MPQBL06

Blast to specification

Overview

What is this standard about?

This standard specifies the skills, knowledge and understanding required to demonstrate competence to blast to specification. It covers completing and checking the initiation circuit, clearing and securing the danger zone, sounding warning and firing the blast and inspecting blast site after detonation. It covers logging of results and data for records and information towards future blasts. This may be in terms of the technical requirements of the blast or may be for safety or for the environment. Information and feedback are assessed for improvements to the operation. During this work account must be taken of the relevant operational requirements and safe working practices.

Who is this standard for?

This standard is only applicable for persons appointed to fire explosives for blasting purposes, usually called shotfirers, or trainees for that function.

Performance criteria

You must be able to:

1. carry out the work activity in accordance with **approved policies, procedures and practices** for the **blasting environment**
2. implement safety procedures, connecting and protecting the ignition system for the blast in conformity with the blast specification
3. clear, secure and maintain the specified danger zone or area
4. check the initiation system sequence
5. check and confirm all warning systems, blast monitoring devices and safety precautions are in place and operable
6. locate the firing station in accordance with the blasting specification
7. give notification of intention to blast to all who may be affected by the work activity
8. attach and check the exploder
9. fire the blast
10. recognise when fume and dust have dispersed
11. carry out post blast inspection
12. identify and report post blast conditions, indicating when they are potentially hazardous
13. give the all clear and allow re-entry to the blast site or area when satisfied that it is safe and the blasting operation is complete
14. interpret blast monitoring information
15. complete records of the blast and post blast conditions appropriate to organisational requirements, the blast and blast location
16. report according to organisational requirements

Knowledge and understanding

You need to know and understand:

1. the organisational **approved policies, procedures and practices** in relation to the work activity and **blasting environment**
2. the legislative requirements for blasting in the work environment
3. the hazards and risks associated with the work activity
4. the sources of information and guidance on blasting in the work environment and how to interpret them
5. the types of initiation systems and **explosive materials** used on site
6. blast patterns
7. initiation sequences for blasting patterns and the possible effects of incorrect time delay period between individual charges
8. how a delay is created in the initiation system in use
9. the possible effects of adverse environmental and site conditions on system performance and possible premature detonation
10. the types, uses and limitations of shotfiring equipment for the work environment
11. the causes of premature initiation
12. how to check the suitability, and limitations of the types of exploder in use
13. the methods of giving warning of the blasting activity
14. why and how to secure the blasting area and danger zone
15. the problems and conditions that could prevent blasting, or could arise from blasting, and how to deal with them
16. the causes of misfires, how to recognise them, and the actions to take should they occur
17. the hazards and risks associated with misfires and unexploded charges
18. the causes of, and dangers from flyrock
19. the effects of fumes created by blasting
20. how to carry out a post blast inspection, what to inspect, and the acceptable conditions for the post blast site and surrounding areas that may be affected
21. the types and causes of post blast falls and slippage of ground and their effects
22. how and why blast monitoring is carried out and recorded
23. the organisation communications, reporting and recording arrangements for the work activity

Scope/range

1. **approved policies, procedures and practices**: legislative, organisational, operational, accident or emergency, health and safety, first aid, and environmental as appropriate to the work activity
2. **blasting environment**: in relation to at least one blasting environment: mining, quarrying, quarrying (black powder), demolition, tunnelling, civil engineering, under water
3. **explosive materials:** explosive articles or substances, and any blasting intermediaries, or as defined in current legislation, as appropriate to the work activity

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Developed by	MPQC
Version Number	1
Date Approved	December 2015
Indicative Review Date	January 2021
Validity	Current
Status	Original
Originating Organisation	MPQC
Original URN	MPQBL06
Relevant Occupations	Shotfirer
Suite	Blasting Operations
Keywords	blast; shot; blasting; shotfiring; explosive; quarrying; mining; demolition; tunnelling; diving; extract; excavate; demolish; materials; mine; quarry; detonator; misfires; flyrock; health; safety; environment