MPQBL17

Design and arrange for the authorisation of the blast specification

Overview

What is this standard about?

This standard specifies the skills, knowledge and understanding required to demonstrate competence to design and arrange for the authorisation of the blast specification. This includes establishing the blast requirements and location, and specifying the explosive materials and equipment to be used from the available options, with due regard to legislation and local conditions. During this work the candidate must take account of the relevant operational requirements and safe working practices.

Who is this standard for?

This standard applies to persons who design blasts and produce blast specifications, either as their primary function, or in conjunction with other blasting or extraction operations.

Performance criteria

You must be able to:

1. establish the operational requirements from the blast
2. determine and identify the location and dimensions of the blast
3. identify and select equipment for the work activity
4. select the **explosive materials** and initiation system to be used
5. determine the burden, spacing and pattern to achieve the operational requirements
6. identify all environmental protection requirements, conditions and restrictions
7. collect available blast site information or records
8. identify the geological and geotechnical aspects and issues that could affect the blast
9. prepare a blast design
10. review the design against information available, regulatory requirements and organisational requirements
11. prepare the blast specification
12. communicate specification to **relevant persons**
13. ensure the blast specification is approved
14. carry out work activities according to the **approved policies, procedures and practices**

Knowledge and understanding

You need to know and understand:

1. the **approved policies, procedures and practices** in the context of the work activity
2. your responsibilities under the health and safety statutory requirements
3. geological anomalies and geotechnical information related to the work activity and location
4. blast designs and blast specifications
5. the effects of changing blast parameters
6. the capability of blast site equipment
7. the principles and practice of risk assessment
8. the strength of mineral strata
9. the effects of multi-row blasting and decking
10. site requirements for the blasted material
11. types of **explosive materials** and blasting accessories, their strengths and characteristics
12. types of initiating systems, their strengths and characteristics
13. why and how delays are created, and the effects of changing delays
14. how to make an assessment of the extent of the danger zones
15. how to interpret information from preparation activities
16. types of **explosive materials**, their strengths and characteristics
17. the measurement, control and analysis of blast vibration
18. your responsibilities to vary the blast specification
19. environmental and planning conditions applicable to the site and the work activity
20. the roles and responsibilities of the **relevant persons** involved in the work activity
21. the potential consequences and hazards arising from incorrect blast design or specification

Scope/range

1. **approved policies, procedures and practices**: legislative/regulatory, organisational, operational, accident or emergency, health and safety, first aid, and environmental as appropriate to the work activity
2. **relevant persons**: supervision, work colleagues, maintenance engineers, designated persons and/or those affected by the work activity, as appropriate to the work activity
3. **explosive materials:** explosive articles or substances, and any blasting intermediaries, as defined in current legislation, as appropriate to the work activity

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