

Noise audit – guide

Approved: 29 January 2016

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Introduction

This document was reformatted in November 2015. At this time no material changes were made to the content of the guide, which was originally published in September 2006 under the title *Noise HI Audit Guideline*.

Note: The Safety Regulation System (SRS) has replaced the AXTAT system and all reporting is done online through SRS.

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1 Noise Control Policy

Noise Control Policy

Noise Control Policy		
Point	Standard	Guideline
1.1	There is a written Policy Statement which sets out the Noise Control Policy of the organisation.	Intent: To verify the existence of a policy statement. Personnel: N/A. Method: Policy Statement. A single copy displayed in several prominent positions will be sufficient to confirm compliance with this standard.
1.2	The Noise Control Policy Statement is signed by the responsible person.	Intent: To verify demonstrable commitment on the part of the senior management of the organisation to major noise control objectives. Personnel: N/A. Method: Policy statement. Sight the policy statement for an executive signature.
1.3	The Noise Control Policy Statement is dated with the date of issue.	Intent: To verify that the noise policy statement is current and that proper control of documentation is in place to ensure that changes in policy are communicated throughout the organisation. Personnel: N/A. Method: Policy statement. Check that the current version is on display.
1.4	The Noise Control Policy Statement states a date by which it must be reviewed.	Intent: To verify that the noise policy statement is held under regular review to enable continuous improvement to take place and ensure its relevance in relation to the current state of the organisation. Personnel: N/A. Method: Policy statement. Check that the current version is on display.

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1.5	The Noise Control Policy Statement is prominently displayed at numerous locations throughout the site.	Intent: To verify that there is the opportunity for the noise control policy to be regularly viewed by a representative section of employees in the organisation. Personnel: N/A. Method: Policy statement. The statement should be displayed in prominent positions in sufficient copies so each employee can view at once per day.
1.6	The Noise Control Policy sets out specific noise exposure goals for employees.	Intent: To verify that the statement contains relevant noise exposure goals. Personnel: N/A. Method: Policy Statement. The document should recognise that the normalised daily noise exposure value (LAeq,8h of 85 dB(A)) is adjusted (if appropriate) for extended shifts as per Table 2 of AS1269.1:2005 - Occupational noise management Part 1: Measurement and assessment of noise immission and exposure. Refer to MSIR r 7.3(b).
1.7	The Noise Control Policy declares management's commitment for selection and purchase of quiet equipment.	Intent: To verify that the statement clearly identifies the commitment of senior management to have 'buy-quiet' procedures in place. This process will consequently avoid the costly need for adding noise controls at a later date. Personnel: N/A. Method: Policy statement. Ensure the document commits the organisation to progressive replacement of the existing noisy plant with quieter plant at a rate which is practicable to this organisation.
1.8	The Noise Control Policy declares management's commitment for noise controls in temporary work areas.	Intent: To verify that the statement contains the commitment of senior management to undertake noise control measures in temporary work areas. Personnel: N/A. Method: Policy statement. Ensure the document has a relevant reference to this effect.

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1.9	The Noise Control Policy declares management's commitment for undertaking audiometric tests.	Intent: To verify that the statement contains the commitment of senior management to provide their employees with regular audiometric examinations for the purpose of the WorkCover Authority legislation and the health surveillance scheme requirements. Personnel: N/A. Method: Policy statement. Sight the document for a relevant reference to this effect.
1.10	The Noise Control Policy declares management's commitment to provide the resources needed to achieve the stated noise goals.	Intent: To verify the strong commitment of senior management to the achievement of the standards outlined in the noise control policy. This process should ensure the implementation of the most cost-effective noise control program leading to elimination of noise hazards. Personnel: N/A. Method: Policy statement. Sight the document for the management's commitment to allocate funding for the noise control program.
1.11	The Noise Control Policy contains general statements of the roles and responsibility of the organisation employee and contractors in implementing the policy.	Intent: To verify that all people employed by the organisation, including contractors, are responsible for successful implementation of the policy. Personnel: N/A. Method: Policy statement. Check if the document outlines these responsibilities including agreements with contractors in terms of responsibilities for noise control and provision of information.
1.12	Employees are provided with an overview of the organisations noise control policy	Intent: To verify that employees are aware of the organisation noise control policy. Personnel: manager, supervisors, training personnel, employees. Method: Confirm this requirement by sighting the organisation documents and seek employee feedback by the use of questionnaires

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2 Noise Report

Noise Report

Noise Report		
Point	Standard	Guideline
2.1	There is a current noise report.	Intent: To verify the existence of a noise report reflecting the current noise climate within a mine as required by Reg 7.8 or 7.9. Personnel: Manager, occupational health and safety personnel. Method: Noise report. Review the noise report to ensure its validity.
2.2	Contractors are covered by a current noise report.	Intent: To verify coverage of contractors by a noise report as required by Section 9 of the Act. Personnel: Manager, contract manager, occupational health and safety personnel. Method: Noise report. Ensure contractors are either included on the organisation's report or covered by a separate report. Timeframe for preparation of a noise report as per Reg. 7.8 or 7.9.
2.3	The State Mining Engineer has been notified of the report.	Intent: To verify that the state mining engineer has been notified of the report completion as required by Reg. 7.11(1)(b). Personnel: Manager, occupational health and safety personnel. Method: Noise report. Compare the departmental records with those available on site. Check compliance of the notification with the format shown in the Guidelines for Noise control in mines-Figure A6.1.
2.4	A copy of the notification form is included in the original report.	Intent: To verify compliance of the noise report with the approved form issued for the purpose of Reg. 7.10(1). Personnel: Manager, occupational health and safety personnel. Method: Noise report. Check if a copy of the same notification form as the one submitted to the State Mining Engineer is included in the report.

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2.5	A summary of noise control work undertaken previously is in the report.	Intent: To verify compliance of the noise report with the approved form issued for the purpose of Reg. 7.10(1). Personnel: Manager, occupational health and safety personnel. Method: Noise report. Examine the report for engineering noise controls and noise management measures which have been undertaken by this organisation. Verify these measures by observations.
2.6	Noise measurement data is in the report.	Intent: To verify compliance of the noise report with the approved form issued for the purpose of Reg. 7.10(1). Personnel: Manager, occupational health and safety personnel. Method: Noise report. Examine the noise management data for compliance with results tables shown in the Guideline for Noise control in mines-Figures A6.2-5.
2.7	Strategies to deal with noise sources by means of engineering noise control are given in the report	Intent: To verify compliance of the noise report with the approved form issued for the purpose of Reg. 7.10(1). Personnel: Manager, occupational health and safety personnel. Method: Noise report. Examine the report's content with regard to recommendations on the strategies for engineering noise control. Make a note of recommendations (if any) for the purchase of a new plant, or modification to the existing plant in terms of engineering treatment of the noise source or the noise transmission path. The note will provide a useful reference when assessing compliance with standards covered by audit element 3 and 4.

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2.8	Recommendations for reduction of exposure time are in the report.	Intent: To verify compliance of the noise report with the approved form issued for the purpose of Reg. 7.10(1). Personnel: Manager, supervisors, occupational health and safety personnel. Method: Noise report. Examine the report for recommendations on reduction of employee exposure time (administrative noise control measures). These recommendations may include job rotation, job redesign or rosters which allow fewer employees to be exposed to noisy operations. Note progress with implementation of these recommendations while reviewing a noise control plan covered by audit element 3.
2.9	Recommendations for selection of personal hearing protectors are in the report.	Intent: To verify compliance of the noise report with the approved form issued for the purpose of Reg. 7.10(1). Personnel: Manager, occupational health and safety personnel. Method: Noise report. Examine methods used in the report, for selection of personal hearing protectors. Ensure that the attenuation of the personal hearing protectors is as such that L(eff)Aeq,8h is less than L(crit)Aeq,8h. Note make and model of the selected protectors for audit on element 6.
2.10	Noise report is signed and dated by a noise officer.	Intent: To verify compliance of the noise report with the approved form issued for the purpose of Reg. 7.10(2). Personnel: Manager, occupational health and safety personnel. Method: Noise report. Sight the report for a noise officer's signature and date. Check validity of the officer's approval.

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2.11	Instrument calibration certificates are appended to the report.	Intent: To verify compliance of the noise report with the approved form issued for the purpose of Reg. 7.10(3). Personnel: Manager, occupational health and safety personnel. Method: Noise report. Check if a calibration certificate is attached to the report. Check if the instruments used for collecting noise data had a valid certification in terms of a timeframe and accreditation of laboratories. For further details see approved procedures contained in the guidelines for noise control in mines.
2.12	Floor plan contours are appended to the report.	Intent: To verify compliance of the noise report with the approved form issued for the purpose of Reg. 7.10(1). Personnel: Manager, occupational health and safety personnel. Method: Noise report. Check if relevant floor plans showing noise contours are attached to the report.
2.13	Noise report is readily available to employees.	Intent: To verify compliance with Reg. 7.11(1)(c). Personnel: Manager, supervisors, occupational health and safety personnel. Method: Noise report(s). Verify if at least one set of the last 2 reports (if any) is readily accessible to employees on site.
2.14	The contents of the noise report have been communicated to employees.	Intent: To verify compliance with Reg. 7.11(1)(a). Personnel: Manager, supervisors, occupational health and safety personnel, training personnel, employees. Method: Check if the information contained in the report has been properly disseminated. The results of noise reports should be made available to employees by any line of communication set-up on a minesite. For example, in-house training sessions, publishing extracts from reports in newsletters, circulars etc. Seek employee feedback on this subject through the use of questionnaires.

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3 Noise Control Plan

Noise Control Plan

Point	ntrol Plan Standard	Guideline
Point	Standard	Guideline
3.1	There is a Noise Control Plan listing engineering and administrative noise control measures identified in the report.	Intent: To verify compliance with Reg. 7.11(3). Personnel: Manager, supervisors, occupational health and safety personnel, employee representatives. Method: Noise control plan. Check if a written noise control plan has been prepared.
3.2	The Noise Control Plan has been implemented.	Intent: To verify compliance with Reg. 7.11(3). Personnel: Manager, supervisors, occupational health and safety representatives, finance, accounting and purchasing personnel. Method: Noise control plan. Check if the plan has been implemented within 6 months from completion of a noise report.
3.3	The plan identifies the proposed noise control measures based on appropriate ranking of noise problems.	Intent: To verify compliance with Reg. 7.11(3). Personnel: Manager, supervisors, health and safety personnel, employee representatives. Method: Noise control plan. Check if the proposed noise control measures (both engineering and administrative) reflect the outcome of a ranking process which gives the highest priority to high noise risk areas.
3.4	The plan specifies dates when the documented actions are to be completed.	Intent: To verify compliance with Reg. 7.11(3). Personnel: Managers, supervisors, purchasing personnel. Method: Noise control plan. Check progress with completion of various tasks against the estimated timetable shown in the report.

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3.5	The plan shows noise reduction resulted from implementation of the documented actions.	Intent: To verify compliance with Reg. 7.11(3). Personnel: Manager, occupational health and safety personnel. Method: Noise control plan. Check if the expected reduction in noise and exposure levels has been noted against any of the completed tasks.
3.6	The plan includes procedures for its review and update.	Intent: To verify compliance with Reg. 7.11(3). Personnel: Manager, supervisors, health and safety representatives, employee representatives. Method: Noise control plan. Check if a procedure for review and update is in place. Note the last date of review as this process should be undertaken quarterly.
3.7	Regular progress reports are provided to the manager.	Intent: To verify compliance with Reg. 7.11(3). Personnel: Manager. Method: Noise control plan. Check if the manager is in receipt of regular progress reports. This feedback enables the manager to check progress against the estimated timetable, budget, and to authorise any necessary adjustments to the plan.

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4 Buy Quiet Process

Buy Quiet Process

Buy Quiet Process		
Point	Standard	Guideline
4.1	There is a purchase specification which specifies maximum acceptable noise emission values.	Intent: To verify compliance with Reg. 7.4 Personnel: Manager, production, plant and maintenance engineers, purchasing personnel. Method: Purchase specification. Check the existence of a purchase specification(s) and ensure that the maximum acceptable noise levels are specified for potentially noisy plant. Refer to Appendix B, flowchart No. 1 in the guidelines for calculation of the appropriate limits.
4.2	There is a noise test form used for obtaining information on noise data from suppliers.	Intent: To verify that an appropriate procedure is in place to meet the requirements of Reg. 7.4 and Section 14 of the Act. Personnel: Production, plant and maintenance engineers, purchasing personnel. Method: Noise data. Ensure a form such as the one shown in Appendix B of the guidelines or similar, is used for obtaining noise data from manufacturers/suppliers. Verify this process by obtaining records of any plant purchase.
4.3	Noise is taken into account in the selection of any new plant.	Intent: To verify that the purchase procedure meets the requirements of Reg. 7.4 and Section 14 of the Act. Personnel: Manager, production, plant and maintenance engineers, purchasing personnel. Method: Verify that those who approve any purchase request take noise into account in the final selection of the item to be purchased. Note: flowchart No. 2 (if applicable) from the guidelines should be used to estimate noise levels after delivery or installation of a new plant.

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4.4 Noise emissions of any noisy Intent: plant are checked upon its delivery / installation on site. Personnel: and safety personnel. Method:

To verify that the purchase procedure meets the requirements of Reg. 7.4 and Section 14 of the Act.

Manager, production, plant and maintenance engineers, purchasing personnel, occupational health

Check if the following procedure is in place:

- Upon delivery, the appropriate personnel or consultant is engaged to check the noise emission of a new plant.
- Before a final payment is approved, the purchasing personnel verify the acceptability of noise emission

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5 Noise Control Measures

Noise Control Measures

Noise Control Measures		
Point	Standard	Guideline
5.1	There is a system for inspection and maintenance of noise control equipment.	Intent: To ensure that engineering noise control measures are monitored and maintained. Personnel: Manager, maintenance personnel. Method: Review inspection and maintenance records of noise control attachments such as; silencers, barriers, absorptive materials, vibration mountings, impact absorbers, gaskets, seals, etc. Check if paperwork for this work is formalised.
5.2	There is a procedure for reporting faults of noise control equipment.	Intent: To verify that a procedure is in place to record defects of noise control attachments. Personnel: Manager, maintenance personnel, plant operators. Method: Verify the existence of a system to accommodate this requirement. Seek feedback on the system operation from individual employees through the use of questionnaires.
5.3	There is a system for the repair of reported equipment faults.	Intent: To verify that all reported faults are being attended to. Personnel: Manager, maintenance personnel. Method: Check, at random, records of repair work undertaken to rectify reported work. Carry out a visual inspection of noise control attachments to check if there are any signs of poor maintenance/repair work. These likely to include; poor sealing of enclosure doors, degradation of acoustic linings, clogging of silencer lining perforations, missing silencers, vibration isolations which have 'bottomed' and degradation of impactabsorbing surfaces.

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5.4 There is a system to identify the need for control of employee noise exposure in temporary work areas.

Intent:

To verify that noise is controlled in temporary work areas.

Personnel:

Manager, supervisors, contractors.

Method:

Check if any temporary work site is suitably located or screened to ensure that noise levels generated do not adversely affect employee's hearing. If necessary, entry to such sites shall be restricted to personnel wearing selected hearing protectors. Check location of warning signs in relation of 85 dB (A) contour.

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6 Personal Hearing Protectors

Personal Hearing Protectors

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Point	Standard	Guideline
6.1	There is a system for purchase of hearing protectors with recommended attenuation levels.	Intent: To verify the existence of a system for purchase of hearing protectors. Personnel: Manager, occupational health and safety personnel, purchasing personnel. Method: Refer to a note on audit point 2.9 regarding selection of hearing protectors outlined in the noise report. Check, if hearing protectors ex warehouse/stores provide attenuation valves identical to those selected in the noise report. Ensure that L(eff)Aeq values for all protectors do not fall below 70 dB (A) which may lead to problems with overprotection. Check if purchases of any new protectors are verified by the occupational health personnel.
6.2	Employees are issued with hearing protectors having recommended attenuation levels.	Intent: To verify that employees are issued with hearing protectors appropriate to their noise exposure. Refer to Reg. 7.6(a). Personnel: Manager, supervisors, warehouse/stores personnel, occupational health and safety personnel. Method: Check distribution methods of hearing protectors to individual employees. Ensure employees are provided with protectors having attenuation valves capable of reducing their noise exposure below a criterion value of L(crit)Aeq,8h.
6.3	There is a system for regular checks of wearing rates and practices	Intent: To establish if frequent checks are carried out to ensure that hearing protectors are worn correctly and consistently. Personnel: Manager, supervisors, occupational health and safety personnel. Method: Verify if monthly checks are undertaken to ensure protectors are worn full time whenever the wearer is in the presence of hazardous noise. The checks should also include inspection of protectors for any damage and cleanliness. Seek employee feedback on this subject through the use of questionnaires.

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6.4	Facilities are readily available for the cleaning of reusable protectors.	Intent: To verify the existence of cleaning stations for non-disposable hearing protectors. Personnel: Manager, supervisors, occupational health and safety personnel. Method: Check if a centralised cleaning station or separate stations equipped with cleaning tissues, detergent, water etc. are established for this purpose. Seek employee feedback on access and use of the station through questionnaires.
6.5	There is a system for prompt replacement of worn or damaged protectors.	Intent: To verify the existence of a system for replacement of hearing protectors. Personnel: Managers, supervisors, warehouse/stores personnel, occupational health and safety personnel. Method: Establish if the replacement procedure used by the organisation provides for issuing of protectors with consistent attenuation valves. Seek employee feedback on this subject through the use of questionnaires.

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7 Safety Warning Signs

Safety Warning Signs

Safety Warning Signs		
Point	Standard	Guideline
7.1	Noise hazard areas where hearing protection must be worn are sign posted.	Intent: To verify that noise hazard areas are marked. Refer to Reg. 7.6(b). Personnel: Manager, maintenance personnel, occupational health and safety personnel. Method: Refer to Audit Point 2.12 for location of the safety warning signs. Check location compliance with noise contours specified. Check if the signs displayed conform to AS1319 requirements.
7.2	Safety warning signs for hearing protection are kept clean.	Intent: To verify that the message that the sign carries is legible. Personnel: Maintenance personnel, occupational health and safety personnel. Method: Check if the signs on display are properly maintained in good condition, kept clean and well illuminated, if required. Check on a method adopted for marking of temporary noise areas.
7.3	Where sign posting is not practicable, alternative arrangements are made to recognise circumstances in which personal hearing protectors are required.	Intent: To ensure that alternative arrangements are adopted to allow employees recognise circumstances in which personnel hearing protectors are required. Personnel: Manager, maintenance personnel, occupational health and safety personnel. Method: Check if any of the following methods is adopted: - Attaching prominent warning signs (notices) to tools and equipment indicating that personal hearing protectors must be worn when operating them Providing written and verbal instructions on how to recognise circumstances in which personal hearing protectors are needed.

8 Information Instruction and Training

Information Instruction and Training

Point	Standard	Guideline
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8.1	The site induction includes a section on the site noise hazards and the wearing of hearing protection	Intent: To verify that there is an induction and training program within the organisation, aiming to minimise noise-induced hearing loss. Refer Reg. 7.7. Personnel: Manager, training personnel. Method: Examine organisation induction and training records to confirm the process occurs. Ensure the same requirement is met by contractors.
8.2	Employees are provided with information on damage to their hearing resulting from exposure to excessive noise.	Intent: To verify that employees are given information on the effects of noise on their hearing. Refer Reg. 7.7 Personnel: Managers, line managers, training personnel, employees. Method: Sight written documents to confirm this requirement.
8.3	Employees are given instruction and training on the use, fitting and care of personal hearing protectors.	Intent: To verify that employees are instructed and trained on the use and maintenance of hearing protectors. Refer to Reg. 7.7 Personnel: Managers, supervisors, training personnel, employees. Method: Sight written documents to confirm this requirement.
8.4	Employees are provided with information on noise control measures which are in use or are planned.	Intent: To verify that employees are provided with information on implementation of a noise control plan. Personnel: Manager, supervisors, employees. Method: Confirm this requirement by sighting the organisation documents. This information can be disseminated through; noticeboards, posters, handouts etc. Seek employee feedback by the use of questionnaires.
8.5	Instruction and training obtained by employees is recorded.	Intent: To verify that the organisation keeps records of employee training. Personnel: Manager, manager human resources. Method: Randomly check individual employee training records to confirm this requirement.

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9 Noise Dosimetry

Noise Dosimetry

Noise Dosimetry		
Point	Standard	Guideline
9.1	There is a site noise dosimetry program implemented aiming to assess employee exposure to noise.	Intent: To verify compliance with compliance with the State Mining Engineer recommendation under the provision of MSI Act Section 9. Personnel: Manager, supervisors, occupational health and safety
		personnel, employee representatives.
		Method:
		Verify if the employee noise exposure is being assessed. Check if a written program to meet this requirement is in place.
9.2	The Resources Safety recommended minimum sampling frequency is included in the sampling program.	Intent: To verify that each employee exposed to noise above the action level to be tested for noise exposure at least every five years.
		Personnel:
		Manager, supervisors, occupational health and safety personnel, employee representatives.
		Method:
		Check if the frequency of employee testing corresponds to the recommended intervals referred to in the RSD Procedure for personal noise exposure recordings.
9.3	Employee overexposure results are assessed and corrective action undertaken	Intent: To ensure that employees with recorded noise overexposure are protected from occupational noise induced hearing loss (ONIHL) by engineering, administrative or both noise control methods. Personnel: Manager, supervisors, occupational health and safety
		personnel, employee representatives.
		Method: Verify the company records in relation to any corrective
		action which might have been undertaken recently.

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9.4	Each employee sampled is provided with the result of their noise exposure assessment.	Intent: To verify that employees are provided with a feedback on their noise exposure level for both educational and noise control purposes.
		Personnel:
		manager, supervisors, occupational health and safety personnel, employee representatives
		Method:
		Verify with those employees who have been sampled that the standard is met.
9.5	The sampling results are submitted to Resources Safety.	Intent: To verify that the companies submit their records.
		Personnel:
		Manager, supervisors, occupational health and safety personnel, employee representatives.
		Method:
		Check if the company records correspond to those available at Resources Safety.

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