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Fires on surface drill rigs

This safety bulletin provides safety advice for the NSW mining industry.

Significant safety issue

The Resources Regulator has noted an increase in the reporting of fires on surface drill rigs in the past few months. Fire and explosion events may disrupt mining operations and put mine workers at risk.

While a fuel source for a fire risk may extend from the use of oil and grease on surface drill rigs, operators should also consider other fuel sources, including but not limited to naturally occurring gases and coal dust.

Photo 1: Ignition of gas while drilling blast holes. Photo courtesy of the mine.



Discussion

As outlined in the safety bulletin on [mines preparing for fires](#) (January 2018), fires may cause damage and operational losses, as well as threaten the health and safety of people at mines and petroleum sites.

Mine and petroleum site operators should consider the potential ignition sources on surface drill rigs. Operating drill steels can become hot during use, and even hotter when the drill rods become blocked or bogged. Operators need to consider a process that enables a safe system of work to control the risk when both a source of fuel and an ignition source are present. This control of hazard should extend to the control of risks associated with the build-up of coal dust and the accumulation of natural gases in the drill hole.

Operators should also consider how human and organisational factors may be influencing the overall outcomes of the incident, including the practicality of procedures, and the resources provided to follow the procedures. Operators should consider the effectiveness of controls within their risk management arrangements. The controls should also be reviewed against the site safety management systems.

Recommendations

It is recommended that mine and petroleum site operators should:

- consider positioning remotely activated fire suppression near the drill area
- implement trigger action response plans (TARPs) for drilling in hot or gaseous ground conditions
- monitor gas on drill areas where coal seams are known for high gas content
- monitor temperatures near the drill hole area
- use air and water injection for drill hole anomalies and blocked or bogged drill steels to reduce the temperature of blocked rods
- implement a safe system of work that enables effective supervision, particularly if the drill steel becomes bogged in a coal seam or a high gas hole and for the process of recovering the drill rods.

NOTE: Please ensure all relevant people in your organisation receive a copy of this safety bulletin, and are informed of its content and recommendations. This safety bulletin should be processed in a systematic manner through the mine's information and communication process. It should also be placed on the mine's notice board.

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Disclaimer

The information contained in this publication is based on knowledge and understanding at the time of writing. However, because of advances in knowledge, users are reminded of the need to ensure that information on which they rely is up to date and to check the currency of the information with the appropriate officer of NSW Department of Planning and Environment or the user's independent advisor.

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