

## Annexure A

### Comments / inputs on the Draft Noise-Induced Hearing Loss Regulations as proposed by the Department of Employment and Labour.

Kindly provide inputs, corrections and/ or comments in writing on the proposed Draft Noise-Induced Hearing Loss Regulations in the following format:

Name and Surname:				E- mail				Phone number:			
Company name (if applicable)											
Government		Industry		Union		Consultancy		Private		Other	

1	Regulation and/or sub regulation from the draft, referring to	Comment/ Input/ Correction/ Proposal Plus motivation

Will the proposed regulation have an impact on any other regulation? If so, which regulation and what will be the impact?

2	Regulation and/or sub regulation from the draft, referring to	Comment/ Input/ Correction/ Proposal Plus motivation

Will the proposed regulation have an impact on any other regulation? If so, which regulation and what will be the impact?

3	Regulation and/or sub regulation from the draft, referring to	Comment/ Input/ Correction/ Proposal Plus motivation

Will the proposed regulation have an impact on any other regulation? If so, which regulation and what will be the impact?

General comments:	
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Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Provide inputs to Department of Employment and Labour by e-mailing this completed document to [warren.mallon@labour.gov.za](mailto:warren.mallon@labour.gov.za) and [Alukhethi.Munzhedzi@LABOUR.gov.za](mailto:Alukhethi.Munzhedzi@LABOUR.gov.za)

# Noise-Induced Hearing Loss Regulations

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#### **Definitions**

1. In these Regulations any word or expression to which a meaning has been assigned in the Act shall have the meaning so assigned and, unless the context indicates otherwise-

**“approved noise inspection authority”** means an inspection authority approved by the chief inspector of the Department of Employment and Labour for the monitoring of noise in the workplace;

**"Chief Director: Provincial Operations"** means the provincial director as defined in regulation 1 of the General Administrative Regulations, 2003, published as Government Notice R.929 in Gazette No. 25129 of 25 June 2003;

**“Competent person: audiometric testing”** means-

(a) for screening audiometry;

(i) a person registered in terms of the Health Professions Act, 1974 (Act No. 56 of 1974), with the Health Professions Council of Council of South Africa in any of the following categories:

(aa) ENT (ear, nose and throat specialist);

(bb) speech therapist;

(cc) audiologist; or

(dd) occupational medicine practitioner;

(ii) a person with a qualification in audiometric techniques obtained from an institution registered with the South African Qualification Authority or any of its structures in terms of the South African Qualifications Authority Act, 1995 (Act No. 58 of 1995), and registered with the South African Society for Occupational Health Nursing (SASOHN); and

(b) for diagnostic audiology;

(i) a person registered in terms of the Health Professions Act, 1974 (Act No. 56 of 1974), with the Health Professions Council of Council of South Africa in any of the following categories:

(aa) ENT (ear, nose and throat specialist); or

(bb) an audiologist;

**"competent person: risk assessment"** in relation to noise, means a person who—

(a) has in respect of the work or task to be performed the required knowledge, training and experience in noise and, where applicable, qualifications that includes noise: provided that where appropriate qualifications and training are registered in terms of the provisions of the National Qualifications Framework Act, 2008 (Act No. 67 of 2008), those qualifications and that training must be regarded as the required qualifications and training; and

(b) is familiar with the Act and the applicable regulations made under the Act;

**“exposure”** means the extent to which a person is exposed to noise at the workplace as determined by the noise risk assessment, and includes potential or accidental exposure, and exposed has a derivative meaning;

**“HPDs or hearing protective devices”** means an ear-muff/s or ear-plug/s which conform to SANS 1451 and SANS 50458;

**“ $L_{Req,8h}$  or 8-hour rating level”** means the rating level normalized to a nominal 8-hour working day and should be A weighted;

**“ $L_{peak}$  or peak noise level”** means the peak level of the sound pressure wave with no time constant applied and should be C weighted;

**“noise”** means unwanted sound that may cause annoyance, interference with speech or communication and/or hearing impairment;

**“noise action level”** means the value of the  $L_{Req,8h}$  at or above 82 dB(A) for continuous noise and/or  $L_{peak}$  at or above 135 dB(C) for impulse noise at which specified actions or counter measures must be taken;

**“noise exposure monitoring”** means the systematic process of measuring the magnitude, frequency and duration of exposure to noise;

**“noise-rating limit”** means the value of the  $L_{Req,8h}$  at or above 85 dB(A) for continuous noise and/or  $L_{peak}$  at or above 137 dB(C) for impulse noise at which specified actions or counter measures must be taken;

**“noise risk assessment”** means an assessment and risk categorisation of exposure to noise in the workplace;

**“noise technical committee”** means a committee established in terms of regulation 16;

**“ototoxic chemical agents”** means chemical agents that damage the ear and cause hearing loss;

**“SANS 10083”** means the South African National Standard Code of Practice for the Measurement and Assessment of Occupational Noise for Hearing Conservation Purposes;

**“SANS 1186-1”** means the South African National Standard Code of Practice for Symbolic Safety Signs – Part 1: Standards signs and general requirements;

**"SANS 1451"** means the South African National Standard Code of Practice for Hearing Protection;

**"SANS 50458”** means the South African National Standard Code of Practice for the recommendations for selection, use, care and maintenance – guidance document;

**"the Act"** means the Occupational Health and Safety Act.1993 (Act No. 85 of 1993);

**“vulnerable employee”** means an employee who is at a higher risk of injury, disease or complications;

### **Scope of Application**

2. (1) These Regulations will apply to:

(a) any employer or self-employed person at any workplace under their control, where persons are exposed to continuous or impulse noise at or above the applicable noise action level; and

(b) a designer, manufacturer, importer or supplier of machinery or plant for use at a workplace;

(2) With the exception of regulation 4 (6), the provision of regulation 4 shall not apply to a self-employed person.

### **Exposure to noise**

3. Subject to regulations 9 and 10, an employer or self-employed person must ensure that no person entering the workplace under their control will be exposed to noise at or above the noise action level.

### **Information, instruction and training**

4. (1) An employer who undertakes work which exposes an employee to noise must inform and consult the relevant health and safety representatives or health and safety committee established for that workplace of the intention to conduct:

(a) a noise risk assessment contemplated in regulation 7;

(b) noise exposure monitoring contemplated in regulation 8; and

(c) training contemplated in regulation 4 (3).

(2) An employer who undertakes work which exposes an employee to a noise must inform the relevant health and safety representatives or health and safety committee for that workplace of the intention to conduct medical surveillance contemplated in regulation 8;

(3) An employer must inform the relevant health and safety representatives or health and safety committee for that workplace of the documented outcomes of the:

(a) noise risk assessment contemplated in regulation 7;

(b) noise exposure monitoring contemplated in regulation 8; and

(c) medical surveillance contemplated in regulation 9;

(4) An employer must establish, for all employees who may be exposed to noise at or above the noise action level, a training programme with regard to these regulations;

(5) The training programme contemplated in regulation 4 (4) must be conducted prior to the placement of the relevant employee;

(6) The training programme contemplated in regulation 4 (4) with regard to these regulations, must focus on:

(a) the content and scope of these Regulations;

(b) the potential sources of exposure to noise;

(c) ototoxic chemical agents acting synergistically with noise to cause hearing loss;

(d) the potential risks to health and safety caused by exposure to noise;

(e) the differing effects of exposure to physical agents to men, women, young employees and vulnerable employees, where such difference may exist;

(f) the measures taken by the employer to protect an employee against the adverse effects of exposure to noise;

(g) the necessity for the compliance with noise control measures in all areas, including the correct use, maintenance and limitations of HPDs;

(h) the precautions to be taken by the employees to protect themselves against the adverse effects associated with the exposure;

(i) the noise risk assessment, the purpose of noise exposure monitoring and the necessity for medical surveillance;

(j) the noise action level and noise-rating limit for hearing conservation and their meaning;

(k) the procedures for reporting, correcting and replacing defective noise control measures including HPDs;

(l) any additional matters contemplated in regulations 5 and 9; and

(m) access to records of noise risk assessment, noise exposure monitoring and personal medical records;

(7) Refresher training must be conducted annually;

(8) An employer or self-employed person must ensure, as far as is reasonably practicable, that mandatories or persons other than employees who may be affected by noise exposure at the workplace are informed and trained in accordance with regulation 4 (4); and

(9) An employer must keep a record of employee training in terms of this regulation.

### **Duties of persons who may be exposed to noise**

5. (1) Any person who is or may be exposed to noise at or above the noise action level must obey any lawful instruction by the employer or self-employed person or by anyone authorized thereto by the employer or self-employed person, regarding:

(a) the use of measures adopted for noise control;

(b) the immediate reporting of defective, damaged or lost noise control measures to the health and safety representative or the employer;

(c) the use of HPDs;

(d) a prohibition to enter or remain in an area where HPDs are required unless the person is authorized to do so and is wearing the required HPDs;

(e) co-operation with the employer in determining personal exposure, which may include the wearing of a sound dosimeter;

(f) the reporting for medical surveillance as required by regulation 9; and

(g) information, instruction and training received as contemplated in regulation 4.

### **Duties of designers, manufacturers, importers and suppliers**

6. (1) Any designer, manufacturer, importer or supplier of machinery or plant for use at work must:

(a) as far as is reasonably practicable, ensure that machinery or plant minimises the exposure to noise;

(b) as far as is reasonably practicable, supply machinery or plant that can be transported, received, stored and handled in a manner that minimises the exposure to noise;

(c) provide information, instruction and training as deemed necessary to minimises the exposure to noise during use of machinery or plant;

(d) as far as is reasonably practicable, install machinery or plant in a manner that minimises the exposure to noise; and

(e) provide information to potential users on the appropriate maintenance of machinery or plant to ensure safe operation and use.

## Noise Risk Assessment

7. (1) An employer or self-employed person must in respect of a workplace under their control cause the noise risk assessment to be done:

- (a) within 60-days after the commencement of operations;
- (b) thereafter at intervals not exceeding 24-months, to determine if any person may be exposed to noise which is at or above the noise action level; and
- (c) by a competent person;

(2) When making the noise risk assessment contemplated in regulation 7 (1), an employer or self-employed person must take into account the following:

- (a) the noise sources to which a person may be exposed;
- (b) adverse effects that the noise may have on persons;
- (c) the extent to which a person may be exposed;
- (d) the nature of the work process and any reasonable deterioration in or failure of any control measures;
- (e) the presence and extent of exposure to ototoxic chemical agents; and
- (f) the presence and extent of exposure to whole body vibration;

(3) The risk assessment conducted in terms of sub-regulation (1) must take into account specific effects of exposure to men, women, young employees and vulnerable employees, where applicable;

(4) An employer must, in terms of the noise risk assessment:

- (a) consider any deviations identified by the noise risk assessment and the proposed recommendations; and
- (b) develop a documented action plan for the implementation of the recommendations;

(5) An employer or self-employed person must forthwith review a noise risk assessment made in accordance with regulation 7 (1) if:

- (a) there is reason to believe that such noise risk assessment is no longer valid;
- (b) control measures are no longer efficient;
- (c) technological or scientific advances allow for more efficient control methods; or
- (d) there has been a significant change in—
  - (i) work methods;
  - (ii) the type of work carried out; or
  - (iii) the type of equipment used to control exposure;

(6) The review of the noise risk assessment contemplated in regulation 7 (5), must be carried out in accordance regulation 7 (2) and (4).



## **Noise Exposure Monitoring**

8. (1) An employer must ensure that a noise exposure monitoring programme at that workplace is implemented where the noise risk assessment or a review of such assessment indicates that any employee may be exposed to noise at or above the noise action level;

(2) The noise exposure monitoring programme contemplated in regulation 8 (1) must be:

(a) carried out in accordance with the provisions of these regulations;

(b) carried out by an approved noise inspection authority; and

(c) representative of the employees' exposure to noise, in accordance with regulation 8 (3);

(3) In order to comply with regulation 8 (2) (c), an employer must ensure:

(a) that area noise exposure monitoring:

(i) is done, as contemplated in SANS 10083 where a number of employees work in an area of approximately equal noise level;

(ii) is done, as contemplated in SANS 10083, where an employee is working at an approximate fixed location relative to the noise source;

(b) that personal dosimetry monitoring must be done, as contemplated in SANS 10083, for employees who do not have a fixed workplace and move around from one position to another; and

(c) that peak noise levels are monitored, where the noise risk assessment determines that employees may be exposed to impulse noise;

(4) An employer must, in terms of the noise exposure monitoring report, develop a documented action plan for the implementation of the recommendations; and

(5) The employer must ensure that the noise exposure monitoring contemplated in regulation 8 (3) is carried out at least every 24-months.

## **Medical Surveillance**

9. (1) An employer must establish, maintain and document a system of medical surveillance for all employees exposed to:

a) noise at or above the noise-rating limit; or

b) noise at or above the noise action level where there is concomitant exposure to ototoxic chemical agents and/or whole body vibration;

(2) In order to comply with the requirements of regulation 9 (1), medical surveillance must be implemented in conjunction with the Code of Practice for Medical Surveillance for Noise-Induced Hearing Loss, as contemplated in regulation 15.

## **Noise Zone**

10. (1) An employer or self-employed person must ensure that:
- (a) any workplace or part of such workplace is designated as a noise zone, where:
    - (i) the exposure to noise is at or above the noise action level where there is concomitant exposure to ototoxic chemical agents and/or whole body vibration; or
    - (ii) the exposure to noise is at or above the noise-rating limit;
  - (b) a noise zone is clearly demarcated and identified by signage, in accordance with SANS 1186-1, indicating that the relevant area is a noise zone and that HPDs as contemplated in regulation 12 must be worn; and
  - (c) no person enters or remains in a noise zone unless HPDs are worn.

## **Control of exposure to noise**

11. (1) An employer or self-employed person must ensure that the exposure of a person to noise is either prevented or, where this is not reasonably practicable, adequately controlled;
- (2) In order to comply with regulation 11 (1) an employer or self-employed person must, as far as is reasonably practicable, reduce noise exposure to levels below the limits referred to in regulation 10 (1)(a), by implementing a combination of the hierarchy of noise control measures including:
- (a) engineering control measures to eliminate or reduce noise at its source, or the modification of the routes by which noise reaches workplaces;
  - (b) administrative control measures to limit the number of persons exposed and the duration of exposure; and
  - (c) the use of HPDs as a last resort, if engineering and administrative control measures are insufficient;
- (3) An employer must ensure that an employee who is exposed to noise receives information, instruction and training, as contemplated in regulation 4, with regard to the correct inspection, use, and reporting of failures of control measures implemented in regulation 11 (2).

## **Hearing protective devices**

12. (1) Where HPDs are provided, an employer or self-employed person must ensure that HPDs:
- (a) reduce exposure to noise:
    - (i) to below the noise-rating limit; or

(ii) to below the noise action level where there is concomitant exposure to ototoxic chemical agents and/or whole body vibration;

(b) are selected, used, maintained and stored in accordance with SANS 50458; and

(c) are procured in accordance with SANS 1451;

(2) The employee must, where there is the requirement to use HPDs as contemplated in regulation 12 (1):

(a) inspect, use, wear, store and dispose of the HPDs in accordance with any information, training or lawful instruction given by the employer;

(b) not intentionally misuse or damage the HPDs; and

(c) immediately inform the employer of any damage, defect, or any need to clean or replace any of the HPDs.

### **Maintenance of control measures**

13. (1) Every employer or self-employed person must ensure that any control measure is:

(a) fully and properly used; and

(b) maintained in an efficient state, in good working order and in good repair and cleanliness.

### **Records**

14. (1) An employer or self-employed person must:

a) keep record of the reports for:

(i) training, as contemplated in regulation 4;

(ii) noise risk assessments and action plan, as contemplated in regulation 7;

(iii) noise exposure monitoring and action plan, as contemplated in regulation 8;

(iv) medical surveillance reports, as contemplated in 3.8.7 of the code of practice;  
and

(v) maintenance of control measures, as contemplated in regulation 13;

(b) keep records, as contemplated in regulation 14 (1)(a) for 40-years;

(c) make the records contemplated in regulation 14 (1)(a) available for inspection by an inspector and relevant health and safety representative or health and safety committee; and

(d) submit all records, as contemplated in regulation 14 (1)(a) to the relevant Chief Director: Provincial Operations, when they cease activity.

## **Code of practice**

15. (1) The Chief Inspector may, in consultation with the Noise Technical Committee, develop or review approved codes of practice relevant to hearing conservation in the workplace in order to guide and regulate exposure to noise in the workplace.

## **Noise technical committee**

16. (1) The Council must, after consultation with the Minister, establish a noise technical committee which must consist of:

(a) a chairperson designated by the chief inspector from the employees of the Department of Employment and Labour;

(b) one person designated by the chief inspector from the employees of the Department of Employment and Labour;

(c) three persons designated by employer's organisations to represent employers;

(d) three persons designated by employees' organisations to represent the federation of unions;

(e) two persons to represent professional bodies recognised by the chief inspector;

(f) one person representing a higher educational institution;

(g) one person representing occupational medicine; and

(h) persons who are competent in respect of the matters to be dealt with by the noise technical committee who have been co-opted by the committee with the authorisation of the council;

(2) The council must:

(a) appoint members of the noise technical committee for a period that the council may determine at the time of the appointment;

(b) after having afforded a member a reasonable opportunity to respond, discharge such a member at any time, for reasons that are fair and just; and

(c) appoint a new member in the place of a member who is discharged in terms of regulation 16 (2)(b);

(3) The noise technical committee must:

(a) advise the council on noise related matters, including, but not limited to, codes, standards and training requirements;

(b) make recommendations and submit reports to the council regarding any matter to which these Regulations apply;

(c) advise the council regarding any matter referred to the noise technical committee by the council;

(d) perform any other function for the administration of a provision of these Regulations that may be requested by the council; and

(e) conduct its work in accordance with the instructions and rules of conduct framed by the council.

### **Offences and penalties**

17. Any person who contravenes or fails to comply with any provision of regulations 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14 and 15 shall be guilty of an offence and liable on conviction to a fine or to imprisonment for a period not exceeding 12-months and, in the case of a continuous offence, to an additional fine of R200 for each day on which the offence continues or to additional imprisonment of one day for each day on which the offence continues: Provided that the period of such additional imprisonment shall in no case exceed 90 days.

### **Withdrawal of regulations**

18. XXXX

### **Short title**

19. These Regulations are referred to as the draft Noise-Induced Hearing Loss Regulations, 20XX.



**employment & labour**

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Department:  
Employment and Labour  
**REPUBLIC OF SOUTH AFRICA**

**CODE OF PRACTICE FOR MEDICAL  
SURVEILLANCE**

**FOR**

**NOISE-INDUCED HEARING LOSS  
REGULATIONS**

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## FOREWORD

The Minister's Advisory Council for Occupational Health and Safety gave approval from the establishment of a Technical Committee (TC) to review the Noise-Induced Hearing Loss Regulations of 2003. The TC is constituted of members of organised labour, organised business, specialists in the field of occupational health and safety and the Department of Employment and Labour.

Due to the complex nature of medical surveillance with regard to assessing employees' exposure to occupational noise and the resultant effects, a decision was taken by the TC to produce a Code of Practice for Medical Surveillance for Noise-Induced Hearing Loss. The Code of Practice is a move from a reactive approach to addressing occupational hearing loss, to a proactive approach, that incorporates all requirements of medical surveillance, particularly audiometric testing, and places it into one document.

## LEGAL STATUS OF COPs

This Code of Practice is incorporated into the Noise-Induced Hearing Loss regulations of 202X through Regulation 15 of the said regulations.

## OBJECTIVES OF THE COP

The objective of the Department of Employment and Labour's Code of Practice for Medical Surveillance in respect of the Noise-Induced Hearing Loss Regulations is to assist employers with the development and implementation of a medical surveillance programme.



## ACRONYMS AND DEFINITIONS

### Acronyms

CoP: Code of Practice

HPD: Hearing Protective Device

NIHL: Noise-Induced Hearing Loss

PLH: Percentage Loss of Hearing

STS: Standard Threshold Shift

OHP: Occupational Health Practitioner

OMP: Occupational Medicine Practitioner

## Definitions

“**audiogram**” means a chart, graph or table indicating the hearing threshold levels of an individual as a function of frequency, (namely 0.5, 1, 2, 3, 4, 6 and 8 kHz), as determined during a measurement of a person’s hearing threshold levels by means of a monaural, pure tone, air-conduction threshold test;

“**audiometric test**” means the act of assessing an individual’s hearing in order to establish a PLH shift and/or STS;

“**audiometric zero**” means the average hearing threshold at 2, 3 and 4 kHz for each ear calculated from baseline;

“**audiometry**” means the procedure to be followed in testing an individual’s hearing;

“**Compensation Commissioner**” means the Compensation Commissioner appointed under section 2(l)(u) of the Compensation for Occupational Injuries and Diseases Act, 1993 (Act No. 130 of 1993);

“**diagnostic audiology**” means the advanced assessment and management of hearing and hearing loss conducted by an audiologist or ENT Specialist;

“**instruction No. 171**” means the Compensation Commissioner’s Circular Instruction No.171 and Supplement entitled Determination of Permanent Disablement Resulting from Noise Induced Hearing Loss and Trauma;

“**PLH**” means percentage loss of hearing calculated on every audiogram;

“**PLH shift**” means the difference between the current PLH and the baseline PLH; and is used to determine the need for compensation for NIHL;

**“screening audiometric tests”** means audiometric tests, conducted by a competent person, to establish baseline, entry, initial, periodic and exit audiograms;

**“STS or Standard threshold shift”** means an average change in hearing of 10dB or more at the frequencies of 2, 3 and 4 kHz in one or both ears, as compared to the employee’s audiometric zero; and is used as a measure to prevent NIHL;

## 1. Scope

The scope of the Code of Practice for Medical Surveillance will be aligned with the scope of application of the Noise-Induced Hearing Loss Regulations.

## 2. Medical Surveillance

2.1 An employer is required to establish, maintain and document a system of medical surveillance in terms of Regulation 8 of the Noise-Induced Hearing Loss Regulations. The medical surveillance must be a planned, ongoing programme of audiometric testing, including baseline, entry, initial, periodic and exit audiometry.

2.2 The medical surveillance programme must be implemented under the guidance of an occupational medicine practitioner.

## 3. Audiometric Testing

3.1.1 Audiometric testing must be conducted on all employees exposed to:

- a) noise at or above the noise action level where there is concomitant exposure to ototoxic chemical agents and/or whole body vibration; or
- b) noise at or above the noise-rating limit.

3.1.2 The audiometric testing may include; baseline, entry, initial, periodic and exit audiometry.

3.1.3 Audiometric testing must be conducted by a competent person: audiometric testing, as defined in the Noise-Induced Hearing Loss Regulations.

### 3.2 Baseline audiometry

3.2.1 The baseline audiometric test must be conducted before or within 30-days of deployment or entry into an environment where there is potential exposure to noise.

3.2.2 A baseline audiometric test is a once-off test that must be conducted on every employee who is deployed or enters into an environment where there is potential exposure to noise for the first time in their work-life span.

3.2.3 The baseline audiometric test, in terms of 3.2.1, must establish:

- a) a baseline PLH, which will serve as a reference PLH against which all future PLH shifts will be compared; and
- b) the audiometric zero for the purpose of calculating STS, against which all future STS will be compared.

3.2.4 An employee employed before the promulgation of the Noise-Induced Hearing Loss Regulations of 202X, will require a baseline audiometric test to establish;

- a) the audiometric zero against which all future STS will be compared.

3.2.5 The baseline audiometric test, in terms of 3.2.4 (a), must be conducted within 24-months of the promulgation of the Noise-Induced Hearing Loss Regulations of 202X.

3.2.6 The baseline audiometric test must comply with the following:

3.2.6.1 Reliability criteria:

As referenced in SANS 10083, consists of;

- a) otoscopic examination (clause 14);
- b) audiometric history (clause 14);
- c) correct test environment (clause 14); and
- d) use of reliable equipment with regards to type, maintenance and calibrations (clauses 15 and 16).

3.2.6.2 Validity criteria:

As referenced in Instruction 171, Supplement 171 and SANS 10083, consists of;

- a) two audiograms done;
  - i. on the same day;
  - ii. the same setting; and
  - iii. two different sittings;
- b) must be conducted after at least 16-hours free from any noise exposure without the use of HPDs;
- c) the hearing thresholds in the two audiograms for each ear, at any frequency from 0.5 kHz to the 4 kHz must not differ by not more than 10 decibels;

3.2.7 Once a valid baseline audiometric test has been established, the audiogram with the lowest PLH will be regarded as the baseline for that employee.

3.2.8 Where a screening audiometric test is unable to establish a valid baseline audiometric test, the screening test must be repeated after another interval of 16-hours free from exposure to noise (without the use of HPD). If the repeat screening test is still unable to establish a valid baseline audiometric test, the employee must be referred to an audiologist to establish a valid baseline audiometric test, using appropriate techniques or methodologies, as referenced in Instruction 171 and SANS

10083 clause 17.9. This process must be completed, as far as is reasonably practicable, within the 30-day deadline.

3.2.9 Where a valid baseline audiometric test has not been established or is not available for the period 1 May 2001 to 16 November 2003 or for employees deployed into an environment with potential exposure to noise after November 2003, the baseline PLH (reference PLH) will be considered to be 0%.

3.2.10 Within 24-months from the promulgation of the Noise-Induced Hearing Loss Regulations of 202X, conduct a baseline audiometric test to establish the audiometric zero, against which future STS comparisons will be made.

3.2.11 Any employee who starts work in a noise zone during this 24-months period will require a baseline audiometric test, which will establish:

- a) baseline PLH shift; and
- b) audiometric zero.

### 3.3 Entry Audiometric Test

3.3.1 An entry audiometric test must be conducted on every employee previously exposed to noise, who is deployed or enters a new environment with potential exposure to noise. The employer must use the entry audiometric test to establish:

- a) PLH shifts from baseline;
- b) STS comparison against audiometric zero;
- c) preventive interventions and reporting, in terms of 3.8; and
- d) the need for referral for diagnostic audiology.

3.3.2 The entry audiometric test must comply with the following:

### 3.3.2.1. Reliability criteria:

As referenced in SANS 10083, consists of:

- a) otoscopic examination (clause 14);
- b) audiometric history (clause 14);
- c) correct test environment (clause 14); and
- d) use of reliable equipment with regards to type, maintenance and calibrations (clauses 15 and 16).

### 3.3.2.2. Validity criteria:

As referenced in SANS 10083, an entry audiometric test must meet the following validity criteria:

- a) consist of one audiogram;
- b) must be conducted after at least 16-hours free from any noise exposure without the use of HPDs;
- c) must be conducted before or within 30-days of deployment or entry into an environment where there is potential exposure to noise.

## 3.4 Initial Audiometric Test

3.4.1 An initial audiometric test must be conducted on every employee exposed to noise, in terms of 3.1.2, where there is no valid baseline and/or valid entry audiometric test.

3.4.2 The initial audiometric test must establish:

- a) PLH shifts from baseline;
- b) STS comparison against audiometric zero;
- c) preventive interventions and reporting, in terms of 3.8; and
- d) the need for referral for diagnostic audiology.

3.4.3 The initial audiometric test must comply with the following:

#### 3.4.3.1. Reliability criteria:

As referenced in SANS 10083, consists of:

- a) otoscopic examination (clause 14);
- b) audiometric history (clause 14);
- c) correct test environment (clause 14); and
- d) the use of reliable equipment with regards to type, maintenance and calibrations (clauses 15 and 16).

#### 3.4.3.2. Validity criteria:

An initial audiometric test must meet the following validity criteria:

- a) consist of one audiogram; and
- b) must be conducted after at least 16-hours free from any noise exposure without the use of HPDs.

### 3.5 Periodic audiometry

3.5.1 A periodic audiometric test must be conducted on every employee exposed to noise, in terms of 3.1.2, as part of medical surveillance for noise.

3.5.2 The periodic audiometric test must be conducted:

- a) every 12-months for exposures;
  - i) at or above 85 dBA but less than 105 dBA;
  - ii) at or above 82 dBA with concomitant exposure to ototoxic chemical agents and/or whole body vibration;
- b) every 6-months for exposures at or above 105 dBA;
- c) at more frequent intervals if recommended by the OHP based on clinical evidence.

3.5.3 The periodic audiometric test must establish:



- a) PLH shifts from baseline;
- b) STS comparison against audiometric zero;
- c) preventive interventions and reporting, in terms of 3.8; and
- d) the need for referral for diagnostic audiology.

3.5.4 The periodic audiometric test must comply with the following:

3.5.4.1 Reliability criteria:

As referenced in SANS 10083, consists of:

- a) otoscopic examination (clause 14);
- b) audiometric history (clause 14);
- c) correct test environment (clause 14); and
- d) the use of reliable equipment with regards to type, maintenance and calibrations (clauses 15 and 16).

3.5.4.2 Validity criteria:

As referenced in SANS 10083, a periodic audiometric test must meet the following validity criteria:

- a) consist of one audiogram;
- b) where reasonably practicable, should be conducted after a period of at least 16-hours free from any noise exposure without the use of HPDs: Provided that the correct wearing of HPDs, that complies with the relevant parts of SANS 1541, while performing work in a noise zone prior to the audiometric test, must be deemed as meeting the 16-hour period free from noise exposure.

## 3.6 Diagnostic audiology

3.6.1 A diagnostic audiometric test must be conducted on all employees exposed to noise, in terms of 3.1.2, where:

- a) screening audiometry identifies a PLH shift greater than 10% from baseline; and
- b) the hearing loss pattern suggests NIHL.

3.6.2 An employer must provide the audiologist with the documents listed in SANS 10083 clause 19.13.

3.6.3 The diagnostic audiometric test must comply with the following:

3.6.3.1 Reliability criteria:

As referenced in SANS 10083, consists of:

- a) otoscopic examination (clause 14);
- b) audiometric history (clause 14);
- c) correct test environment (clause 14);
- d) the use of reliable equipment with regards to type, maintenance and calibrations (clauses 15.2, 16 and 19); and
- e) the battery of audiometric tests (clause 19.12).

3.6.3.2 Validity criteria:

As referenced in SANS 10083, a diagnostic audiometric test must meet the following validity criteria:

- a) is conducted by an audiologist or ENT Specialist;
- b) consist of two sets of the battery of audiometric tests, in terms of 3.5.3.1 (e);
- c) be conducted after a period of at least 24-hours free from any noise exposure without the use of HPDs;
- d) be conducted on the same day;
- e) the two diagnostic audiometric tests do not differ by more than 10 dB at any frequency used to determine the PLH.

3.6.4 Where, after 3 attempts, it is not possible to obtain a diagnostic audiogram that meets validity criteria, the employee must be immediately referred to an ENT Specialist to determine the hearing loss.

3.6.5 The diagnostic audiometric test, used to compensate an employee for NIHL must become that employees revised baseline.

## 3.7 Exit Audiometry

3.7.1 An exit audiometric test must be conducted on every employee who was exposed to noise, in terms of 3.1.2, on termination of employment.

3.7.2 The exit audiometric test must be conducted before or within 7-days of date of termination of employment.

3.7.3 Should an audiometric test, meeting the criteria in 3.6.3, conducted within 6-months prior to date of termination of employment, that audiometric test can be considered as fulfilling the requirements for an exit audiometric test.

3.7.4 The exit audiometric test must establish:

- a) PLH shifts from baseline;
- b) STS comparison against audiometric zero;
- c) preventive interventions and reporting, in terms of 3.8; and
- d) the need for referral for diagnostic audiology.

3.7.5 The exit audiometric test must comply with the following:

3.7.5.1 Reliability criteria:

As referenced in SANS 10083, consists of;

- a) otoscopic examination (clause 14);
- b) audiometric history (clause 14);
- c) correct test environment (clause 14); and
- d) the use of reliable equipment with regards to type, maintenance and calibrations (clauses 15 and 16).

3.7.5.2 Validity criteria:

As referenced in SANS 10083, an exit audiometric test must meet the following validity criteria:

- a) consist of one audiogram; and
- b) be conducted after a period of at least 16-hours free from any noise exposure without the use of HPDs.

### 3.8 Action Criteria and Reporting

#### 3.8.1 The OHPs must determine:

- a) the audiometric zero and STS; PLH and PLH shift from baseline; and
- b) the type of hearing loss.

#### 3.8.2 Where a STS of 10dB to 25dB is reached, the OHP must ensure that:

- a) the audiometric test is referred for discussion with an OMP;
- b) an investigation is conducted by the employer to determine;
  - i) the reasons for the STS shift, including pathologies; and
  - ii) the effectiveness of the hierarchy of controls, including HPDs;
- c) the employer retrains the employee in terms of regulation 4 of the Noise-Induced Hearing Loss Regulations;
- d) the STS is reported to the employer and health and safety committee and/or the health and safety representative; and
- e) the frequency of subsequent periodic audiometric tests must follow an OMP recommendation.

#### 3.8.3 Where a STS of 25dB or more is reached, the OHP must ensure that:

- a) the provisions of 3.8.2 are complied with;
- b) the employee is referred for diagnostic audiology;
- c) where diagnostic audiology confirms a STS of 25dB or more, the OMP must report the STS to the Chief Inspector of the Department of Employment and Labour.

#### 3.8.4 Where screening audiometry identifies a PLH shift of 10% or more from baseline, the OHP must ensure that:

- a) the employee is referred to the OMP for further case management;
- b) the employee is referred for diagnostic audiology on the recommendation of the OMP;

#### 3.8.5 Where diagnostic audiology confirms a PLH shift of 10% or more from baseline, with a NIHL pattern:

- a) the OHP must report the case to:
  - i) the employer; and

- ii) the Chief Inspector of the Department of Employment and Labour;
- b) the employer must report the case to the Compensation Commissioner;
- c) the employer must conduct an investigation to determine;
  - i) the reasons for the PLH shift, including pathologies; and
  - ii) the effectiveness of the hierarchy of controls, including HPDs;
- d) the frequency of subsequent periodic audiometric tests must follow an OMP recommendation.

3.8.6 As referred in SANS 10083, the date of the diagnostic audiometric test confirming a shift in PLH from baseline that exceeds 10%, must be regarded as the date of diagnosis of compensable NIHL.

3.8.7 The employer must keep a record of the following:

- a) all audiometric tests conducted;
- b) all documents relating to reliability and validity criteria; and
- c) investigation into STS and PLH shifts.

3.8.8 The employer must ensure that:

- a) an employee is provided with a copy of baseline audiometric test and exit audiometric test upon termination of employment; and
- b) where reasonably practicable and relevant, a new employee provides a copy of their baseline audiometric test.