

Revised: April, 2023

## Noise Control and Hearing Conservation

### 1. Introduction

#### 1.1. Purpose

This Code of Practice (COP) is to ensure that no worker is subjected to noise levels which may contribute to hearing loss or that may exceed legal requirements. CPES has identified "Noise" as a hazard source as part of our hazard identification, assessment, and control (HIAC) program.

In accordance with legislated requirements on noise control and hearing conservation, this COP has been developed to:

- Assess workers' fitness for specific jobs.
- Establish employee audiometric baseline.
- Identify and address any deterioration in hearing.

#### 1.2. Application

This COP applies to all personnel working for CPES.

#### 1.3. Definitions

**Occupational Exposure Limits (OELs):** define a worker's maximum permitted daily exposure to noise without hearing protection. For the purpose of this COP, a noise-exposed worker is one who is exposed to noise levels exceeding 85 dBA  $L_{ex}$  as a time-weighted average over 8 hours.

**$L_{ex}$  Measurement** (or noise exposure level): averages a worker's total exposure to noise over the entire workday and adjusts it to an equivalent 8-hour exposure. In other words, a worker exposed to 88 dBA for 4 hours or 91 dBA for 2 hours would be exposed to 85 dBA  $L_{ex}$  (an exposure equivalent of 85 dBA for 8 hours).

**Noise Measurement Standard:** noise must be measured in accordance with the Canadian Standards Association's (CSA) Noise Measurement Standard Z107.556-94 (Procedures for the Measurement of Occupational Noise Exposure).

### 2. Responsibilities

CPES will provide hearing protective equipment training, audiometric testing and keep records at all CPES facilities. CPES will not provide training, audiometric testing or keep records for contractors working at CPES work sites. Contractors shall maintain an equivalent program of their own and advise CPES of any deterioration in hearing. Contractors will comply with the use of hearing protection in all posted areas.

The Manager or designate will be the program administrator and will be responsible to implement the control methods identified within this COP in their Business Unit in conjunction with new hire requirements as outlined by Human Resources (HR). Managers must consult with HR if an employee with abnormal hearing could be at risk while performing assigned duties.

Regular audiometric testing will occur at each CPES facility annually for employees in British Columbia, and every 2 years for employees in Alberta and Saskatchewan, unless the results of the audiometric tests indicate further testing is required.

Employee responsibilities include:

- a) As a minimum, wearing hearing protection in noise-posted and or designated areas.
- b) Participating in audiometric testing.
- c) Reporting any concerns as they relate to noise hazards sources and hearing concerns in the workplace.

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- d) Participating in Noise Control and Hearing Protection training requirements

The Health Safety and Environment (HS&E) Department has the responsibility:

- e) To evaluate the effectiveness of the Noise Control and Hearing Conservation COP.
- f) Be responsible for the development and delivery of Hearing Loss Prevention Training.
- g) Conduct noise level surveys and establish noise level inventory for CPES equipment and facilities/worksites.

### **3. Practice and Guidelines**

#### **3.1. Noise Level Surveys**

CPES will ensure noise level surveys are conducted at:

- a) All CPES facilities.
- b) All new facilities and after equipment changes that may potentially impact noise levels.
- c) Following process changes and expansions.
- d) At least every 5 years.

A worker affected by noise at the workplace must be able to access a copy of the workplace noise measurements on request. A copy of the measurements must be kept on file.

In all environments that exceed 100 dBA, it is recommended that octave band analysis be conducted. In these situations qualified third party services will be used.

#### **3.2. Posting of Signs**

Noise levels that regularly exceed 85 dBA will be identified with a clearly visible warning sign located at all the entrances to the facility.

- a) Saskatchewan regulations OHS 111 sub (5) require signage to be posted in areas where noise levels are in excess of 85 dBA.
- b) Any area where noise levels exceed 100 dBA will be clearly posted with signs requiring the use of double hearing protection.
- c) Equipment that exceeds regulatory noise levels should have decals adhered in a visible area. Information on this sign/decal is provided in **Appendix A**.

#### **3.3. Noise Controls**

Methods of maintaining noise levels at or below regulatory requirements by engineering designs will be investigated for all new equipment, expansions and or facilities.

When possible, work normally required in noisy areas will be conducted during equipment shutdowns or on other occasions when noise levels are reduced.

If engineering or administrative controls are impractical, then hearing protection will be used as a means of reducing exposure to noise.

#### **3.4. Personal Protection**

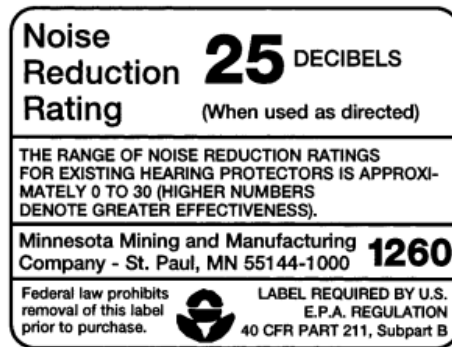
Hearing protection is to be worn at all times in posted areas exceptions should not be made regardless of the duration of the exposure. Note, longer durations of exposure may require protection at lower levels of exposure, it

Double protection is required for all environments that exceed 100 dBA. It is recommended that exposure durations be limited.

Hearing protection must be provided and meet the requirements of CSA Standard Z94.2-02, Hearing Protection Devices - Performance, Selection, Care, and Use. The selection must be the appropriate class and grade .

Noise Reduction Rating:

All hearing protection is assigned a Noise Reduction Rating, this is the number of decibels that the product will reduce the noise level experienced by when used as directed. It is important to remember that, this number assumes that the user is using the product perfectly. In real world situation, the fit, removing the ear plugs occasionally and other user actions can significantly reduce this noise reduction rating. A general rule of thumb is to assume that the user will achieve only half of the rating when using the ear plug in a real-world setting. The noise reduction rating should be included on the packaging for the product.



Workers will receive training in the use, selection, and care of hearing protection through the CPES Personal Protective Equipment (PPE) (Care, Use and Maintenance) training which is completed at the time of hire. In addition, continual education on hearing conservation will be provided to workers throughout the course of their employment.

This training will include instruction on the proper insertion and use of hearing protection.

**To insert your ear plug:**



1. Roll the ear plug up into a narrow cylinder.
2. Lift your ear back with your opposite hand.
3. Slide/twist/corkscrew the plug into your ear and hold for 30 seconds/until it is fully expanded.
4. Perform a fit check by repeatedly cupping your ears.

Fit Testing. When hearing protective equipment is required, users must perform a quantitative fit test to ensure they have achieved a proper seal.

For Ear Plugs:

1. Use your fingertips to feel if the ear plugs are fully inserted into the ear canal, use a mirror to check, or have a coworker visually confirm.
2. Cup hands tightly over your ears. If sounds are much more muffled with your hands in place, the earplugs may not be sealing properly.
3. Talk out loud. Your voice should sound hollow, as if you are talking in a barrel.
4. Listen for noises around you. Noises should not be as loud as they were before inserting the ear plugs.

For Earmuffs:

1. Read the manufacturer’s instructions on how to don the earmuffs.
2. • Make sure the earmuffs cover the whole ear, and do not have anything in between that prevents a good seal between the earmuff and the ear (for example, prescription eyewear).
3. • Listen for noises around you. Noises should sound muffled and not be as loud as they were before putting on the earmuffs.

The following types of hearing protection will be acceptable:

<b>82 - 100 dBA</b>	<b>100 dBA +</b>
<b>Ear plugs <u>or</u> ear muffs meeting CSA standard Z94.2-02 (Hearing Protection Devices – Performance, Selection, Care and Use).</b>	<b>Ear plugs <u>and</u> ear muffs meeting CSA standard Z94.2-02 (Hearing Protection Devices – Performance, Selection, Care and Use).</b>

**3.5. Hearing Evaluation**

Any employee working or has the potential to work where noise levels exceeding the 85 dBA (80 dBA in Saskatchewan) will have a baseline audiogram. The purpose of baseline testing is to establish a measurement of the worker’s hearing and then to monitor the worker’s hearing at regular intervals to detect changes in hearing ability.

New employees shall undergo baseline audiometric testing within six months of hiring and then again within one year.

If an employee becomes noise exposed as a result of a transfer, the Supervisor will advise the HS&E Advisor so that an audiogram may be scheduled.

All employees will be notified (in confidence) within 60 days of their results and within 30 days if the audiogram was abnormal or if there was any abnormal shift. Any necessary medical follow-up and recommendations will also be provided at that time.

If an employee routinely works in an environment that exceeds 100 dBA, it is recommended that, twice-annual audiometric testing be provided (CSA Standard Z94.2-02, Page 31, Table 4).



**Appendix A -Hearing Protection Signs**

Wherever noise exceeds the regulated limit, a suitable warning sign which indicates that hearing protection is required must be posted. Standard hearing protection symbols recognized by the CAN/CSA Standard Z-321 are shown below. Any approved sign may be used.

