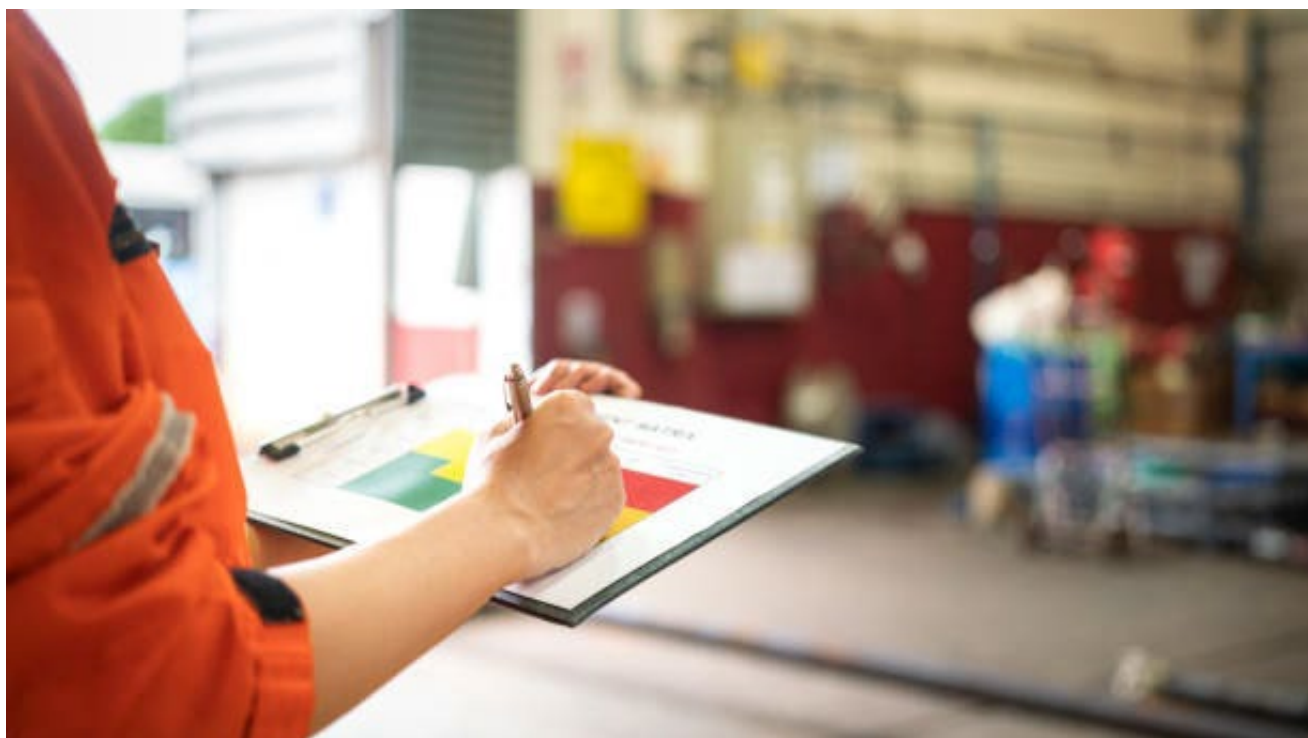


Consolidated report

Health control plan – coal mines

September 2022 to April 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 Regulator has developed a bowtie hazard management framework and standardised assessment checklist for each program plan. Under each program plan, the effectiveness of the safety management system at each mine site is assessed against a standard set of control supports and critical controls.

Exposures to health impairment at coal mine sites (coal mine sites include above surface coal mines, coal processing sites and underground coal mines) and the threats’ critical controls and control supports are identified in the health impairment – injury or illness bowtie.

Health impairment can occur in various coal mining environments and has the potential to cause serious and/or fatal injuries to workers if not controlled effectively.

This report will consolidate assessment findings, and provide analysis and recommendations for operators of coal mine sites.

An inspection assessment program was developed to assess how coal mine sites are prepared to manage risks.

In total there were 51 coal mine sites assessed including:

- 23 open cut coal mines
- 10 coal processing sites
- 18 underground coal mines.

In summary, there were 1,377 individual assessment findings and of those 8 assessment findings related to the management of the health control plan required enforcement action to be taken at a coal mine site.

The assessment program was conducted between September 2022 and April 2024.

In summary, there were 8 compliance notices issued in total comprising of:

- 4 x section 191 improvement notices issued to one underground mine, one open cut coal mine and one coal processing site
- 4 x section 23 cause for concern notices issued to one underground coal mine and 3 open cut coal mines.

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

Assessment criteria for all assessments

Critical controls were identified by the Regulator and assessment criteria were assigned to each potential threat.

A tabulation of the threat, consequence, critical control and control support for the health control plan at coal mine sites is provided in Table 1.

Table 1. Threats, consequence, critical controls and control supports assessed for the review of the health control plan at coal mine sites.

Threat/Consequence		Critical control	Control support
Threat	1. Heat, humidity and cold	PC1.3	Hydration
	3. Physical capacity limitations	PC3.2	Alcohol and other drug free
	4. Mental capacity limitations	PC3.3	Well rested
	3. Physical capacity limitations	PC3.4	Physically capable for work
Consequence	3. Suicide	MC3.2	Mental health support systems

Assessment findings for coal mine sites

Overall, the assessment findings for coal mine sites were:

- 51 coal mine site assessments comprised of:
 - 23 open cut coal mines
 - 10 coal processing sites
 - 18 underground coal mines
- 1,377 individual findings for the assessed criteria
- 8 assessment findings with enforcement action recorded related to the management of health control plan at the coal mine site.

Figure 1 provides a summary assessment of overall results by critical control and coal mine operation type.

Figure 1. Summary assessment of overall results by critical control and coal mine operation type

	Threat				Consequence	Grand Total
	1. Heat, humidity and cold	3. Physical capacity limitations 4. Mental capacity limitations		3. Physical capacity limitations	3. Suicide	
	PC1.3	PC3.2	PC3.3	PC3.4	MC3.2	
	Hydration	Alcohol and other drug free	Well rested	Physically capable for work	Mental health support systems	
Open cut	100%	96%	98%	99%	100%	98%
Processing	96%	100%	99%	100%	100%	98%
Underground	96%	99%	100%	100%	99%	98%
Grand Total	98%	98%	99%	99%	99%	98%

In summary the overall assessment findings by critical control and coal mine operation type were assessed in total as 98%.

The lowest assessment finding at one of the 23 open cut coal mines was 78%. The other 22 open cut coal mines were assessed in the range of 90% and above.

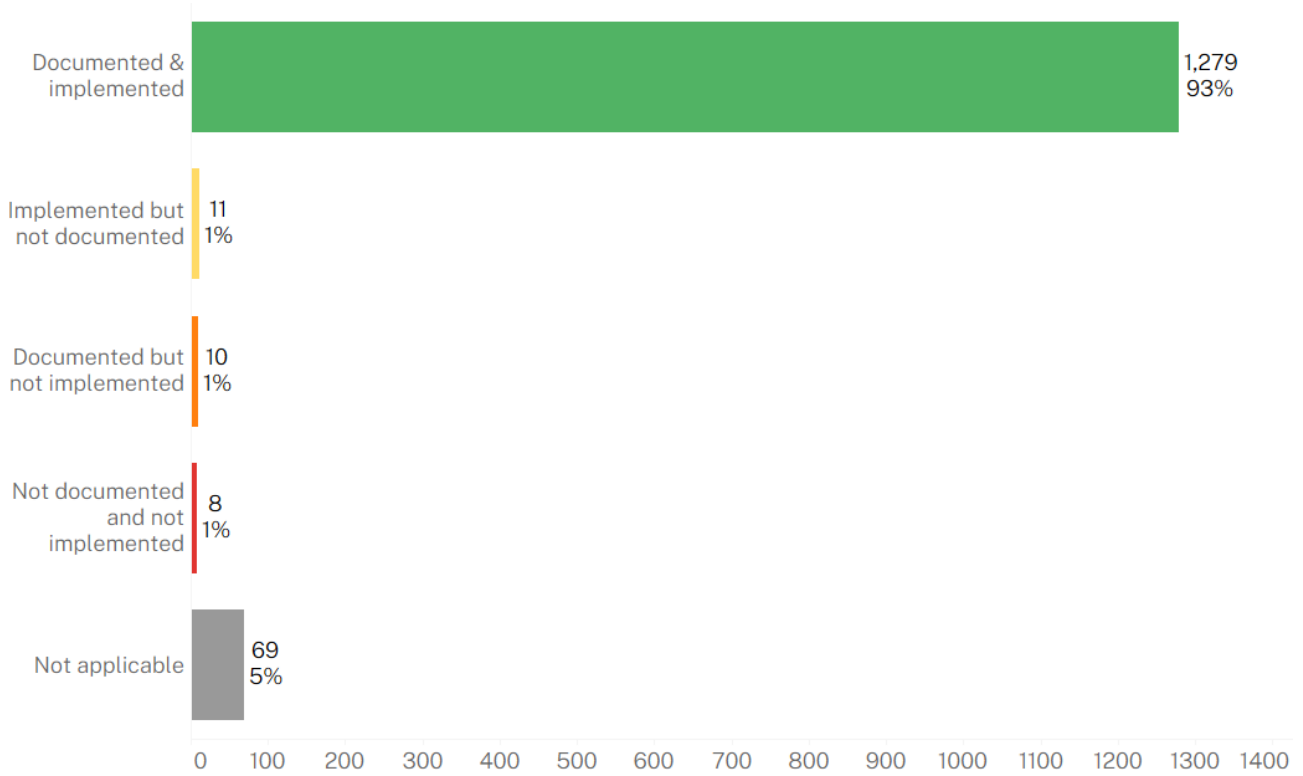
The lowest assessment finding at one of the 10 coal processing sites was 89%. The other 9 coal processing sites were assessed in the range of 96% and above.

The lowest assessment finding at one of the 18 underground coal mines was 91%. The other 18 underground coal mines were assessed in the range of 93% and above.

Assessment overall ratings for coal mine sites

The assessment overall ratings for coal mine sites assessed are in Figure 2.

Figure 2. Overall assessment ratings for coal mine sites

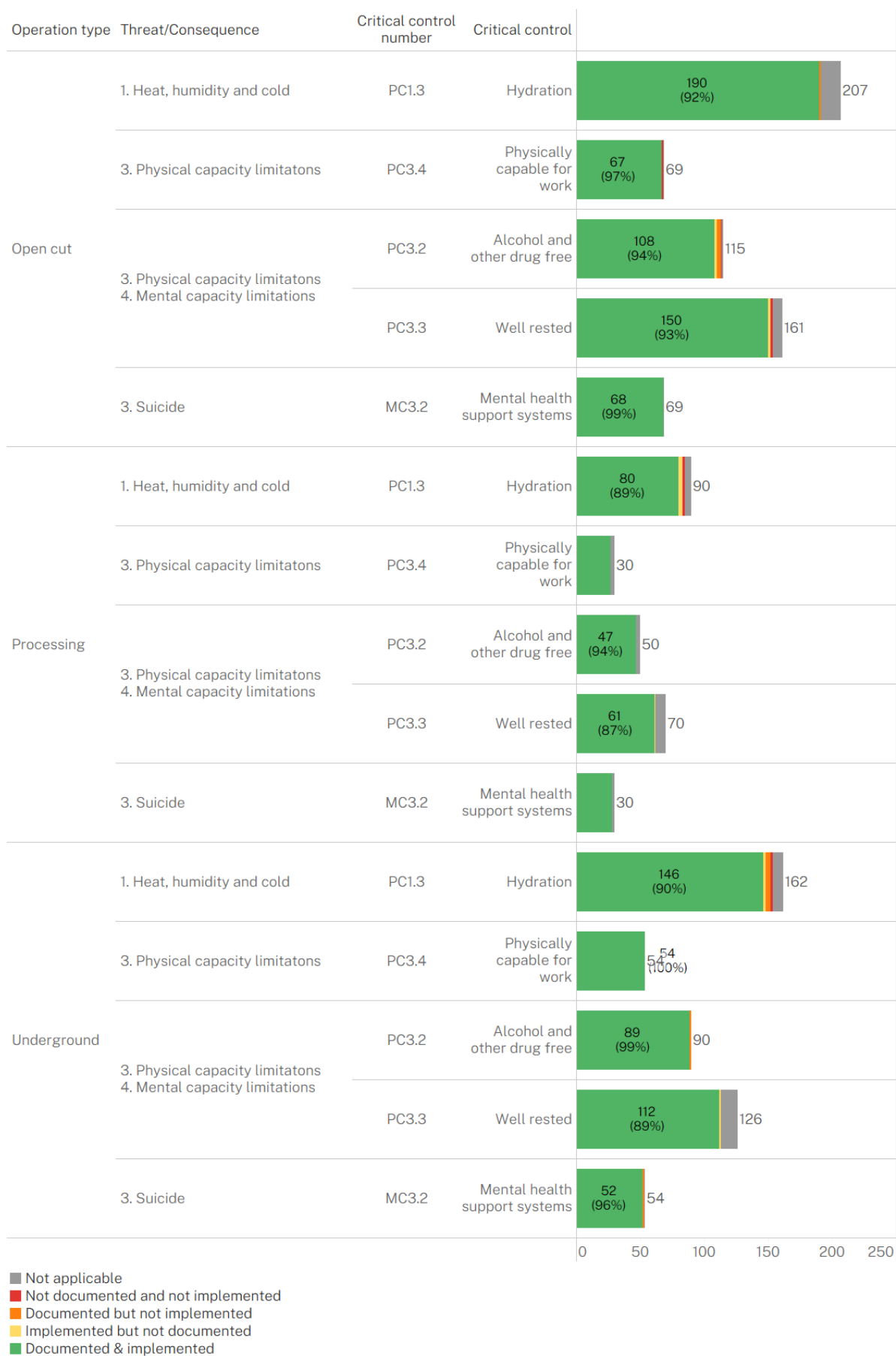


In summary the overall assessment ratings for coal mine sites were:

- 93% rating for documented and implemented finding
- 1% rating for implemented but not documented finding
- 1% rating for documented but not implemented finding
- 1% rating for not documented and not implemented finding

The overall assessment ratings by operation type and critical control are in Figure 3.

Figure 3. Overall assessment ratings by operation type and critical control



Notices issued to coal mine sites

In summary, there were 1,377 individual assessment findings and of those 8 assessment findings required enforcement action to be taken at a coal mine site related to the health control plan.

Other compliance notices were issued but they were not directly related to the health control plan.

In summary, there were 8 compliance notices issued related to the management of the health control plan in total comprising of:

- 4 x section 191 improvement notices issued to one underground mine, one open cut coal mine and one coal processing site
- 4 x section 23 cause for concern notices issued to one underground coal mine and 3 open cut coal mines

The compliance notices issued for coal sites were reviewed and Table 2 lists the notices issued by type and number.

Table 2: Notices issued for coal mine sites

NOTICE TYPE	TOTAL ISSUED	NUMBER OF SITES
s.191 improvement notice	4	3
s.23 notice of concern	4	4
Total	8	8
Note: some mine sites were issued multiple notices		

Recommendations for coal mine sites

Based on the findings outlined in this report and with respect to the numbers and types of compliance notices issued during the assessment of the health control plans at coal mine sites, it is recommended that the following issues should be reviewed by mine operators of coal mine sites.

- Fatigue management including travel durations to and from the coal mine site.
- Coal dust management particularly at coal crushing plant and coal loading operations.
- Worker consultation and training on site health control plan implementation particularly in drug and alcohol management and fatigue management controls at the coal mine site.
- Worker mental health support systems for the management of stress-related illness resulting from injury incidents occurring to the worker or other persons at the coal mine site.
- General workplace hygiene standards – waste storage and removal standards in machine cabins and meal rooms.

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	cau@regional.nsw.gov.au
Incident reporting	To report an incident or injury call 1300 814 609 or log in to the Regulator Portal
Website	www.resourcesregulator.nsw.gov.au
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 Compliant	4	4
Implemented but not documented Improvement needed	3	2
Documented but not implemented Significant improvement needed	2	1
Not documented and not implemented Non compliant	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