

Safety Newsflash

Multiple significant post blast fume events

Multiple blasts in open cut coal mines have generated significant post blast fume events in recent weeks. There were no reported exposures to coal mine workers or the community, but the events have caused community concern and have the potential to cause adverse health impacts.



Blasting fume is hazardous. It is a combination of post blast gases, which are predominantly nitrogen dioxide and nitric oxide. Nitrogen dioxide is the visible component. Exposure to high concentrations can lead to adverse health outcomes. Authority holders have a regulatory obligation to eliminate or mitigate hazards in their operations.

To prevent or minimise post-blast fume, mine operators and blasting contractors must maintain a sound knowledge and understanding of causal factors of post blast fume generation. These factors are detailed in [Queensland Guidance Note \(QGN\) 20 – Management of Oxides of Nitrogen in Open Cut Blasting](#).

Recommendations:

1. Blasting management systems must incorporate results of risk assessments in blast designs which cover all blast hazards, including the generation of post blast fume.
2. Blast designs must be based on the actual ground and environmental conditions, as predicted through weather forecasts for the duration of loading and firing activities.
3. Changes in actual environmental or in-hole conditions when compared to the original blast design, must be addressed at the blast design level.
4. Blast loading activities that are proposed to exceed the available weather prediction time frames, must be appropriately risk assessed to ensure that detonation performance of the explosives is maximised, while minimising product degradation that may lead to post blast fume generation.

5. While product manufacturers provide guidance on “sleep times” for ideal ground conditions, in non-ideal ground conditions, sites must consider reducing sleep times and also blast sizes to minimise the generation of post blast fume.

Further information

For further information on managing blast fumes, please see our [website](#).



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