2426 – Hardwood Dimension & Flooring Mills
    - (c) 2431 – Millwork

**TOSHA Instruction CPL 2.502**  
**September 23, 1999**  
**Standards & Procedures**

- (d) 2448 – Wood Pallets & Skids
- (e) 2499 – Wood Products, NEC
- (f) 2511 – Wood Household Furniture, except Upholstered
- (g) 2512 – Wood Household Furniture, Upholstered
- (h) 3069 – Fabricated Rubber Products, NEC
- (i) 3089 – Plastic Products, NE
- (j) 3272 – Concrete Products, Except Block & Brick
- (k) 3321 – Gray & Ductile Iron Factories
- (l) 3441 – Fabricated Structural Metal
- (m) 3443 – Fabricated Plate Work (Boiler Shops)
- (n) 3444 – Sheet Metal Work
- (o) 3446 – Architectural & Ornamental Metal Work
- (p) 3465 – Automotive Stampings
- (q) 3469 – Metal Stampings, NEC
- (r) 3471 – Electroplating, Plating, Polishing, Anodizing and Coloring
- (s) 3479 – Coating, Engraving and Allied Services, NEC
- (t) 3714 – Motor Vehicle Parts & Accessories
- (u) 3732 – Boat Building and Repairing
- (v) 5093 – Scrap & Waste Materials

Additional SIC Codes may be added where information indicates there is a potential for high noise levels and the potential for hearing loss.

- c. Formal complaints, safety and health agency referrals and media reports shall be scheduled as unprogrammed inspections, conducted as described in the relevant chapters of the Field Operations Manual (FOM). Where information of previous interventions indicates no need to inspect, this should be documented in the case file.
  - d. Nonformal complaints and other referrals involving operations where high noise levels are suspected shall be scheduled as unprogrammed inspections. Where information of previous interventions indicated no need to inspect, this should be documented in the case file.
2. All health and safety consultants shall be instructed to be diligent in their efforts to identify worksites where high noise levels are possible. Every identification of such operations shall be handled as follows:
- a. Referrals: Regardless of whether or not a violation is observed, whenever a consultant measures, observes or receives any other

notice of an operation where high noise levels are possible the consultant shall:

- (1) Make note of the equipment used and work operation, including any apparent violations or hazards (not wearing hearing protection, or not performing audiometric testing).
  - (2) Note the location of the work area, worksite and the company name and address, if known.
- b. All worksites where high noise levels are possible shall be inspected as follows:
- (1) If the worksite has requested a full service safety and health visit, the noise levels will be noted in narrative and the inspection will be handled in the usual manner.
  - (2) If the worksite has not requested a health visit the consultant shall advise the customer of :
    - (a) The Local Emphasis Program and;
    - (b) The seriousness of the hazard and recommend that the customer request a health survey. If the customer does not agree to a health survey the consultant will remind the customer of our obligation to report on all serious hazards and refer the matter to their Supervisor. The Supervisor in consultation with the Project Manager will determine the necessity to refer the matter to compliance.
3. The discovery of worksites where high noise levels exist may be the result of a specific search to find this type of operation, at the discretion of the Director. Identification will normally occur during the course of inspections and possibly during the course of routine travel.
  4. Documentation of the events leading up to the observation or the reporting of the worksite shall be maintained by the Area Office in case of denial of entry.
  5. When an inspection is not conducted because consent has not been obtained, a warrant normally shall be sought in accordance with the current procedure for handling such cases.

- E. INSPECTION PROCEDURES: The following procedures shall be followed during all inspections where potential employee noise exists:
1. Inspections shall be conducted in accordance with the FOM and OSHA Instruction CPL 2-2.35A; December 19, 1983: Subject: 29 CFR 1910.95(b)(1), Guidelines for Noise Enforcement; Appendix A.
  2. Noise measurements shall be taken in accordance with OSHA Technical Manual.
  3. All noise reductions during the inspection will be documented. The reductions must be reported by memo to Operations Manager in decibels (dBA). The reductions must be measured where changes were made between the initial walkaround and final noise monitoring or after final abatement. The reductions can be estimated, however adequate documentation must be included in the memo to justify the estimates. These estimates cannot be used to issue a citation. These reductions can include:
    - a. the use of hearing protection (NRR)
    - b. administrative controls
      - employee rotation
      - increasing distance from noise source
    - c. engineering controls
    - d. Handouts which describes an effective Hearing Conservation Program and the LEP will be provided all employers on each health inspection. The handouts are included in the Appendices.
  4. Abatement of violations, informal conference settlement agreements and review commission settlement agreements will include a requirement that the company attend a training class on methods of reducing noise exposure through the use of hearing protection, an effective hearing conservation program and simple controls.
- F. RECORDING IN THE IMIS: Safety inspections which result in a referral to the Health section and Health inspections where noise exposures are either eliminated, reduced or measured must be identified so they can be tracked. The following guidelines shall be applied when recording inspections conducted under this LEP or other inspections of worksites where high levels of noise are found:

1. Current instructions for completing the appropriate inspection classification boxes (Items 25(c)) on the Inspection Report, OSHA-1Form.)
  - a. The OSHA-1 for any inspection under this LEP shall be recorded under "Local Emphasis Program" (Item 25c.). Record "NOISE" in the field in Item 25(c). (NOTE: The entry is made with ALL CAPS.)
  - b. The OSHA-1 for any programmed inspection scheduled under this Local Emphasis Program shall be marked "Planned" (Item 24h.) and "Local Emphasis Program" (Item 25c.) Record "NOISE" in the field in item 25c.
  - c. The OSHA-1 for any unprogrammed inspection where high noise levels are found shall be marked as unprogrammed (Item 24 a. through g. as appropriate). In addition it shall be marked "Local Emphasis Program" (Item 25c.). Record "NOISE" in the field in item 25c.
  
2. Current instructions for Compliance Officers completing the Noise Monitoring form, OSHA-92.
  - a. The CSHO will complete the Noise Monitoring Form (92) in accordance with the IMIS Manual.
  - b. The Area Office Secretary will make copies of the OSHA-92's and send them to Nashville.
  - c. The Health Secretary will batch the OSHA-92's and transfer them to the Operations Manager.
  - d. The Operations Manager will enter the Noise Monitoring Sheet OSHA-92 into the NCR Database.
  - e. The CSHO will send a memorandum to the Central office which indicates the decibel (dBA) reductions in noise exposures through the use of hearing protection, administrative controls or engineering controls. The reductions can be estimated, however adequate documentation must be included in the memo to justify the estimates. These estimates cannot be used to issue a citation. A copy of a sample memo is included in Appendix B. The memo will contain at least the following information:
    - CSHO-ID
    - Reporting-ID
    - Inspection Number

**TOSHA Instruction CPL 2.502**  
**September 23, 1999**  
**Standards & Procedures**

- Noise level before reduction
  - Noise level after reduction
  - Type of Noise Control (Use of or proper use of PPE, Administrative or Engineering Control)
- f. The information will be recorded by the Operations Officer in a tracking database.
3. Current instructions for Consultants completing the Noise Monitoring form, Consultation-92:
- a. The Consultant will complete the Noise Monitoring Form Consultation-92 in accordance with the IMIS Manual.
  - b. The Consultant will enter the Noise Monitoring Sheet Consultation-92 into the NCR Database.
  - c. The Consultant will send a memorandum to the IH Consultation Supervisor in the Central office which indicates the decibel (dBA) reductions in noise exposures through the use of hearing protection, administrative controls or engineering controls. The reductions can be estimated, however adequate documentation must be included in the memo to justify the estimates. This memo will be forwarded to the Operations Manager. The memo will not in any way identify the company. A copy of a sample memo is included in Appendix B. The memo will contain at least the following information:
    - CSHO-ID
    - Reporting ID
    - Visit Number
    - Job title of worker
    - Noise level before reduction
    - Noise level after reduction
    - Type of Noise Control (Use of or proper use of PPE, Administrative or Engineering Control)
  - d. The Operations manager will enter the Direct reading Form (93) into the NCR Database.
4. Nonformal complaints, other government agency referrals and reports from the public reporting potential hazards related to noise shall be recorded on an OSHA-7, Notice of Alleged Safety or Health Hazards, or an OSHA-90, Referral Report, if appropriate, in accordance with current

IMIS instructions. They shall be recorded as unprogrammed inspections under the LEP.

**G. FULL-SERVICE PROGRAM SUPPORT:**

1. The Training Section will develop outreach programs which will support the enforcement effort:
  - a. To increase the coverage of the LEP, Compliance Officers and Consultants will be trained in the identification of potential high noise areas and work operations. This training will include:
    - (1) the evaluation of hearing protection usage.
    - (2) The use of Sound level meters (SLM).
    - (3) How to perform 8-hour Time-Weighted-Average estimates when making a referral.
  - b. All Tennessee OSHA staff will be instructed on the LEP and changes in the compliance directives (CPLs).
  - c. Letters will be sent to employers who engage in operations where high noise levels are expected, which explain the hazards of noise, what Tennessee OSHA standards require and outline the LEP.
  - d. Information which describes the Local Emphasis Program on Noise will be included in each training session that is taught by Tennessee OSHA's Training Staff.
  - e. Newspapers in the major cities in the State of Tennessee will be provided with articles and information to periodically encourage the publishing of the Notice to employers about the concentration of Tennessee OSHA's attention on potential hearing loss in the workplace.
  - f. Handouts which describe an effective Hearing Conservation Program and describe the LEP are developed. See Appendix A.
  - g. A training session on noise will be conducted tri-annually for all employers cited for noise violations.
  - h. The Compliance web-page will have a special section devoted to Local Emphasis programs. This should provide the public access

to assistance in identifying high noise exposures or detecting potential problems through e-mail or information.

2. The Consultation Section will develop outreach programs which will supplement the enforcement effort:
  - a. Letters sent by the Compliance Section to the employers referenced in paragraph I.1.C. will offer Consultation Resources.
  - b. Consultation Resources will conduct Correction Assistance Cited visits where the employer has been cited for violations of the Tennessee OSHA standards, the citations are a final order and the employer has requested in writing help to correct those citations.
  - c. All Consultation customers will be advised of the special emphasis program and will be encouraged to reduce their employees' noise exposures to the lowest level feasible.
  - d. Each IH Consultant's report will document an evaluation of workplace noise levels where comprehensive visits are conducted. The Consultant's report will document an evaluation of workplace noise where a partial visit is conducted and where the customer's request includes an evaluation of noise.
  - e. The Consultation web-page provides the public access to assistance in correcting hazards or detecting potential problems through e-mail or requesting on-site assistance.

H. EVALUATION:

1. Compliance and Consultation data will be evaluated monthly.
2. An evaluation report will be completed monthly by the Operations Manager. This report will be provided to the Administrator and Managers.
3. An annual evaluation will be performed in August 2000 to evaluate the LEP for its effectiveness, impact upon the workplace, and its continuation in FY2001.

I. ACTION: Managers and Supervisors will insure that the procedures listed in this LEP are followed during interventions where noise exposures are suspected to be at or above 85 dBA.

J. EFFECTIVE/EXPIRATION DATES: This instruction is effective October 1, 1999 and shall remain in effect until cancelled or superseded.





## APPENDIX A

Tennessee Occupational Safety & Health Administration (TOSHA)

### **SPECIAL EMPHASIS PROGRAM FOR NOISE & HEARING CONSERVATION**

The Tennessee Occupational Safety and Health Administration (TOSHA) HAS INSTITUTED A SPECIAL EMPHASIS PROGRAM FOR noise exposure and hearing conservation. This was done to focus state-wide attention on occupational noise and to prevent occupational hearing loss in employees. Each day thousands of workers are exposed to excessive noise levels on the job. Those noise levels are capable of causing permanent hearing loss.

Excessive noise can destroy the ability to hear and may also put stress on other parts of the body, including the heart. Workers exposed to noise sometimes complain of nervousness, sleeplessness and fatigue. For most **effects of noise, there is no cure**, so prevention of exposure to excessive noise levels and hearing conservation are very important. The damage done by noise depends mainly on how loud it is and on the length of exposure. The frequency or pitch can also have some effect, since high-pitched sounds are more damaging than low-pitched ones. Noise may tire out the inner ear causing temporary hearing loss. After a period of time, it may be restored. With continued noise exposure the ear will lose its ability to recover from temporary hearing loss and the damage will become permanent. Permanent hearing loss results from the destruction of cells in the inner ear – cells which can never be replaced or repaired. Normally, workplace noise affects the ability to hear high frequency (high-pitched) sounds. This means that even though a person can still hear some noise, speech or other sounds may be unclear or distorted. Distortion occurs especially when there are background noises or many people talking. A hearing aid can make speech louder, but not make it clearer.

During all health and safety inspections and all consultation visits conducted starting October 1, 1999, the TOSHA compliance officer or consultant will make the employer aware of the special emphasis program on noise and measure the noise levels in the work area. Interventions will be made where there are noise levels above 85 dBA.

#### **Suggestions for employers to reduce or eliminate noise exposure:**

- Monitor noise exposures to determine who is exposed above an 8-hour time weighted average (TWA) of 85 dBA. Employers can buy or rent sound level meters or arrange for a consultant from workers' compensation insurance carrier or TOSHA to conduct the survey. Telephone TOSHA Consultation at 1-800-325-9901.

**TOSHA Instruction CPL 2.502  
September 23, 1999  
Standards & Procedures**

- Develop, implement and maintain (at no cost to employees) a hearing conservation program consisting of:
  - Mandatory annual hearing tests.
  - Providing hearing protectors.
  - Making use of hearing protectors mandatory when noise levels are above 90 dBA.
  - Conducting annual training on the effects of noise.
  - Keeping accurate records of audiograms and reviewing them to ensure that the program is “effective.”

**Reasons people loose their hearing:**

- people feel noise is no threat to them. Noise is not like an air contaminant which they can smell or see.
- The initial injury to their hearing is not evident. Noise induced hearing loss is cumulative and hard to detect.
- Serious damage may take ten to twenty years to become evident.
- Using hearing protection is too much trouble.
- When audiograms are reviewed, appropriate action is not always taken.
- There is a failure in explaining the importance of using hearing protection.
- There is a false belief that medical science can correct noise induced hearing loss.
- There is no pain associated with noise in the 85-100 decibel range.
- People believe hearing loss is normal.

**TOSHA Standards for Noise and Hearing Conservation:**

The TOSHA standards for noise and hearing conservation are the same as those of the U.S. Department of Labor’s Occupational Safety and Health Administration (OSHA). They are contained in Title 29, Code of Federal Regulations, Part 1910, Section 95 (29 CFR 1910.95) for General Industry and in Part 1926, Section 52 (29 CFR 1926.52) for the Construction Industry.

**For more information and publications on carbon monoxide contact your local Tennessee OSHA office listed below or telephone 1-800-249-8510.**

Chattanooga	(423) 634-6424	Knoxville	(423) 594-6180
Jackson	(901) 423-5641	Memphis	(901) 543-7259
Kingsport	(423) 224-2042	Nashville	(615) 741-3161

APPENDIX B

SAMPLE CO/NOISE INTERVENTION REPORT

STATE OF TENNESSEE  
DEPARTMENT OF LABOR & WORKFORCE DEVELOPMENT  
**OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION**  
ANDREW JOHNSON TOWER – 3<sup>RD</sup> FLOOR  
NASHVILLE, TENNESSEE 37243-0659

MEMORANDUM

TO: Jim S. Cothron, Manager, Operations Branch

FROM:

SUBJECT: CO/Noise Reductions

DATE:

REPORTING ID: \_\_\_\_\_ INSPECTION/VISIT NO. \_\_\_\_\_

CSHO NO. \_\_\_\_\_ SIC Code: \_\_\_\_\_ Circle One: CO Noise

Job Title/Location	Shifts	Number of Employees	Reductions dBA/ppm	
			Before	After
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

Describe in detail how the reduction was accomplished (work practices, administrative controls, engineering controls, maintenance, or ventilation for CO or hearing protection NRR for noise)?

(Over)



APPENDIX C

# Hearing Conservation

This appendix is the OSHA publication with the above title, OSHA 3074, 1992 (revised). It is not reproduced herein, but may be obtained from the TOSHA Education and Training Branch. Telephone: (615) 741-3161 or 1-800-249-8510.

This page intentionally left blank.

Appendix D

# Hearing Conservation Program



## A Summary of Requirements

- 1) **Monitor** the sound levels in the workplace to determine the exposure levels of the employees.
- 2) **Obtain** a baseline audiogram (within 5 months of initial exposure or 1 year when using a mobile test van) for each employee exposed at or above an 8-hour Time Weighted Average (TWA) of 85 decibels (dBA); notify employees that the baseline audiogram must be preceded by 14 hours without exposure to high noise levels.
- 3) **Obtain** a new audiogram for exposed employees at least annually thereafter; notify employees to avoid high noise levels for 14 hours preceding the annual audiogram.
- 4) **Compare** each employee's annual audiogram to that employee's baseline audiogram.

If the annual comparison shows that an employee has suffered a Standard Threshold Shift (STS), a retest may be obtained with 30 days and the retest may be taken as the annual audiogram (optional).
- 5) **Inform** each employee who has suffered a STS (average of 10 dBA loss in either ear at 2K, 3K and 4K Hz) in writing that the shift has occurred; make the notification within 21 days of the determination.

A physician may determine that an STS is not work related. If such determination is not made, assume that it is work related.
- 6) **Record** each STS as a work related illness on the OSHA-200 log, with column 7(f) checked, within 6 days of the determination. If a physician determines that an STS is not work related, or a retest done

within 30 days shows an STS does not exist, line out the entry on the OSHA-200 log.

When a persistent STS is found, substitute the annual audiogram for the baseline audiogram.

- 7) **Require** hearing protection be worn by all employees whose exposures exceed 90 dBA for an 8-hour TWA; make hearing protection available to all employees whose exposures exceed 85 dBA for an 8-hour TWA.
- Provide a variety (at least two types) of hearing protection.
  - Require all employees exposed above 85 dBA (8-hour TWA) who have sustained an STS to wear hearing protection.
  - Require all employees exposed above 84 dBA (8-hour TWA) to wear hearing protection if a mobile test van takes more than six months to conduct the baseline audiogram (for the period exceeding six months from initial exposure to the time the audiograms are conducted).
- 8) **Train** employees exposed at or above 85 dBA at least annually on:
- The effects of noise on hearing;
  - The purpose of hearing protectors, advantages, disadvantages, and attenuation of various types and instructions on selection, fitting, use of care; and
  - The purpose of audiometric testing and an explanation of the test procedure.
- 9) **Post** a copy of the noise standard (29 CFR 1910.95) in the workplace. A copy of the standard may be obtained, free of charge, from:

Tennessee Department of Labor  
& Workforce Development – TOSHA  
ATTENTION: Standards  
710 James Robertson Parkway – 3rd Floor  
Nashville, TN 37243-0659  
Telephone: 615-741-3161 or Fax: 615 253-1623

APPENDIX E

**OSHA Instruction CPL 2-2.35A  
29 CFR 1910.95(b)(1), Guidelines  
for Noise Enforcement; Appendix A**

The above titled appendix to OSHA's noise enforcement guidelines which has been adopted by TOSHA, is not reproduced here, but is available on the Internet at:

[http://www.osha-slc.gov/OshDoc/Directive\\_data/CPL\\_2-2\\_35A.html](http://www.osha-slc.gov/OshDoc/Directive_data/CPL_2-2_35A.html)

Compliance officers should print and/or reproduce the instruction as necessary to provide it to those employers without internet access.

This page intentionally left blank.