# DEPARTMENT OF MINERALS AND ENERGY WESTERN AUSTRALIA

# SIGNIFICANT INCIDENT REPORT NO. 78

## BLASTING ACCIDENTS

### **INCIDENT**

There have been three accidents involving blasting in the last few months, resulting in one fatality and two serious injuries. All resulted from the injured being too close to the face at the time of detonation. The fatality and a serious injury were caused by fly rock and in the third incident the injured person was hurled to the ground by concussion from the blast.

# IMMEDIATE CAUSES OF INDIVIDUAL ACCIDENTS

- 1. The entry to a face, in which the fuse was lit, did not have a guard or warning notice and barricade to prevent access by personnel. A second party of personnel entered the area to light the fuse, being unaware that it had already been lit.
- 2. A miner was lighting up 18 safety fuses individually. He had completed lighting them up, but before he could retreat to a safe position the first charge detonated.
- 3. A miner firing a longhole stope blast electrically with a shot exploder found he was unable to initiate the detonator from the usual firing position. He decided to resolve this problem by moving closer to the blast area and shortening his firing line.

### COMMENTS AND PREVENTATIVE ACTION

- As required by Regulation 8.25(1) of the Mines Safety and Inspection Regulations Persons intending to fire a charge of explosive or blasting agent must:
  - (a) give a complete and definite warning to all persons in adjacent workings before the person fires; and
  - (b) ensure that
    - (i) all means of entry to the place of firing are guarded against entry by any person; or
    - (ii) firing warning notices are erected across each place of entry.
- As required by Regulation 8.31(3) of the Mines Safety and Inspection Regulations A person lighting more than 4 fuses by hand must use a multiple igniting cartridge, igniter cord, or some similar device in accordance with the manufacturer's or supplier's instructions.
- As required by Regulation 8.36(6) of the Mines Safety and Inspection Regulations -
  - ...... the underground manager must ensure that a written procedure is developed that provides a safe system of connecting up and firing, and that the procedure is clearly understood by all employees working underground and is followed by those employees.
- The firing procedure developed on the mine must ensure that each individual firing is carried out only by the shotfirer authorised for that purpose.
- Safe blast initiation positions for electrical firing must be determined, taking into account the distance to the blast, ventilation flow, the ground support at the blasting point, and the possibility of seismic events associated with blasting. Consideration should also be given to the possibility that exploration or service holes may intersect both the blast site and the firing position.
- Where there is potential for sulphide dust ignitions during blasting, suitable precautionary measures must be taken to ensure the safety of all personnel.

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