

## Compliance priority report

### Audiometric testing – METEX surface/underground

January 2024 to June 2024



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# Executive summary

A crucial part of the NSW Resources Regulator’s incident prevention strategy for mines and petroleum sites involves:

- Targeted assessments and planned inspection programs – focusing on assessing an operation’s control of critical risks by evaluating the effectiveness of control measures in the mine’s safety management system.
- Priority programs – proactively assessing a topic that is an emerging risk throughout the industry, which is determined primarily from incident data as well as evolving industry trends. Although these topics may also be contained within the Regulator’s planned inspection programs, the aim of compliance priority programs is to gather further information and knowledge about how the industry is managing and controlling a specific issue.

The compliance priority ‘audiometric testing’ targeted metalliferous surface and underground mines during the first six months of 2024.

From 1 January 2024, persons conducting a business or undertaking (PCBUs) are required to provide audiometric testing to workers who are required to frequently wear hearing protection at work.

Consecutive exemptions were granted under the Work Health and Safety Regulations 2017 requiring PCBUs to conduct audiometric testing in accordance with clause 58.

The last exemption (No. 021/21) commenced on 1 January and was in effect until 31 December 2023. From 1 January 2024, the exemption ended.

To help prevent hearing loss in the workplace, employers must provide hearing tests (audiometric tests) to workers who frequently use hearing protection to control noise that exceeds the exposure standard:

1. within 3 months of starting their employment (baseline test) and
2. a follow-up test at least every 2 years.

This report will provide information on assessment findings and recommendations for METEX surface and underground mine operators.

In summary of METEX surface sites (24 quarries, 3 dredging sites and 2 processing sites) and 10 METEX underground mines there were 39 assessments resulting in 7 compliance notices issued to 6 surface sites and 1 underground mine.

The METEX airborne contaminants assessment program was conducted between January 2024 and June 2024.

Explanatory notes on the assessment system are listed in Appendix A.

## Assessment criteria for all assessments

Assessment criteria were identified by the Regulator to review mine operator compliance with the requirements of the regulations.

A tabulation of the assessment criteria for audiometric testing at METEX surface and underground mines is provided in Table 1.

Table 1. Criteria for the planned inspection program audiometric testing at METEX surface and underground mines

Criteria number	Criteria
1	Has the mine identified and assess noise sources at the workplace to determine the risk of hearing loss to workers?
2	Does the mine have a program for pre-employment/baseline audiometric testing program?
3	Does mine conduct 2 yearly follow up audiometric tests for exposed workers?
4	Does the mine conduct personal noise monitoring of workers on a routine basis by a competent person?

## Assessment findings for METEX surface and underground mines

Overall, the assessment findings for METEX surface and underground mines were:

- 29 METEX surface sites were assessed (24 quarries, 3 dredging sites and 2 processing sites)
- 10 METEX underground mines were assessed
- 156 individual findings for the assessed criteria,
- 15 assessment findings with enforcement action recorded,
- 7 compliance notices were issued to 6 surface sites and 1 underground mine

Figure 1 provides a summary assessment of the overall results by criteria.

Figure 1. Summary assessment findings of overall results by criteria for METEX surface and underground mines

01	02	03	04	Grand Total
Has the mine identified and assess noise sources at the workplace to determine the risk of hearing loss to workers?	Does the mine have a program for pre-employment/baseline audiometric testing program?	Does mine conduct 2 yearly follow up audiometric tests for exposed workers?	Does the mine conduct personal noise monitoring of workers on a routine basis by a competent person?	
96%	97%	85%	90%	92%

- Green (=100%)
- Yellow (>= 80% and <100%)
- Orange (>= 65% and <80%)
- Red (<65%)

In summary the overall assessment findings by criteria were assessed in total as 92%.

The lowest assessment finding was 85% (yellow colour category) for criteria 03 – Does mine conduct 2 yearly follow up audiometric tests for exposed workers?

All the other criteria from 01 to 04 were assessed ranging from 90% to 97% (yellow colour category).

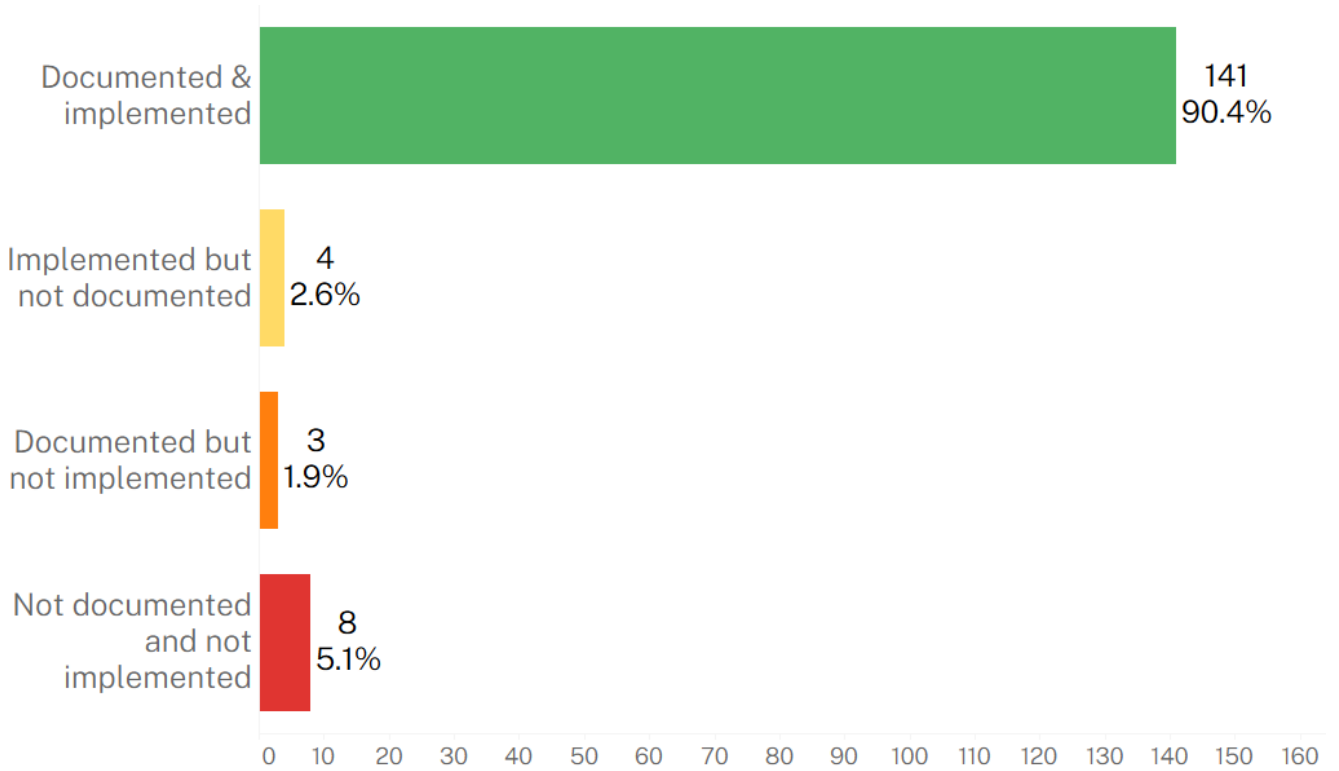
## Assessment overall ratings for METEX surface and underground mines

In summary the overall assessment ratings for surface coal mines were:

- 90% rating for documented and implemented finding
- 2.6% rating for implemented but not documented finding
- 1.9% rating for documented but not implemented finding
- 5% rating for not documented and not implemented finding.

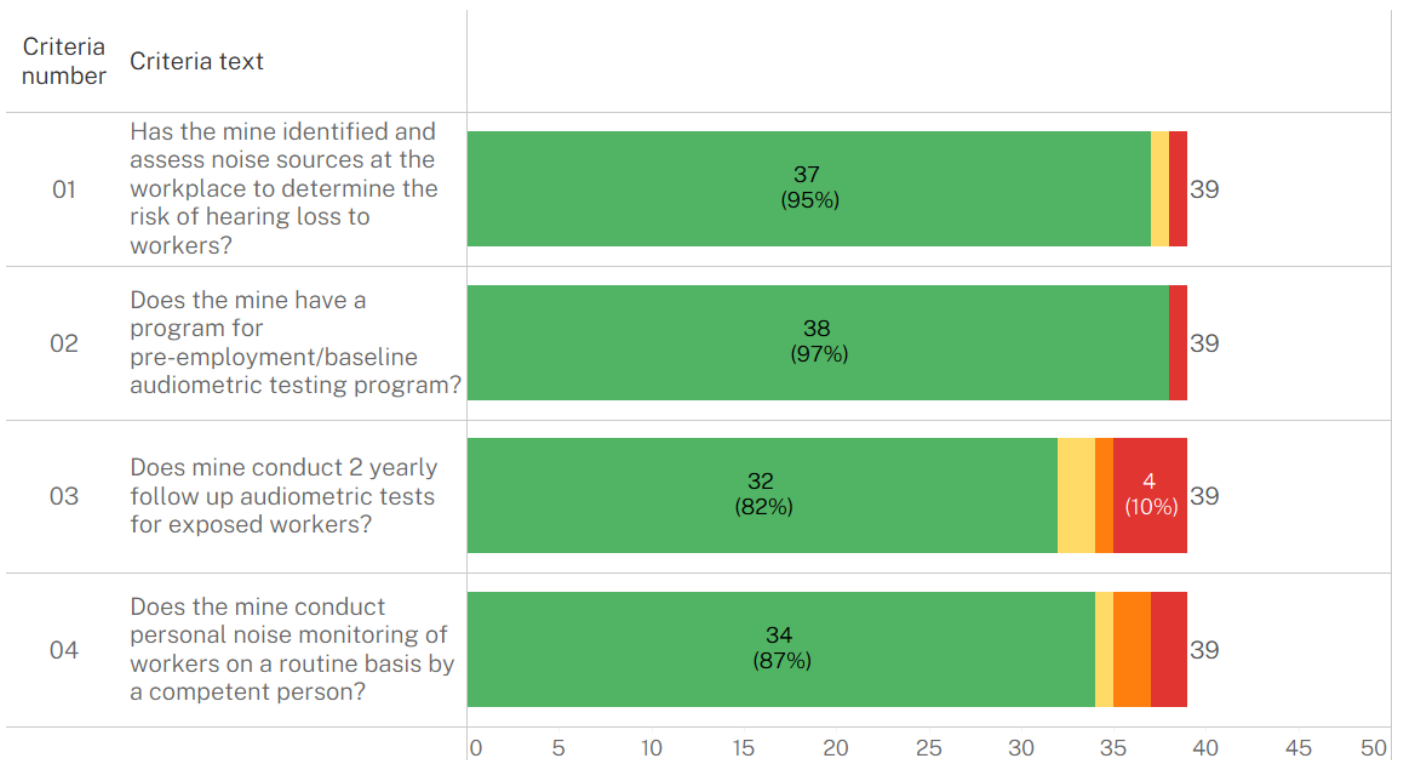
The overall assessment findings ratings for METEX surface and underground mines are shown in Figure 2.

Figure 2. Overall assessment findings ratings for METEX surface and underground mines



The overall assessment ratings by criteria for METEX surface and underground mines are shown in Figure 3.

Figure 3. Overall assessment ratings by criteria for METEX surface and underground mines



## Notices issued to METEX surface and underground mines

In total there were 39 assessments conducted at METEX surface and underground mines.

There were 156 individual assessment findings and of those 15 assessment findings required enforcement action to be taken at the METEX surface and underground mines.

There were 7 compliance notices issued to 6 surface sites and 1 underground mine comprising:

- 2 x section 191 improvement notices
- 5 x section 23 cause for concern notices.

The compliance notices issued for METEX surface and underground mines were reviewed and Table 2 lists the notices issued by type and number.

Table 2: Notices issued for METEX surface and underground mines

Notice type	Total issued	Number of sites
s.191 improvement notice	2	2
s.23 notice of concern	5	5
Total	7	7

## Recommendations for METEX surface and underground mines

The occurrence of hearing loss can be temporary, where hearing may be restored after time away from the noise source. However, with continued exposure to hazardous noise, the ability of the ear to recover diminishes and hearing loss can become permanent. The amount of hearing loss that occurs depends on several factors such as how loud the noise is, the duration of exposure, the frequency, pitch, and the varying susceptibility of individuals.

Hearing loss can also be caused or made worse by a person’s exposure to certain chemicals called ‘ototoxic substances’ (‘Oto’ means ear ‘toxicity’ means poisoning) which includes some solvents, heavy metals and asphyxiants. These substances can be absorbed into the body and cause damage to parts of the inner ear and auditory nerve. Exposure to ‘ototoxins’ can make the ear more sensitive to the harmful effects of noise, which may result in tinnitus (ringing in the ears) and can lead to subsequent hearing loss.

Further information on noise induced hearing loss and ototoxic substances can be found in the Safe Work Australia code of practice Managing noise and preventing hearing loss at work (July 2020).

Based on the findings outlined in this report and with respect to the numbers and types of compliance notices issued during the assessment of audiometric testing it is recommended that the following information should be reviewed by operators of METEX surface and underground mines:



Under clause 58 of the WHS Regulation a PCBU audiometric testing must be provided by a PCBU:

- when a worker is frequently required by the PCBU to wear hearing protection at work as a control measure to protect them from noise-related hearing loss from noise that exceeds the noise exposure standard.

The exposure standard for noise is defined as:

- an 8-hour equivalent continuous noise level of 85 dB(A),  $L_{Aeq,8h}$  85 dB(A), or
- a peak sound level of 140 dB(C),  $L_{C, peak}$  140 dB(C).
  - within 3 months of commencement of employment for new workers (baseline test)
  - in any event, every 2 years (follow-up testing)
  - more frequent testing may be required for workers exposed to high average noise levels during their work shifts (e.g., noise levels greater than 100 dB(A)).

After each hearing test is completed, it is the responsibility of the PCBU to:

- keep confidential records of the baseline and follow-up hearing tests for each worker
- review noise control measures in the workplace if a permanent threshold shift of hearing, or tinnitus is detected for a worker
- take reasonably practicable steps to modify the work environment for workers whose hearing loss interferes with the ability to perform work safely
- provide copies of the worker’s hearing tests when their employment ends.

Information regarding audiology clinics in your local area can be found on the [Audiology Australia website](#).

Many audiometric testing services also provide mobile screening services which can undertake testing at your site.

## Further information

For more information on safety assessment programs, the findings outlined in this report, or other mine safety information, please contact the NSW Resources Regulator.

Contact type	Contact details
Email	<a href="mailto:cau@regional.nsw.gov.au">cau@regional.nsw.gov.au</a>
Incident reporting	To report an incident or injury call 1300 814 609 or log in to the <a href="#">Regulator Portal</a>
Website	<a href="http://www.resourcesregulator.nsw.gov.au">www.resourcesregulator.nsw.gov.au</a>
Address	NSW Resources Regulator 516 High Street Maitland NSW 2320

# Appendix A – Assessment criteria rating

Each assessed criteria is rated from one to 4 based on evidence supporting the expected control supports identified at the mine site.

Evidence supporting expected control supports

Expected control supports	Rating	Evidence supporting rating / comments				
	<table border="1"> <tr> <td>4</td> <td>3</td> </tr> <tr> <td>2</td> <td>1</td> </tr> </table>	4	3	2	1	
4	3					
2	1					

Assessment findings results are calculated based on the total points allocated to the assessed ratings as a percentage of the maximum possible points for each criteria group, and any findings rated as ‘Not applicable’ were excluded from the calculation.

Criteria assessed ratings and points

Assessed as	Rating	Points
Documented & implemented <b>Compliant</b>	4	4
Implemented but not documented <b>Improvement needed</b>	3	2
Documented but not implemented <b>Significant improvement needed</b>	2	1
Not documented and not implemented <b>Non compliant</b>	1	0
Not applicable (N/A)		

Findings results (points) with colours assigned as follows:

- Green (=100%)
- Yellow (>= 80% and <100%)
- Orange (>= 65% and <80%)
- Red (<65%)
- Not applicable