MPQMG38
Blast to specification

Overview

This standard is designed for the individual to demonstrate the skills, knowledge and understanding required to prove 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 the employee must take account of the relevant operational requirements and safe working practices.

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:

P1 carry out the work activity in accordance with **approved policies, procedures and practices** for the **blasting environment**

P2 implement safety procedures, connecting and protecting the ignition system for the blast in conformity with the blast specification

P3 check the ignition system and sequence

P4 clear and secure the specified danger zone or area

P5 check and confirm all warning systems, blast monitoring devices and safety precautions are in place and operable

P6 locate the firing station in accordance with the blasting specification

P7 give notification of intention to blast to all who may be affected by the work activity

P8 complete and check the ignition circuit, secure and check the exploder

P9 fire the blast

P10 recognise when fume and dust have dispersed

P11 carry out post blast inspection

P12 identify and report post blast conditions, indicating when they are potentially hazardous

P13 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

P14 interpret blast monitoring information

P15 complete records of the blast and post blast conditions appropriate to organisational requirements, the blast and blast location

P16 report according to organisational requirements

Knowledge and understanding

You need to know and understand:

K1 the organisational **approved policies, procedures and practices** in relation to the work activity and **blasting environment**

K2 the legislative requirements for blasting in the work environment

K3 the hazards and risks associated with the work activity

K4 the sources of information and guidance on blasting in the work environment and how to interpret them

K5 the types of detonating devices and **explosive materials** used

K6 delayed detonators and how the delay is created

K7 blast patterns

K8 initiation sequences for blasting patterns and the possible effects on the time delay period between individual charges

K9 the possible effects of adverse environmental and site conditions on system performance and possible premature detonation

K10 the types of approved circuit testers for the work activity and work environment

K11 circuit testing for electrical initiation

K12 the types, uses and limitations of shotfiring equipment for the work environment

K13 the types of initiation and premature ignitions

K14 the types of exploders, how to check their suitability, and their limitations

K15 how to identify and deal with faults that cannot be rectified

K16 the methods of giving warning of the blasting activity

K17 why and how to secure the blasting area and danger zone

K18 the problems and conditions that could prevent blasting, or could arise from blasting, and how to deal with them

K19 the causes of misfires, how to recognise them, and the actions to take should they occur

K20 the hazards and risks associated with misfires and unexploded charges

K21 the causes of, and dangers from flyrock

K22 the effects of fumes created by blasting

K23 how to carry out a post blast inspection, what to inspect, and the acceptable conditions for the post blast area

K24 the reasons for post blast slippage of ground and its effects

K25 how and why blast monitoring is carried out and recorded

K26 the organisation communications, reporting and recording arrangements for the work activity

Additional information

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**: must provide performance and knowledge evidence in relation to at least one blasting environment: mining, quarrying, demolition, tunnelling, civil engineering, under water

Scope/range related to knowledge and understanding	1	**explosive materials**: explosive articles or substances as defined in the Classification and Labelling of Explosives Regulations 1983, or subsequent legislation that supersedes it, as appropriate to the work activity

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