

HEARING CONSERVATION PROGRAM

HEARING CONSERVATION STANDARD, WAC 296-62-09015

Community Colleges of Spokane
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HEARING CONSERVATION PROGRAM

Community Colleges of Spokane

INTRODUCTION

The hearing conservation program of the Community Colleges of Spokane has been adopted, per the Hearing Conservation Standard, WAC 296-62-09015 through 296-62-09055, because noise exposures in some CCS work areas were found to exceed the 8-hour time-weighted average (TWA) sound level of 85 decibels (dB).

BACKGROUND

Excessive sound levels or "noise" (unwanted sound) can produce hearing loss that is temporary, permanent, or a combination of temporary and permanent. Because noise-induced hearing loss cannot be repaired or cured, the Washington State Department of Labor and Industries, Division of Industrial Safety and Health, has adopted a permissible exposure level (PEL) of an 8-hour time weighted average (TWA) of 85 dBA for noise, which is designed to guard against unnecessary hearing damage. Values equal to or below these levels are considered acceptable for industrial noise exposure without the use of hearing protection.

Incorporated into the PEL is a maximum exposure level or ceiling level for noise. Any exposure above the ceiling level mandates the use of hearing protection regardless of the exposure duration. For continuous noise, the ceiling level is anything above 115 dBA and for impact/impulse noise, the ceiling is at or above 140 dB.

If any worker is exposed to sound levels greater than the PEL, employers are required to establish an effective hearing conservation program and to protect the employee(s) by ensuring the use of hearing protectors (earplugs, muffs), furnished by the employer. If the employer is successful in reducing the overall noise level below 85 dBA, the hearing conservation program may be a temporary requirement. If the noise level remains at or above 85 dBA, it must be a permanent and ongoing program.

Whenever employee noise exposures equal or exceed an 8-hour TWA of 90 dBA, employers are required to reduce the employee's noise exposure level through feasible engineering controls and/or administrative controls.

POLICY STATEMENT

To meet the requirements of the hearing conservation standard, WAC 296-62-09015 through 296-62-09055, the administration of the Community Colleges of Spokane dedicates the available resources to achieve full compliance through implementation of the CCS hearing conservation program, as embodied within this handbook.

The hearing conservation program is an addition to and extension of the already existing safety and health program of the Community Colleges of Spokane and becomes an integral part of that program. As such, the administrative policy statement as noted in the original Safety and Health Program manual (restated, in part, below) is also applicable to and shall be in effect for the hearing conservation program.

"The personal safety and health of employees, students, and visitors are of primary importance to the Community Colleges of Spokane. It shall be the duty of this employer to comply with the standards and systems of education for safety as shall be prescribed for this employer by the Director of Labor and Industries through the Division of Safety or by statute . . . It will be the responsibility of both management and each employee to cooperate with one another to achieve a productive implementation of the objectives contained in this safety and health program. It is the commitment of the Community Colleges of Spokane that the safety and health program be an integral component in the daily operation of this district."

HEARING CONSERVATION PROGRAM ELEMENTS

The hearing conservation program of the Community Colleges of Spokane consists of these major elements:

- 1) **Evaluation of noise exposures.** When reasonable information indicates that any employee's exposure may equal or exceed an 8-hour time-weighted average of 85 dBA, CCS will obtain individual or representative exposure measurements for all employees who may be exposed at or above that level. Affected employees or their representatives will be provided with an opportunity to observe measurements of employee noise exposure. If monitoring results indicate that employees are exposed at or above an 8-hour time-weighted average of 85 dBA, the employees will be notified by CCS.
- 2) **Noise control.** Whenever employee noise exposures equal or exceed an 8-hour time-weighted average of 90 dBA, feasible administrative or engineering controls will be utilized.
- 3) **Audiometric testing program.** CCS will maintain an audiometric testing program for affected employees, at no cost to them, including a baseline audiogram and annual audiometric testing thereafter. CCS will inform each employee of the results of his/her audiometric test and whether or not there has been a hearing level decrease or improvement since his/her previous test. If a standard threshold shift occurs, CCS will implement follow-up procedures, per the WAC guidelines.
- 4) **Hearing protectors.** CCS will make appropriate hearing protectors available to all employees exposed to a time-weighted average of 85 dBA or greater at no cost to the employees, replacing the protectors as necessary, and will ensure that the protectors are worn. Training in the use and care of hearing protectors will be provided, including proper initial fitting and correct usage.
- 5) **Training program.** CCS has instituted a training program for all employees who are exposed to noise at or above an 8-hour time-weighted average of 85 dBA, and will ensure employee participation in this program.
- 6) **Access to information.** CCS will make available to affected employees or their representative's copies of the Hearing Conservation Standard, WAC 296-62-09015 through 296-62-09055 and any informational materials furnished by L & I pertaining to this standard.
- 7) **Warning signs.** Signs will be posted at entrances to or on the periphery of all defined work areas in which employees may be exposed at or above 115 dBA, indicating that the area is a high noise area and that hearing protectors are required.
- 8) **Recordkeeping.** CCS will maintain an accurate record of all employee exposure measurements. These records will be provided upon request to employees, former employees, representatives designated by the individual employee, and the Director of the Department of Labor and Industries.

In those instructional or classified staff work areas where noise exposures of any employee are documented at or above an 8-hour time weighted average (TWA) of 85 dBA, any new CCS employee(s) hired for that position and/or work area will, within a one-month time period of beginning date of employment, be given a baseline audiometric test and subsequently re-tested annually. They will also enter into the full CCS Hearing Conservation Program, including training and provision of hearing protectors.

EVALUATION OF NOISE EXPOSURES

A) Monitoring

When reasonable information indicates that any employee's exposure may equal or exceed an 8-hour time-weighted average of 85 dBA, CCS will obtain individual or representative exposure measurements for all employees who may be exposed at or above that level.

The sampling strategy will be designed to identify all employees required to be included in the hearing conservation program and to enable the proper selection of hearing protectors.

Where circumstances such as high worker mobility, significant variations in sound level, or a significant component of impulse noise exist, CCS will use representative personal sampling to comply with the monitoring requirements of this section unless CCS establishes that area sampling produces equivalent results.

B) Method of noise measurement

Noise dosimeters or sound level meters which comply, as a minimum, with the provisions as noted below will be used whenever employee exposures are evaluated for the purpose of complying with the Hearing Conservation Standard, WAC 296-62-09015 - 296-62-09055.

Dosimeters shall meet the Class 2A-90/80-5 requirements of the American National Standard Specification for Personal Noise Dosimeters, S1.25-1978.

Sound level meters shall meet the Type 2 requirements of the American National Standard Specification for Sound Level Meters, S1.4-1971 (R1976).

All continuous, intermittent, and impulsive sound levels from 80 dBA to 130 dBA will be integrated into the exposure computation.

Monitoring will be repeated whenever a change in production, process, equipment or controls increases noise exposures to the extent that:

Additional employees may be exposed at or above an 8-hour time-weighted average of 85 dBA; or

The attenuation provided by hearing protectors being used by employees may be rendered inadequate to attenuate employee exposure at least to a time-weighted average of 85 dBA or below.

C) Calibration of monitoring equipment

Dosimeters and sound level meters used to monitor employee noise exposure will be calibrated using the instrument manufacturer's calibration instructions before and after each day's use.

D) Employee notification

CCS will notify each employee exposed at or above an 8-hour time-weighted average of 85 dBA of the results of the monitoring.

E) Observation of monitoring

CCS will provide affected employees or their representatives with an opportunity to observe any measurements of employee noise exposure which are conducted.

NOISE CONTROL

Whenever employee noise exposures equal or exceed an 8-hour time-weighted average of 90 dBA, feasible administrative or engineering controls will be utilized.

Upon request, CCS will prepare and submit a written compliance plan to the Director of the Department of Labor and Industries, or his/her designee. This plan would include a description of the manner in which compliance will be achieved with respect to cited violations of item #II (A), above, and would include proposed abatement methods, anticipated completion dates, and provision for progress reports to the director or his/her designee.

AUDIOMETRIC TESTING PROGRAM

CCS will establish and maintain a mandatory audiometric testing program as noted below for all employees whose exposures equal or exceed an 8-hour time-weighted average of 85 dBA. In those CCS work areas where noise exposures of any employee are documented at or above an 8-hour time weighted average (TWA) of 85 dBA, any new employee(s) hired for that position and/or work area will, within a one-month time period of beginning date of employment, be given a baseline audiometric test and subsequently re-tested annually. The program will be provided at no cost to employees.

Audiometric tests will be performed by a licensed or certified audiologist, otolaryngologist, or other qualified physician, or by a technician who is certified by the council of accreditation in occupational hearing conservation. A technician who performs audiometric tests must be responsible to an audiologist, otolaryngologist or other qualified physician.

All audiograms obtained will meet the requirements of WAC 296-62-09047, Appendix A: Audiometric measuring instruments.

A) Baseline audiogram

Prior to or within 180 days after an employee's first exposure to noise at or above a time-weighted average of 85 dBA, CCS will establish for each employee so exposed a valid baseline audiogram against which subsequent audiograms can be compared. If mobile test units are utilized, CCS is allowed up to one year to obtain a valid baseline audiogram for each exposed employee, provided that each employee so exposed is trained and wears suitable hearing protectors in accordance with the Hearing Conservation Standard.

Testing to establish a baseline audiogram will be preceded by at least 14 hours without exposure to workplace noise. This may be accomplished by use of hearing protectors; however, CCS will notify employees of the need to avoid high levels of non-occupational noise exposure during the 14-hour period immediately preceding the audiometric examination.

After obtaining the baseline audiogram, CCS will obtain a new audiogram at least annually (i.e., every 12-month interval) for each employee exposed at or above a time-weighted average of 85 dBA. Annual audiometric testing may be conducted at any time during the work-shift.

B) Evaluation of audiogram

Each employee's annual audiogram will be compared to that employee's baseline audiogram to determine if a standard threshold shift has occurred. The comparison must be made by a certified audiometric technician.

If the annual audiogram indicates that an employee has suffered a standard threshold shift, CCS may obtain a retest within 30 days and consider the results of the retest as the annual audiogram.

An audiologist, otolaryngologist or other qualified physician will review audiograms, which indicate a standard threshold shift to determine whether there is need for further evaluation. CCS will provide to the person performing this evaluation the following information:

A copy of the requirements for hearing conservation as set forth in WAC 296-62-09015 through 296-62-09055;

The baseline audiogram and most recent audiogram of the employee to be evaluated;

Measurements of background sound pressure levels in the audiometric test room as required in WAC 296-62-09049, Appendix B: Audiometric test rooms; and

Records of audiometer calibrations required by WAC 296-62-09029 (5).

CCS will inform each employee of the results of his/her audiometric test and whether or not there has been a hearing level decrease or improvement since his/her previous test.

C) Follow Up Procedures

If a comparison of the annual audiogram to the baseline audiogram indicates a standard threshold shift, CCS will ensure that the following steps are taken:

Employees not using hearing protectors will be fitted with hearing protectors, trained in their use and care, and required to use them.

Employees already using hearing protectors will be refitted and retrained in the use of hearing protectors and provided with hearing protectors offering greater attenuation, if necessary.

If additional testing is necessary or if CCS suspects that a medical pathology of the ear is caused or aggravated by the wearing of hearing protectors, CCS will refer the employee, at no cost to the employee, for a clinical audiological evaluation or an otological examination, as appropriate.

Inform the employee of the need for an otological examination if a medical pathology of the ear, which is unrelated to the use of hearing protectors, is suspected.

D) Revised baseline

Annual audiogram may be substituted for the baseline audiogram when, in the judgment of the audiologist, otolaryngologist or other qualified physician who is evaluating the audiogram:

The standard threshold shift revealed by the audiogram is persistent; or

The hearing threshold shown in the annual audiogram indicates significant improvement over the baseline audiogram.

E) Audiometric test requirements

Audiometric tests shall be pure tone, air conduction, hearing threshold examinations, with test frequencies including as a minimum 500, 1000, 2000, 3000, 4000, and 6000 Hz. Tests at each frequency will be taken separately for each ear.

Audiometric tests will be conducted with audiometers (including microprocessor audiometers) that meet the specifications of, and are maintained and used in accordance with, American National Standard Specification for Audiometers, S3.6-1969 (R1973).

Pulsed-tone and self-recording audiometers, if used, will meet the requirements specified in WAC 296-62-09047, Appendix A: Audiometric measuring instruments.

Audiometric examinations will be administered in a room meeting the requirements listed in WAC 296-62-09049, Appendix B: Audiometric test rooms.

F) Audiometer calibration.

The functional operation of the audiometer will be checked before each day's use by testing a person with known, stable hearing thresholds, and by listening to the audiometer's output to make sure that the output is free from distorted or unwanted sounds. Deviations of 10 dB or greater will require an acoustic calibration.

Audiometer calibration will be checked acoustically at least annually in accordance with WAC 296-62-09051, Appendix C: Acoustic calibration of audiometers. Test frequencies below 500 Hz and above 6000 Hz may be omitted from this check.

An exhaustive calibration will be performed at least every two years in accordance with sections 4.1.2; 4.1.3; 4.1.4.3; 4.2; 4.4.1; 4.4.2; 4.4.3; and 4.5 of the American National Standard Specification for Audiometers, S3.6-1969 (R1973). Test frequencies below 500 Hz and above 6000 Hz may be omitted from the calibration.

HEARING PROTECTORS

CCS will make hearing protectors available to all employees exposed to a time-weighted average of 85 dBA or greater, or noise above 115 dBA, or any impulsive or impact noise measured at or above 140 dB, at no cost to the employees. Hearing protectors will be replaced as necessary.

CCS will ensure that hearing protectors are worn:

By any employee who is exposed to an 8-hour time-weighted average of 85 dBA or greater; or

By any employee who is exposed to noise above 115 dBA; or

By any employee who is exposed to any impulsive or impact noise measured at or above 140 dB peak using an impulse sound level meter set to either the linear or C-scale.

Employees will be given the opportunity to select their hearing protectors from at least two different types of suitable hearing protectors provided by CCS (e.g., molded, self-molded, custom molded, or ear muffs). CCS will provide training in the use and care of all hearing protectors provided to employees. CCS will ensure proper initial fitting and supervise the correct use of all hearing protectors.

Hearing protector attenuation

CCS will evaluate hearing protector attenuation for the specific noise environments in which the protector will be used by one of the methods described in WAC 296-62-09053, Appendix D: Methods for estimating the adequacy of hearing protector attenuation, or by other methods if approved by the Director of the Department of Labor and Industries.

Hearing protectors must attenuate employee exposure at least to a time-weighted average of 85 dBA or below.

The adequacy of hearing protector attenuation will be re-evaluated whenever employee noise exposures increase to the extent that the hearing protectors provided may no longer provide adequate attenuation. CCS will provide more effective hearing protectors where necessary.

TRAINING PROGRAM

CCS has instituted a training program for all employees who are exposed to noise at or above an 8-hour time-weighted average of 85 dBA, and will ensure employee participation in this program. The training program will be repeated annually for each employee included in the hearing conservation program. Information provided in the training program will be updated to be consistent with changes in protective equipment and work processes.

CCS will ensure that each employee is informed of the following:

The effects of noise on hearing.

The purpose of hearing protectors, the advantages, disadvantages, and attenuation of various types, and instructions on selection, fitting, use, and care.

The purpose of audiometric testing, and an explanation of the test procedures.

The right to access to records. All records will be provided upon request to employees, former employees, representatives designated by the individual employee, and the Director of the Department of Labor and Industries.

That a written description of the CCS hearing conservation training program is maintained by CCS.

ACCESS TO INFORMATION

CCS will make available to affected employees or their representative's copies of the Hearing Conservation Standard, WAC 296-62-09015 through 296-62-09055 and will also post a copy in the workplace. CCS will provide to affected employees any informational materials pertaining to the above referenced standard that are supplied to CCS by the Director of the Department of Labor and Industries.

CCS will provide, upon request, all materials related to CCS's training and education program pertaining to the above referenced standard to the Director of the Department of Labor and Industries.

WARNING SIGNS

Signs will be posted at entrances to or on the periphery of all well-defined work areas in which employees may be exposed at or above 115 dBA. Warning signs will clearly indicate that the area is a high noise area and that hearing protectors are required.

RECORDKEEPING

A) Exposure measurements

CCS will maintain an accurate record of all employee exposure measurements, including those noted below. Employee exposure monitoring records include time-motion studies, sound level meter results, dosimeter results, equipment identification (model number, serial number) and calibration data. These records will be retained a minimum of two years.

B) Audiometric tests

Audiometric testing data includes employee name and job classification, employee audiograms, date of audiogram, examiner's name, date and type of the last audiometric calibration, and the employee's most recent noise exposure assessment. Data on background sound pressure levels inside the test room must also be retained. Audiometric testing data must be retained for the duration of the affected employee's employment.

All required records must be transferred to the new employer and maintained should the previous employer cease to do business.

CCS will retain a legible copy of all employee audiograms.

This record will include:

- a) Name and job classification of the employee;
- b) Date of the audiogram;
- c) The examiner's name;
- d) Date of the last acoustic or exhaustive calibration of the audiometer; and
- e) Employee's most recent noise exposure assessment.

C) Audiometric test rooms

CCS will maintain accurate records of the measurements of the background sound pressure levels in audiometric test rooms.

D) Record retention

CCS will retain records required in this section for at least the following periods:

Noise exposure measurement records will be retained for two years.

Audiometric test records will be retained for the duration of the affected employee's employment.

E) Access to records

All records required by this section will be provided upon request to employees, former employees, representatives designated by the individual employee, and the Director of the Department of Labor and Industries.

F) Transfer of records

Should CCS cease to do business, CCS will transfer to the successor employer all records required to be maintained, as noted above, and the successor employer will retain them for the remainder of the period.