

Drilling hazards – Handling drill rods

July 2009

Summary

This Alert highlights the dangers of working on drill rigs in Victoria following a series of incidents involving drill rods.

Background

One serious incident involved a drill rod running through the hoist limit, flicking out and striking the worker's head, causing a deep laceration.

Investigations found the rod handling systems, combined with the general ergonomics of drill rod handling, and the design/establishment of the drill pads led to these incidents.

Recommendations

Preventative control measures for tenement holders and drill rig operators include:

- provisions in the work plan and occupational health and safety systems to assess the establishment and formation of the drill pads, and meet the operational and safety requirements of the specific drill rig
- ensuring the drill site layout reduces the need to handle, move or carry drill rods
- eliminating double handling of drill rods where practicable
- providing enough space for the driller's offside to easily move the hoisted drill rod away from the drill rig onto the work table, racks or frames
- ensuring drilling contractors provide minimum drill pad requirements for the drill rigs (these requirements are included in the work plan)
- ensuring the work plan and associated occupational health and safety systems include an examination of drill rig safety systems and devices prior to commencing the field program
- using a pre-start checklist that includes checking pull ropes, lifting equipment, break-out tools, guarding, walkways, adequate workplace and shelter
- reviewing all available drill rod handling and breaking systems for adoption onto their drill rigs as a positive means of hazard elimination. Where not practicable, implement a reduction of injuries to the drill crews
- completing a hazard identification at each drill site to ensure existing control measures are still effective
- providing fabricated non-slip walkways, steps and handrails where practicable

- providing a purpose-built drill shack or canopy to protect drill rig personnel from adverse weather conditions
- ensuring work systems are in place to prevent drill crews from working or standing directly beneath suspended or hoisted drill rods
- regularly checking and testing hoist limits on the pull rope
- regularly checking the sheave guard at the top of the mast to allow hoisting gear and drill rods to be raised and lower smoothly
- regularly examining rod break-out tools and associated equipment for wear and fatigue
- implementing quality checks by authorised service providers, such as original equipment supplier or manufacturer, to ensure maintenance and modifications meet loading and quality standards
- ensuring drill rig safety systems include thorough and regular drill rig audits and ongoing ergonomic assessments of drill rigs, in particular access and movement around the drill site.

Further information

WorkSafe publications

Planning for safer plant operation (2007)

Plant hazard checklist (2003) worksafe.vic.gov.au

Other publications

Department of Natural Resources and Mines, QLD - *Mineral exploration safety guidance note* (2004) dme.qld.gov.au

Department of Primary Industries, NSW - *Minerals Industry Safety handbook* (2002) dpi.nsw.gov.au

Department of Primary Industries, Victoria - *Area work plan guidelines for exploration - A guide for exploration and mining licence holders preparing exploration work plans* (2008)

dpi.vic.gov.au

Contact details

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For more information on occupational health and safety, go to WorkSafe's website: worksafe.vic.gov.au

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