***SECTION 4*** *Operational Procedures and Guidelines*

NOISE AND HEARING CONVERSATION PROCEDURE

PURPOSE

***PROCEDURE***

To provide guidance and information to enable the control of noise exposure to prevent occupational noise induced hearing loss.

GENERAL REQUIREMENTS

Noise exposure shall be adequately controlled to ensure that people are not exposed to noise on site or arising from site operations which exceeds an exposure limit of:

 an 8 hour equivalent continuous sound pressure level of 85 dB(A)

 82dB(A) for 12 hours;

 a peak sound pressure level of 120 dB(lin).

Refer to AS 2659 for further definition of sound pressure level measurement.

### ROUTINE OPERATIONS

The Operational Manager and Health and Safety Manager (or equivalent) ensures noise exposure levels have been measured in all areas under relevant operating conditions where exposure from routine operations could foreseeably exceed:

 an 8 hour equivalent continuous sound pressure level of 85 dB(A), or 82dB(A) for 12 hours;

 a peak sound pressure level of 120 dB(lin).

Where assessment confirms that noise exposures do, or are likely to periodically exceed these limits, the organisation shall ensure;

 a documented noise control plan is prepared and implemented. This procedure provides information on potential noise control methods

 hearing protection signs conforming to standards are displayed at suitable locations to warn people entering the area that use of hearing protection is required;

 suitable hearing protection is available to, and used by all people entering the area;

 requirements for use of hearing protection, and the types of hearing protection required, are adequately specified in operating instructions and training materials.

### NON-ROUTINE / AD-HOC OPERATIONS

Operational and team leaders ensure people are provided with, and use suitable hearing protection at all times while performing activities where noise exposure cannot practicably be controlled to below the above limits by other means). eg. grinding, hammering, operating noisy machinery, etc.

NEW OR MODIFIED EQUIPMENT

### DESIGN STANDARD

Operational or maintenance mangers ensure the design standard of 82 dB(A) shall be applied to all new plant and

equipment, including changes to existing equipment in the form of modifications, unless otherwise determined by specialist advice or by the HS Manager

Where technology does not exist, is not reasonable or practical, or is prohibitively expensive to achieve an unprotected exposure less than 82 dB(A):

 the design will facilitate application of the hierarchy of controls e.g. isolation, with the use of personal protective equipment (PPE) as a last resort;

 steps taken to achieve the lowest practicable exposure levels shall be documented and approval obtained from Operational Manager, HS Manager, or equivalent.

### MEASUREMENT OF NOISE LEVELS

Following the introduction of new or modified equipment which is likely to affect noise exposure, the HS Manager, or equivalent.

Mr arranges for measurement of the sound pressure levels in the area, under all relevant operating conditions The HS Manager, or equivalent. coordinates investigation and development of

corrective actions to address any results above the design levels.

If foreseeable exposure levels cannot practicably be controlled to below the above limits, the HS Manager, or equivalent:

 coordinates preparation of a Noise Control Plan

 arranges for installation of hearing protection signs, as described above;

 ensures requirements to wear hearing protection, and the type of protection required are adequately specified in operating instructions and training materials.

AUDIOMETRIC MONITORING

The Organisation shall, in consultation with a suitable occupational health service provider arrange for pre-employment and periodic audiometric screening for employees and relevant contractors who are / will be required to wear hearing protection to control noise exposure.

The occupational health service provider provides details of any results which indicate noise induced hearing loss, excluding confidential medical information, to the HS Manager, or equivalent.

NOISE CONTROL OPTIONS

The feasibility of engineering controls is assessed as the preferred control option. Engineering controls may include:

 elimination to replace the equipment by a quieter operation;

 improved maintenance e.g. replace worn parts, lubrication, repair air leaks, balance rotating parts;

 relocation of noise sources to where they have the minimum impact;

 installation of noise barriers, enclosures, vibration isolation and attenuation devices, lag surfaces, fit mufflers or silencers, stiffening vibrating surfaces;

 modification of the process by reducing free fall, avoiding metal to metal impact;

 using conveyor belts rather than rollers;

 having a programme to switch off equipment which is not required;

 matching air supply pressure to air needs.

If engineering controls sufficient to reduce the noise exposure of employees to below the exposure limit are not practicable, administrative controls are considered. Administrative controls may include:

 organising work schedules to minimise the number of exposed employees;

 evening out work load and avoid busy times when machines are operating for longer hours;

 keeping employees out of noisy areas if their job does not require them to be there;

 increasing the separation between employees and the noise source;

 rotating jobs to remove employees from noise affected tasks or areas.

Where engineering and administrative controls do not reduce the noise exposure of employees to below the company standard,

a program for the provision, use and maintenance of hearing protection is established. Factors which are considered when selecting PPE include:

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 the comfort and user acceptance, e.g. weight, clamping force, ear cup fit, etc.;

 the required attenuation. The attenuation of the PPE must be sufficient to provide at ear sound levels of less than 82 dB(A) and preferably 80 dB(A);

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 the frequency distribution of the noise source. The attenuation of the PPE is matched, as far as practicable, to the octave band frequency distribution of the noise source.

The selection technique is based on either:

 octave band attenuation;

 SLC80 attenuation;

 another accredited method.

RECORD KEEPING

Records of audiometric measurement and sound level measurements shall be retained for at least 20 years after the worker has ceased working with the organisation.

TRAINING REQUIREMENTS

The organisation shall ensure employees who are required to wear hearing protection to perform normal duties complete relevant training during induction and at periodically as required.

### RECORDS OF TRAINING

The organisation shall maintain records of training and make these available during inspections and audits.

REFERENCES

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### WATER NEW ZEALAND PROCEDURES & GUIDELINES:

#### Health and Safety Procedures:

 Health and Safety Management of Change

***PROCEDURE***

 Job Safety Analysis

 Health and Safety in Design

 Health and Safety Training Program

### LEGISLATION, REGULATION AND STANDARDS

 Health and Safety at Work Act 2015

 Health and Safety in Employment Regulations 1995

 AS 2659 Use of Sound measuring equipment

 AS 1269 Acoustics Hearing Conservation

 AS 1270 Acoustics Hearing Protectors.