Fire Safety Advice: Mine Site Managers

The hazardous and remote nature of mining puts mine sites at a high risk of fire. Adequate fire protection is not only a financial and regulatory necessity, but an ethical one. Fire protection for the mining industry requires detailed assessments, plans and execution to meet the unique requirements of a site. Wormald offers the following advice to operations managers for keeping their mine sites fire safe:

1. Conduct a thorough risk assessment to highlight potential fire risks and help determine what fire protection solution is required.

- Fire hazards differ for surface and underground mines, and vary according to a mine's size, structure, materials, equipment and number of staff.
- Common fire hazards can include mobile equipment and mining vehicles; welding and cutting operations; and storing flammable and combustible liquids, including lubricating oil, grease, and diesel and hydraulic fuel. The mined resources such as coal, coal dust and methane, can also compound the risk of fire.
- Consulting a fire protection specialist can help to ensure all hazards are identified and the most appropriate fire protection solution is installed.

2. Understand compliance and regulation requirements.

A breach of fire safety regulation ca incur significant costs and put staff at risk, so it is important for site supervisors to understand and comply with regulation requirements. Fire protection is covered by health and safety standards and legislation, which are governed by states and territories.

- In the NT, TAS, SA and VIC, mining is regulated by general work health and safety legislation. NSW, QLD and WA to have seperate legislation to specifically regulate health and safety in the mining sector.

3. Install adequate fire protection equipment.

Fire protection equipment may include fire sprinkler systems, water spray deluge systems, water mist systems, foam systems, vehicle fire suppression systems, breathing apparatus, gas detection units, thermal imaging cameras, fire suppression systems and portable fire equipment.

- When deciding on the most suitabe fire protection solution, considerations include legislation and standards and the materials being handled on the site.

4. Audit, inspect and maintain fire protection equipment.

A high level of reliability is essential when it comes to fire protection. Fire protection systems and equipment should always perform to the standard to which they were originally designed and installed.

- Regular testing can validate the functionality of the systems and equipment and help uncover any faults or issues that my cause malfunction.
- *Australian Standards AS 1851- 2012 - Routine service of fire protection systems* recommends that fire protection systems be regularly inspected.

5. Provide appropriate signage for all hazards, fire protection equipment and emergency exits.

- Fire extinguishers and other fire safety equipment should be clearly marked.
- Emergency exit signs should be visible so that in the event of an evacuation, people can be directed to escape quickly.

6. Train.

A confident team that is able to respond appropriately in the event of a fire is an invaluable investment and can substantially reduce the impact of a crisis.

- Everyone working within a facility or site should know how to respond to a fire emergency and how to use the fire equipment onsite.
- Fire safety training can be included in staff induction where new employees are briefed and trained on what to do in the event of a fire.
- Fire wardens should be fully trained on their responsibilities, fire equipment and the emergency warning and communication systems in their premises.

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