

Consolidated report

High risk activities (HRA) field assessment

Mining engineering

November 2021 to January 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. These focus on assessing an operation’s control of critical risks through evaluating the effectiveness of control measures in the mine’s safety management system.
- priority programs - proactively assessing a topic that is an emerging risk across the industry, which is driven 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.

High risk activities (HRA) at mine sites have the significant potential for adverse safety outcomes if not planned and carried out in a systematic and integrated manner. Careful consideration must be given to the risks associated with the activity and the methods available to manage those risks.

This consolidated report provides a summary of findings from field assessments for 11 mining engineering related HRA’s from the 31 categories of HRA’s requiring notification to the Regulator, This program conducted **55** site field assessments at **38** mine sites assessing **11** HRA types.

The field assessment program was conducted between November 2021 and January 2024 at coal mine and metallurgical mine sites including both underground and surface operations.

There were **61** compliance notices in total issued to **28** of the **38** sites during the field assessment program.

Not all of the compliance notices issued during the program were directly related to the HRA topic being assessed at the mine. Some compliance notices were issued for other issues identified at the time of the field assessment.

The types of compliance notices issued during the HRA field assessment program consisted of:

- **31 x** WHS(MPS)A s23 notices of concern
- **28 x** WHSA s191 improvement notices
- **2 x** WHSA s195 prohibition notices.

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

Legislative arrangements for HRAs

The HRA scheme under the Work Health and Safety (Mines and Petroleum Sites) Regulation 2022 (WHS(MPS) Reg 2022) allows the Regulator to review the arrangements for the proposed activity to assess the adequacy of the planning and controls.

However, the scheme does not require the Regulator to approve activities.

The responsibility for ensuring that activities are conducted safely remains with the operator of a mine or petroleum site.

The Regulator receives HRA applications from mine operators which are listed in Schedule 3 of the WHS(MPS) Reg 2022.

Schedule 3 lists 7 parts of mining operation types requiring the mine operator to submit a HRA notification to the Regulator.

The schedule 3 parts include in total 31 HRA types:

Part 1 – All mines and petroleum sites = 2 HRA types
Part 2 – Underground mines = 3 HRA types
Part 3 – Underground coal mines = 17 HRA types
Part 4 – Coal mines other underground coal mines = 1 HRA type
Part 5 – All coal mines = 3 HRA types
Part 6 – Petroleum sites = 4 HRA types
Part 7 – Certain mines at which tailings storage facilities are located = 1 HRA type

An operator of a mine or petroleum site is prohibited from undertaking HRA’s unless they have notified the Regulator of the proposed HRA and the waiting period for that activity has expired (unless the Regulator has waived or reduced the waiting period).

When undertaking the high HRA, the operator must carry out the activity in the manner set out in the notification.

The operator of a coal mine must also ensure that any high-risk notification is sent to an industry safety and health representative and a site safety and health representative for the mine.

The Regulator may require the operator to submit a new notification if the content of the notice is inadequate to enable the Regulator to assess the manner in which the operator proposes to undertake the high-risk activity.

If the Regulator reviews a notification and is not satisfied that the activity as described in the notification can be undertaken safely, the Regulator may take a range of actions, including issuing a prohibition notice.

The Regulator has published a [guide to mine operators](#) notifying a HRA on the Regulators website.

Regulator’s mining engineering HRA assessments

The Regulator’s mining engineering program assesses 11 HRA types from the total of 31 HRA types listed in Schedule 3.

The Regulator’s mining engineering HRA assessments include:

Sch 3 - Part 2 - Underground mines – Section 5 – development of new mine entry
Sch 3 - Part 3 - Underground coal mines – Section 9 – working in inrush control zone
Sch 3 - Part 3 - Underground coal mines – Section 11 – shotfiring
Sch 3 - Part 3 - Underground coal mines – Section 12 – sealing

Sch 3 - Part 3 - Underground coal mines – Section 14 – driving underground roadway wider than 5.5 metres
Sch 3 - Part 3 - Underground coal mines – Section 16 – formation of non-conforming pillars
Sch 3 - Part 3 - Underground coal mines – Section 17 – secondary extraction
Sch 3 - Part 3 - Underground coal mines – Section 19 – mining in outburst control zones
Sch 3 - Part 5 - All coal mines - Section 29 – emplacement areas
Sch 3 - Part 5 - All coal mines - Section 31 - barrier mining
Sch 3 - Part 7 - Tailings storage facilities – section 38 – tailings storage facilities

Assessment criteria

The field assessment criteria reviewed 9 criteria for each of the 11 HRA assessed in the program.

A tabulation of the HRA criteria is provided in Table 1.

Table 1. HRA field assessment criteria for the HRA assessed.

Criteria number	Criteria
1	Verify the HRA is being conducted in accordance with the notice given to the Regulator.
2	Confirm the risk assessment for the HRA remains current and relevant.
3	If the site is a coal mine, confirm that the industry safety and health representative (ISHR) and the site safety and health representative (SSHR) have been provided with the HRA notice.
4	Confirm supervisors and workers have received HRA specific training (where the HRA requires specific training).
5	Verify supervisors and workers understand the specific risks involved with the HRA. (May not be relevant if operationally this is a routine task - i.e. secondary extraction.)
6	Confirm workers can explain the appropriate response, regarding possible HRA emergency scenarios.
7	Confirm equipment being used to conduct work for the HRA is consistent with HRA details submitted, is fit-for-purpose and has followed the mine's introduction to site procedures.
8	If works are contracted, confirm contractor(s) involved have a safety management system approved by the mine operator.
9	Confirm that the mine operator can demonstrate conformance by the contractor with the mine's HRA.

Assessment findings

Overall, the assessment findings were:

- 55 site assessments were conducted at 38 mine sites
- 11 HRA types assessed in field assessments
- 492 individual findings for the assessed criteria 1 to 9

Figure 1. Summary of HRA provision descriptions and the number of mines and assessment findings

HRA Provision description	Mine Count	Assessment Count	Findings Count
Barrier mining	1	1	9
Carrying out mining operations in an outburst control zone	2	3	27
Development of a new mine entry (including by sinking a shaft or drift or raise boring)	4	4	36
Driving an underground roadway with a width greater than 5.5 metres	4	5	45
Sealing (other than emergency sealing), but only if notice has not been given as part of a notice for secondary extraction	7	8	71
secondary extraction by longwall mining, shortwall mining or miniwall mining	1	1	9
Shotfiring, if shotfiring has not been undertaken within a year prior to the intended time of shotfiring	1	1	9
The establishment, operation, alteration or decommissioning of a tailings storage facility	8	16	142
The establishment, operation, alteration or decommissioning of an emplacement area	8	9	81
The formation of a pillar other than a conforming pillar	5	5	45
Working in inrush control zone - potential source of inrush cannot be inspected	2	2	18
Grand Total	38	55	492

Figure 2. Summary assessment findings overall results by criteria type – all HRA type field assessments

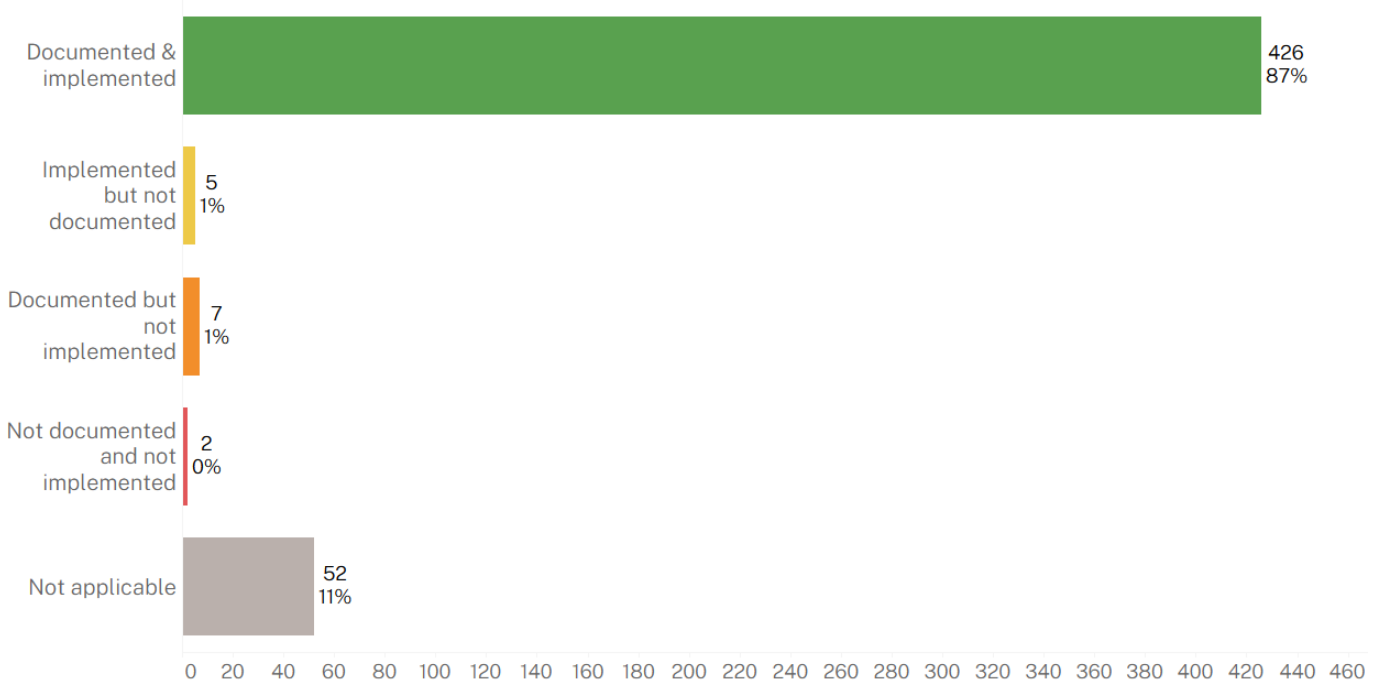
1	Verify that the HRA is being conducted in accordance with the notice given to the Regulator	96%
2	Confirm the risk assessment for the HRA remains current and relevant	99%
3	If the site is a coal mine, confirm that the industry safety and health representative (ISHR) and the site safety and health representative (SSHR) have been provided with copies of the HRA notice	100%
4	Confirm supervisors and workers have received HRA specific training (where the HRA requires specific training)	97%
5	Verify that supervisors and workers understand the specific risks involved with the HRA. (may not be relevant if operationally this is a routine task - i.e. secondary extraction)	97%
6	Confirm that workers can explain the appropriate response, regarding possible HRA emergency scenarios	100%
7	Confirm equipment being used to conduct work for the HRA is consistent with HRA details submitted, is fit for purpose and has followed the mine's introduction to site procedures	100%
8	If works are contracted, confirm contractor(s) involved have a safety management system approved by the mine operator	98%
9	Confirm that the mine operator can demonstrate conformance by the contractor with the mine's HRA	93%
Grand Total		98%

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

The overall assessment findings by criteria type identified the following compliance findings:

- Criteria numbers 3, 6 and 7 were assessed at 100% compliance.
- Criteria number 9 was assessed as the lowest compliance at 93%
 - Criteria 9 = Confirm the mine operator can demonstrate conformance by the contractor with the mines HRA.

Figure 3. Summary assessment findings ratings - overall



The overall assessment findings ratings identified the following ratings:

- 87% rating for documented and implemented for the HRA field assessment,
- 1% rating for implemented but not documented for the HRA field assessment,
- 1% rating for documented but not implemented for the HRA field assessment,
- 5% rating for implemented but not documented for the HRA field assessment,
- 0% rating for not documented and not implemented for the HRA field assessment.

Notices issued

There were **61** compliance notices in total issued to **28** of the **38** sites during the field assessment program.

The compliance notices issued for HRA field assessments were reviewed and Table 2 lists the notices issued by type and number.

Table 2: Notices issued for the HRA field assessment program

NOTICE TYPE	TOTAL ISSUED	NUMBER OF SITES
s.23 notice of concerns	31	22
s.191 improvement notice	28	13
s. 195 prohibition notice	2	2
Total	61	28
		Note: some mine sites were issued multiple notices

Recommendations

Based on the findings outlined in this report and with respect to the numbers and types of compliance notices issued during the HRA field assessment program.

The following recommendations should be reviewed by mine operators:

- PCBUs should read and comply with all requirements of section 35 of the WHS(MPS) Regulation 2022 to assist the Regulator with processing of HRA applications.
- PCBUs should review relevant sections of Schedule 3 High risk activities of the WHS(MPS) Regulation 2022 and comply with the specific legislation associated with the HRA.
- PCBUs should follow the application process and guideline published on the Regulators web site.
- For coal mine operators – the HRA notification provided to the Regulator should also be provided to the ISHR and SSHR.

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 1 through 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