

Quarry Manager of mines other than underground mines or coal mines Paper A – Legislation knowledge

Candidate no.:	

Legislation to be assessed

Unless otherwise stated all references to Act and Regulations are to:

- Work Health and Safety Act 2011
- Work Health and Safety Regulation 2017
- Work Health and Safety (Mines and Petroleum Sites) Act 2013
- Work Health and Safety (Mines and Petroleum Sites) Regulation 2022
- Explosives Act 2003
- Explosives Regulation 2024

Exam details

Region: New South Wales

Venue: Online

Room:

Start date/time: Wednesday 3 September 2025 8:50am End date/time: Wednesday 3 September 2025 11:30am

Duration: 02:40

Instructions to candidates

- Answers are to be written in the allocated spaces within this booklet ONLY
- Answers must be written in pen however, drawings may be completed in pencil
- This booklet is not to be altered in any way, pages are not to be added or removed
- Additional space is provided at the end of the paper. Please label which question the answer relates to.

Primary benchmarks (Focus Areas) include:

Focus Area 1.1 - Statutory function being examined and other relevant statutory functions and responsibilities

Focus Area 1.2 - Safety Management System requirements for mines in NSW, specifically;

- Principal Hazard Management Plans (PHMP)
- Principal Control Plans (PCP)
- Specific control measures for mining, mechanical and electrical

Focus Area 1.3 - Incident reporting requirements and protocols

Focus Area 1.4 - Work, Health & Safety requirements and regulations within the framework as it applies:

- General WHS Act and Regulation
- Mine specific WHS (Mines and Petroleum Sites) Act and Regulation
- Hazard specific relevant to the function e.g., Explosives Act and Regulation, Radiation Control Act and Regulation etc
- · Legislated codes & standards

Focus Area 1.5 - Relevant current Australian and international standards, codes of practice, and alerts and bulletins

Marking criteria

A candidate will be deemed competent in this paper if they have achieved the pass mark of 83/130 (63.8%).

If successful, the candidate will be deemed competent in;

Domain 1 - Statutory functions & regulatory requirements

Knowledge and understanding of their statutory function, or relevant others, and related WHS regulatory requirements

In answering the questions candidates will be required to demonstrate a satisfactory knowledge of

the legislation that applies to the statutory position of Quarry Manager at a mine other than an

underground mine or coal mine. This will also include an assessment of their understanding of other

statutory positions at the mine and general WHS legislation as it applies to mining operations.

All questions are to be attempted.

Not all questions are of equal value and parts of questions may also vary in value. The marks applicable to each part of a question will be indicated adjacent to the question.

This examination is a **closed** book examination – that is you cannot bring any reference material

in to refer to the exam, such as copies of legislation. Reference material will be provided in the exam paper as applicable.

Order of the questions may differ from the online exam.

Marking Sheet

Q #	Marks	Available Marks	Marked by	Summary comments to justify
1		20		
2		30		
3		30		
4		30		
5		20		
Paper Total		130		Marks checked by

A) Fill in the blanks in the extract of legislation below regarding the role of the Quarry Manager, Mine Surveyor and Electrical Tradesperson, WHS(MPS)R schedule 10 part 5
Quarry Manager (2 marks)
(a) The statutory function of a quarry manager is to supervise at the mine.
(b) The requirement for nomination to exercise the statutory function is that the individual nominated must hold a that authorised the exercise of the statutory function.
B) Mining surveyor - only required if survey plan required (2 marks)
(a) The statutory function of mining surveyor is to and and the survey plan of the mine.
C) Qualified electrical tradesperson (4 marks)
The statutory function of qualified electrical tradesperson is to supervise the
of of electrical plant and installations at the mine.
D) Your Quarry Manager has fallen ill and is unable to work for an extended period. You are planning to engage a 'contract' quarry manager from an interstate firm. When considering the appointment of the manager, you are required to satisfy the following:
Fill in the blanks. (2 marks)
The mine operator of a mine must ensure an individual nominated to exercise a statutory function at the mine is readily to exercise, and is of exercising, the statutory function, WHS(MPS)R section 133(2).

E) An individual may exercise more than 1 statutory function, including at different mines,

• Only where unavoidable circumstances occur

WHS(MPS)R s140. Select the correct answer. (1 mark)

- False
- Only with written approval from the Regulator
- True

F) Fill in the blank. (1 mark)
The mine operator must ensure that 'mining activities' do not take place at the mine if an individual has not been nominated for more than days WHS(MPS)R section 133(4)(c)
G) Fill in the blank. (1 mark)
An individual nominated to exercise a statutory function at a mine must, as soon as reasonably practicable, inform the of a matter that may interfere with the individual's ability to exercise the statutory function WHS(MPS)R s134.
H) Fill in the blank. (1 mark)
A practising certificate remains in force, unless sooner cancelled, for a period of years commencing on the date on which it is granted, WHS(MPS)R s140.
I) The WHS(MPS)R section 143 lists seven (7) reasons when the regulator may suspend a practicing certificate. List three (3) reasons. (3 marks)
J) Section 19 WHS(MPS)R "Content of Safety Management System" requires the 'management structure' for the management of WHS at the mine to be set out. The management structure must include five (5) things, list three (3) things. (3 marks)

A) The WHS(MPS)R section 18, imposes a duty to establish and implement a Safety Management System (SMS). Who has this duty? Select the correct answer. (1 mark)

- Mine holder
- Quarry Manager
- Company directors
- Mine Operator

B) What must not take place during a time when a part of the SMS is not established and implemented? Select the correct answer. (1 mark)

- Mining operations
- Mining activities
- Rehabilitation
- Exploration

C) The WHS(MPS)R section 19 outlines the contents of a Safety Management System (SMS). List 10 things that must be contained in a SMS (not including PHMP & PCP). (10 marks)

- D) In your own words, describe what is the meaning of a principal hazard is as per WHS(MPS)R section 4? (4 marks)
- E) The WHS(MPS)R, schedule 1 "Principal Hazard Management Plans" for Ground or Strata failure lists eighteen (18) matters that must be considered in developing the control measures to manage the risks of ground or strata failure in open-cut mines. List six (6) of these matters. (6 marks)
- F) The WHS(MPS)R, schedule 1 "Principal Hazard Management Plans" lists four (4) matters that must be considered in developing the control measures to manage the risks of 'Air quality or dust or other airborne contaminants' in open cut mines. List the four (4) matters. (4 marks)
- G) Section 30 of the WHS(MPS)R sets out the requirements when developing Principal Control Plans, including compliance with a schedule? Select the correct schedule. Select the correct answer. (1 mark)

- Schedule 1
- Schedule 2
- Schedule 6
- Schedule 7

H) The operator of a mine must ensure the Safety Management System is reviewed within 12 months of the commencement of mining operations and then at least once every ____ years? Select the correct answer. (1 mark)

- Every year
- 2 years
- Twice per year
- 3 years

I) Section 20 of the WHS(MPS)R lists the Safety Management System (SMS) inclusions that are required to manage performance standards and audits. List two (2) of these inclusions. (2 marks)

- A) Section 14 WHS(MPS) Act 2013 lists three (3) incident types that meet the definition of a "notifiable incident'. List these three types. (3 marks)
- B) Section 189 WHS(MPS)R 2022 prescribes the serious injuries or illness with respect to WHS(MPS)A 2013 section 14. List six (6) serious injury or illness of a person. (6 marks)
- C) Section 55A WHSR 2017 defines that a psychosocial hazard is a hazard that arises from or relates to four (4) matters. Name three (3) of these matters. (3 marks)
- D) What differentiates a High Potential Incident as defined in WHS(MPS)R section 124 (5)(a) and a Dangerous incident as defined in section 190 WHS(MPS)R? (4 Marks)

Section 19 (2) (n) & (o) of the WHS(MPS)R 2022 requires your Safety Management System to include, procedures to respond to 'notifiable' and 'high potential incidents', along with procedures to conduct investigations at the mine site".

- E) List four (4) things that your incident response/reporting procedures will include? (not your emergency procedure). (4 marks)
- F) List four (4) things your procedures for conducting 'investigations' should include. (4 marks
- G) WHS(MPS)R section 190 An electric shock to a person is reportable to the Regulator, other than a shock from ______ source. Select the correct answer. (1 mark)
 - low voltage
 - extra low voltage
 - 415 volts
 - 100 volts
- H) Tragically your site has had a very serious accident (likely fatality). After calling 000, all

the emergency services have arrived on site. Who is the lead agency that you must deal with in this instance? Select the correct answer. (1 mark)

- SES
- Fire services
- Police
- NEW Resources Regulator
- I) Below are three (3) examples of explosives incidents that could occur at your site. Confirm whether the incident is reportable YES/NO and if it is reportable, to who? (3 marks)
- a) Fly rock that has left the exclusion zone
- b) Misfire due to cut lead in line
- c) Loss of explosive product
- J) Section 124 (5) WHS(MPS)R requires the following to be reported as a High Potential Incident.

An injury to a person, supported by a medical certificate, that results in or is likely to result in the person being unfit, for a continuous period of at least_____, to perform the person's usual activities at the person's place of work? Select the correct answer. (1 mark)

- 7 days
- 14 days
- 21 days
- 28 days

Part 3.1 'Managing risks to Health and Safety' WHSR 2017 sets out a structured approach
for the duty holder to manage risk on site. Answer the questions below.

A) Section 34 - 'Duty to identify hazards'. Fill in the blank. (2 marks)
A duty holder, in managing risks to health and safety, must identify all
hazards that could give rise to risks to health and safety.
B) Section 35 - 'Managing risks to health and safety'. Fill in the blanks. (3 marks)
A duty holder, in managing risks to health and safety, must
(a) risks to health and safety so far as is reasonably practicable, and
(b) if it is not reasonably practicable to risks to health and safety those risks so far as is reasonably practicable.
C) Section 36 'Hierarchy of Controls'
Sets out the order of controls that must be implemented when dealing with risk to health and safety. List the six (6) controls in the correct order. (6 marks)
D) Section 37 – 'Maintenance of Controls' A duty holder who implements a control measure to manage health and safety must ensure that the control measure remains effective, including by ensuring it is "suitable for the nature and duration of the work". Section 37 lists two (2) other parameters that must be satisfied. List the two (2) other

E) Section 38 'Review of Control Measures'

parameters. (2 marks)

A duty holder must review and as necessary revise control measures implemented under this Regulation so as to maintain, so far as is reasonably practicable, a work environment that is without risks to health or safety. List five (5) circumstances where a duty holder must review and revise a control measure under this section. (5 marks)

- F) WHSA 2011 section 75 Within what period must the PCBU at a workplace establish a health and safety committee when requested to do so by a health and safety representative for a work group or 5 or more workers at the workplace? Select the correct answer. (1 mark)
 - 1 month
 - 2 months
 - 3 months
 - 6 months
- G) WHSA 2011 section 64 How long can a health and safety representative for a work group hold a term in office? Select the correct answer. (1 mark)
 - 1 year
 - 2 years
 - 3 years
 - 5 years

The WHS(MPS)R section 34 'Electrical Safety' outlines the requirements for managing electricity at a mine. Answer the following questions;

- H) Electrical installation work at the surface must be carried out in accordance with? Select the correct answer. (1 mark)
 - Wiring Rules
 - Safety Management System
 - AS 4024
 - AS 3760
- I) The electrical installation plans required by the mine operator must include? List 3 things. (3 marks)
- J) In 2004, the Work Health and Safety Regulation 2017 was updated to strengthen the legislative requirements in relation to the management of Crystalline Silica Substance(CSS). Fill in the blank below. (1 mark)

Chapter 8A, section 529A defines Crystalline Silica Substance (CSS) as a material that

contains at least (w/w) concentration.	_ crystalline silica, determined as a weight/weight
•	two new offsiders. What must each person have servised access to any type of explosive, assuming
	plosives Regulation 2024 define and detail when a and what it must contain. List four (4) things a

- A) The Regulator has a range of TRG documents that guide the user with respect to compliance with the legislation. What is a TRG? (1 mark)
- B) The TRG for cutting & welding provides detail in relation to 'Hot Work Permit System' for cutting and welding that is performed outside of designated hot work areas. List four (4) things that a hot work permit system should incorporate. (4 marks)
- C) The national exposure standard for welding fumes (not otherwise classified) for a TWA (8 hour) period is? Select the correct answer. (1 mark)
 - 1 mg/m3
 - 10 mg/m3
 - 0.1 mg/m3
 - 5 mg/m3
- D) The TRG recommends regular inspections of welding equipment to ensure it is maintained in a safe condition. List four (4) safety items that should be checked on the welder before starting work. (4 marks)
- E) As part of your regular communications from the NSW Resources Regulator, you receive Safety Alerts and Bulletins that outline the initial findings and recommendations from recent safety incidents. (typical example below)



NSW Resources Regulator

SAFETY ALERT

DATE: 17 June 2022

Worker burnt during hot work

This safety alert provides safety advice for the NSW mining industry.

Issue

A boilermaker suffered burns to the right-hand side of their face as a consequence of the ignition of an unidentified flammable substance.

List seven (7) steps you will use to manage the alerts and their recommendations. (7 marks)

- F) Which of the following Australian Standards would you use when reviewing your 'routine servicing requirements for fire protection systems & equipment'? Select the correct answer. (1 mark)
 - AS/NZ 3000
 - AS/NZS 4024
 - AS 1851
 - · AS 1940
- G) Which of the following Australian Standards would you use when determining the storage and handling of flammable and combustible liquids requirements for your site? Select the correct answer. (1 mark)
 - AS 2444
 - AS 4775
 - AS 3788
 - · AS 1940
- H) Which of the following Australian Standards would you use when reviewing your 'Fixed Platforms and walkway' design in your Mechanical Engineering Control Plan? Select the correct answer. (1 mark)

- AS/NZS 1657
- AS 3868
- AS/NZS 4024
- AS 2444

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Quarry Manager of mines other than underground mines or coal mines Paper B – Technical knowledge, management of risk and legislation application

Candidate no.:	

Legislation to be assessed

Unless otherwise stated all references to Act and Regulations are to:

- Work Health and Safety Act 2011
- Work Health and Safety Regulation 2017
- Work Health and Safety (Mines and Petroleum Sites) Act 2013
- Work Health and Safety (Mines and Petroleum Sites) Regulation 2022
- Explosives Act 2003
- Explosives Regulation 2024

Exam details

Region: New South Wales

Venue: Online

Room:

Start date/time: Wednesday 3 September 2025 8:00am End date/time: Wednesday 3 September 2025 5:00pm

Duration: 09:00

Instructions to candidates

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- Additional space is provided at the end of the paper. Please label which question the answer relates to.

Primary benchmarks (Focus Areas) include:

Focus Area 2.1 - Apply technical knowledge and understanding to the development and implementation of the mine Safety Management System

Focus Area 2.2 - Apply working knowledge and technical understanding of effective controls for the management of hazards, safe operation, inspection and maintenance of systems, plant and equipment, relevant to the statutory function, such as:

- life risks/hazards and controls
- cycle management plans
- · change management plans
- review of control measures.

Focus Area 2.4 - Training and instruction of workers

Focus Area 3.1 - Assess, inspect and monitor the workplace to identify and manage hazards, risks, emerging issues and changing work conditions through the application of a hierarchy of controls

Focus Area 3.2 - Compile and review shift/engineering reports, information provided by others and other available objective evidence to inform risk assessment and mitigation

Focus Area 3.3 - Management of high-risk activities or work

Marking criteria

A candidate will be deemed competent in this paper if they have achieved the pass mark of 98/145 (67.5%).

If successful, the candidate will be deemed competent in;

Domain 2 - Application and implementation of hazard management through technical knowledge.

Domain 3 - Situational Awareness and risk management.

In answering the questions candidates will be required to demonstrate a satisfactory knowledge of the technical hazards and controls required to manage risks if they were appointed to the statutory position of Quarry Manager at a mine other than an underground mine or coal mine. This will also include the application of the legislation during the assessment and implementation of controls.

They will also be required to demonstrate an awareness of relevant standards, codes of practice and/or MDGs for each answer if applicable.

All questions are to be attempted.

Not all questions are of equal value and parts of questions may also vary in value. The marks applicable to each part of a question will be indicated adjacent to the question.

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in to refer to the exam, such as copies of legislation. Reference material will be provided in the

exam paper as applicable.

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Marking Sheet

Q #	Marks	Available Marks	Marked by	Summary comments to justify
			initials	
1		30		
2		30		
3		20		
4		25		
5		10		
6		30		
Paper Total		145		Marks checked by

The NSW Health and Safety legislation defines airborne dust to include both respirable and inhalable dust. Long-term exposure to many dusts, including respirable crystalline silica (RCS) can cause disabling lung diseases.

The permissible limit of airborne dust concentration that workers can be exposed to in a workplace over a specific period, typically a TWA 8-hour workday, is referred to as a WES

- A) What does WES stand for? (1 mark)
- B) What does TWA stand for? (1 mark)
- C) When conducting sampling, what does SEG stand for? (1 mark)
- D) Describe the properties of inhalable dust, including typical sizes. (2 marks)
- E) Describe the properties of respirable dust, including typical sizes. (2 marks)
- F) Name two (2) respiratory diseases caused from the inhalation of silica dust. (2 marks)

You are the Quarry Manager of an industrial mineral site that is mining 'zeolite', which contains approx 30 % silica. You have recently engaged an occupational hygienist to conduct personal dust monitoring at your operation. The results below are a cut down version of the hygienist's report highlighting the results for 3 out of the 15 workers who participated.

Name	Work task	Respirable Crystalline Silica mg/m3 – 8hr TWA	Respirable dust mg/m3 – 8hr TWA	Inhalable Dust mg/m3 – 8hr TWA
Fitter 1	Screen changes 4hrs, replace conveyor drive motor 4 hrs	0.078	2.198	8.89
Fitter 2	Screen changes 4hrs, replace conveyor drive motor 4 hrs	0.065	1.205	9.24
Operator 1	Fixed plant cleaning 5hrs, plant inspections 3 hrs.	0.124	4.501	8.34

G) Are any of the results reportable to the Regulator? Explain your decision, including the

WES for that category. (4 marks)
H) Fill in the blanks. (2 marks)
As per WHS(MPS)R section 89, Respirable Crystalline Silica (RCS) has been identified as a hazard on your site. Therefore the sampling must be carried out by a person who is of the mining operations and in accordance with schedule
I) What is the <u>minimum</u> frequency that personal dust monitoring must be completed where RCS has been identified as a hazard? Select the correct answer. (1 mark)
 6 monthly 12 monthly 3 monthly 24 monthly
J) After reviewing the results and considering your reporting obligations, describe what the next actions/steps you will take to ensure that workers are not exposed to a contaminated atmosphere. List seven (7) steps. (7 marks)
In preparation for a NSW Resources Regulator assessment, you are reviewing your Safety Management System (SMS) to ensure it contains up to date information on the safe storage, handling and use of combustible and flammable liquids.
K) Explain placarding requirements, what they look like and where they should be located on site? (2 marks)
L) Explain the 'manifest' requirements? (2 marks)
M) Safety Data Sheets (SDS) provide critical information about hazardous chemicals. List four (4) critical pieces of information you will find in a SDS. (2 marks)

N) What does the term 'flash point' mean? (1 mark)

A recent increase in the number of heavy vehicle rollovers has prompted the NSW Resources Regulator to issue Safety Bulletin SB25-03. Of the 40 rollover incidents in the past 12 months, 12 were from the quarry sector.

The Safety Bulletin advises mine operators that they must have a structured, risk-based approach to address vehicle interactions.



A) Section 7 of schedule 1 WHS(MPS)R lists eight (8) matters that must be considered when developing control measures to manage risks of roads and other vehicle operating areas. List six (6) of the considerations. (6 marks)

B) The recommendations in the safety bulletin advise mine operators to monitor ground conditions and the design of tipping areas to ensure that tipping is being performed safely. Your site currently has two tipping areas, both are <u>multi-layered dumps</u>. You conduct an inspection of each dump to review that the agreed control measures are in place. List seven (7) control measures you would expect to observe. (7 marks)

C) During this inspection process, one of your supervisors alerts you to the fact that your Safety Management System (SMS) contains no arrangements for conducting inspections,

as per the requirements of section 39 WHS(MPS)R.

Section 39 (2) requires four (4) things to be taken into account when making these arrangements. List these four (4) things. (4 marks)

D) During the investigation into several of the rollover incidents, a causal factor frequently identified was 'Human Organisational Factors' (HOF). One definition of HOF is given below;

"Human and organisational factors (HOF) encompass the conditions and characteristics within a workplace that influence how people behave, impacting safety, health, and overall performance"

These factors include "personal factors", "job factors", "work environment", "team factors", "organisational factors".

Under each of the headings below, list two (2) criteria that could influence the HOF behaviour of a driver. (8 marks)

Example below

Organisational factors

- Poor mine design including a shortage of manning & resources
- Poor reporting and investigative culture
- a) Personal factors
- b) Job factors
- c) Work environment
- d) Team factors
- E) Another common location for rollover and collision incidents is at the intersection between a haul road and a service road.

List five (5) <u>key design</u> controls that you require in your 'intersection standards' to mitigate these types of collisions. (5 marks)

Your site is going through an expansion phase and your board of directors has decided to use a 'contract construction company' to complete additional earthworks. This is the first time your site has used this contract company.

- A) As part of the engagement of the company, what two options are available to the mine operator and contractor to meet their legislated responsibilities in relation to safety management systems and what arrangements must be in place to ensure these two options are met? Section 26 WHS(MPS)R (5 marks)
- B) Due to the Christmas holiday break and ongoing timeline pressures of completing the expansion, you engage a 'labour hire company' to provide four (4) additional workers. Once the workers are on site, outline six (6) steps involved in the onboarding process for the new labour hire workers to ensure their safety. (6 marks)
- C) During the onboarding process, the validity of one of the workers competencies comes into question, including possible counterfeit documentation. Explain how you would manage the situation given the operator has already been engaged and is operating the machine. Dot points are sufficient. (4 marks)
- D) As part of the expansion, you engage a new drill and blast contractor. You identify that your Safety Management System (SMS) does not include an 'introduction to site' checklist for <u>drill rigs</u> and your supervisors have no training in what to inspect. With your supervisors, you create a new checklist.

<u>Describe</u> ten (10) 'safety critical controls' that you will require on the <u>drill rig</u> checklist? (5 marks)

You are the quarry manager of a site that is mining a 40 m wide 'quartzite' seam in a pit that is approx 1,000 m long, 200 m wide and 100m deep (6 x 15m benches). The northern wall (left hand side of picture below) has a history of isolated ground failures due to a clay seem that sits adjacent to the orebody and under the overburden. Over recent months, the ground failure has become more serious with evidence that the entire northern wall may be slumping.



A) Over the weekend you receive an alert from your 'real time' ground monitoring system to indicate that the wall is slowly slipping into the pit. There is some material still on the floor where people were mining (working) on the Friday. Describe four (4) immediate actions you will take. (4 marks)

B) After you have completed your immediate actions, describe the process you will work through to safely recommence mining activities. Detail seven (7) steps in the process. (7 marks)

- C) As part of the recommencement of mining activities, you revisit your risk management strategy for monitoring the northern wall displacement. There is an accepted industry risk management system (tool) that <u>deals with the progressive failure</u> of conditions and the actions that should be taken. What is the name of this system and describe how it could be used in this scenario? (6 marks)
- D) Regardless of the type of risk assessment being completed, there will generally be multiple controls implemented. The quarry industry is moving in line with other mining sectors where mine operators are being encouraged to identify 'critical controls'. In your own words describe what a 'critical control is'. (3 marks)
- E) During the review of this matter, you establish that your supervisors have never had any basic ground and strata training and do not have a checklist to record their observations when checking the <u>excavator set up at the face</u> working a blasted rill. List five (5) of the main controls that you would expect to see on the checklist. (5 marks)

Your company has imported a new modular crushing and screening plant from Ireland, the first of its kind in the country. It has arrived on site and you have arranged for an external engineering firm to conduct an audit of the conveyor safety systems prior to installation and commissioning.

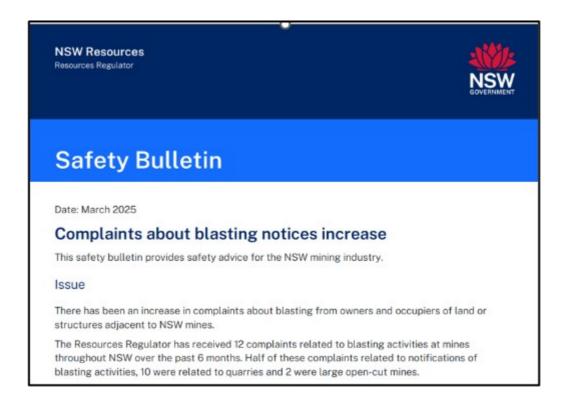
You receive a copy of the report, which assesses compliance with section 46 WHS(MPS)R "Operation of Conveyor belts", section 208 WHSR "Guarding" & AS 4024 Safety of Machinery.

- A) Section 46 of the WHS(MPS)R requires all conveyors to be fitted with a specific 'critical control'. What is that control? (1 mark)
- B) Section 208 WHSR requires that guarding meets certain standards. List four (4) design parameters that are required in this section. (4 marks)
- C) If the plant to be guarded contains moving parts that may break or cause workpieces to be ejected from the plant. What must the person with management or control of the plant ensure? (1 mark)
- D) In relation to the previous question, list three (3) places on this new plant where this guarding consideration must be maintained. (3 marks)
- E) What is the primary document on site that will detail the standards of your conveyor systems and which schedule in the legislation must it consider? (1 mark)

A) You are the Quarry Manager of a <u>limestone</u> quarry and your ticketed shot firer has had to go home sick on the day of the blast. He has left with the hard copy of the blast plan and the drillers log in his ute. The shot is half loaded and no one else in the charge crew has a BEUL. What are your <u>immediate</u> actions? (3 marks)

Your shotfirer has returned the next day and upon the recommencement of loading, you receive a call indicating that the dipping process has not been able to establish product rising in four (4) <u>adjacent holes</u> in the middle of the shot.

- B) What is the likely cause of this issue? (2 marks)
- C) What <u>immediate</u> instructions do you give to the shotfirer? (2 marks)
- D) Describe three (3) hazards that you will have to assess and control before and after firing the blast. (3 marks)
- E) Describe three (3) additional controls you could use to reduce the potential of this type of event from happening again. (3 marks)
- F) Later in the week you receive the following safety bulletin from the NSW Resources Regulator in relation to an increase in blasting notification complaints.



You believe that you have a robust system. However considering the delays with your last blast, you review your procedures to ensure they meet the recommendations of the Safety Bulletin.

Describe seven (7) components that you will need to have in your blast notification procedure. (7 marks)

Section 35 of the WHS(MPS)R "Notification of High-Risk Activities" (HRA) requires the mine operator to give notification to the Regulator prior to a high-risk activity (as defined in schedule 3), being carried out.

One such high-risk activity is the establishment of a 'tailings storage facility' where there is an inundation or inrush risk that is reasonably likely to result in an emergency situation or present a risk to the health and safety of workers and other persons.

You are the new Quarry Manager at a large quarry (2 million tonnes per annum) that produces concrete sand by crushing and washing sandstone material. There is a very high slit content in the material, which is being stored in a 'tailings facility'. This facility is located directly uphill of the main workshop and office complex.

You cannot confirm if a high-risk notification has been submitted and you cannot locate any design records for the dam. There is seepage occurring at the toe of the dam wall, (picture below).



G) Describe three (3) short term actions you will take. (3 marks)

H) Given that this storage facility <u>is considered</u> a 'high risk activity', what information and documents will you need to confirm have been submitted to the Regulator as part of the 'notification' required by schedule 3 section 38 WHS(MPS)R?

List 5 pieces of these information. (5 marks)

I) In the future, what two (2) types of controls can you implement to monitor the water levels in the tailings, dam walls and seepage from the toe of the wall? (2 marks)

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