

SAFETY BULLETIN

DATE: NOVEMBER 2020

Planning for severe weather

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

Background

Events across eastern states of Australia during 2019 and 2020 have highlighted the need to plan for severe weather events, specifically fires, floods and heatwaves. Some of these events directly and indirectly impacted mining operations, demonstrating the need for mine operators to plan for, and where necessary, conduct seasonal risk assessments to consider the type and likelihood of events that may affect their operation. With the current outlook for mainland Australia indicating above average rainfall and temperatures, the wide-ranging impacts of severe weather events should be considered in providing a safe workplace.

Outlook

Issued on 26 November 2020, the Bureau of Meteorology forecasted the following:

- December 2020 to February 2021 rainfall is likely to be above average across most of Australia, except west coast Tasmania.
- Average daytime temperatures during December 2020 to February 2021 are likely to be above the long-term average across parts of Southeast and Far West Australia, as well as along the northern coastline.
- Average night-time temperatures during December 2020 to February 2021 are very likely to be above the long-term average across almost all of Australia.
- La Niña is underway in the tropical Pacific. La Niña typically increases the likelihood of above average rainfall across eastern Australia during summer.

Refer to the Bureau of Meteorology's website for additional information on the [climate outlook overview](#).

Risks

Severe weather can present a wide range of risks that need to be considered by a person conducting a business or undertaking (PCBU). In summer, these events are typically dominated by elements of:

- extreme heat
- strong wind
- storms or protracted heavy rainfall.

These situations can lead to other emergencies such as bushfire or flooding and may present other issues at a workplace such as protracted loss of power or access issues.

Figure 1 NSW in February 2020. Incident after 160 millimetres of rain event (IncNot0036687)



While not an exhaustive list, some key risks to consider are:

- loss of access to and from the site
- loss of communication systems
- instability of highwalls, road, ramps, stockpiles and emplacement areas
- portable infrastructure and buildings being blown over or moved

- fire related damage or injuries
- loss of power to critical systems
- lightning strike damage and related fires
- wind dislodging items causing damage or injuries
- submersion of fixed and mobile plant
- hazardous chemical reactions due to heat or water exposure
- smoke entering underground ventilation systems
- loss of control caused by slippery conditions
- working in or around water and mud
- recovery operations needed to re-establish power, communications and access
- building roof collapse due to snow/hail build-up
- burning embers starting fires.

How to prepare

Prepare before the event

The time to prepare for severe weather is now. Establishing resilient infrastructure, developing plans, establishing contingencies and training workers is generally not possible during a severe weather event.

Emergency Planning

A key component of emergency planning is identifying the likely events and situations that may occur in order to determine what an adequate level of site preparation and response capability needs to be. The effects of severe weather can be wide-ranging. It is critical that emergency risks are identified and adequate controls established, particularly those related to principal hazards at the mine or petroleum site. It is essential that mines and petroleum sites develop an adequate level of response capability based on the risks identified, including first aid, firefighting and rescue arrangements. Due to the nature of severe weather events, it is likely that the event may not be isolated to the mine or petroleum site. Depending on the nature of the severe weather event, emergency services may also be involved in responding and it is important that the arrangements at the mine or petroleum site are interoperable with the emergency services. Certain incidents must be immediately notified to emergency services, and the attending emergency services may exercise powers to enter and control the event at the mine. These requirements should be included in consultation that may be required under WHS(MPS)R Cl89

between the mine or petroleum site and emergency services. Visit the Regulator's website for more information about [emergency planning at mines and petroleum sites](#).

Figure 2 Firefighting training. Mine Rescue Challenge in 2017



Adjusting to conditions

With some risks changing due to environmental conditions, a seasonal risk assessment may help identify potential issues, based on long-range weather predictions and forecast outlooks, in conjunction with remaining informed about localised events and real-time updates. In any case, mines need to consider the impact of severe weather in order to prepare.

For example, during a period of extreme heat, changes to planned work or methods may be required to ensure workers are not adversely affected by the environmental conditions. That may include modified tasks, additional worker rotations and providing additional rest and rehydration opportunities.

According to [NSW Heatwave SubPlan](#), extreme heatwaves are estimated to cause more deaths in Australia than all other natural hazards combined. Outdoor workers are among those identified as most vulnerable to the effects of heat, a particular consideration for mine operators. Such heat events often correspond with periods of extreme fire danger, another compounding factor to be considered at mines and petroleum sites.

Severe weather can have different effects and require specific planning for different parts of the workplace. Special provisions are required for remote or isolated work that is conducted, in accordance with WHSR Cl48. This includes maintaining an effective method of communication with workers. Workers engaged in remote or isolated work must be contactable and be located during emergencies, including receiving warning of impending events.

Warning systems and action plans

Communicating the risks associated with severe weather is essential. Informative communication prior to and during severe weather should take place, in conjunction with emergency warnings where imminent or actual hazards are present. Workers must be made aware of their required actions, including where to seek shelter in a place of safety if required.

Trigger Action Response Plans (TARPs) can assist mine and petroleum site operators to develop graduated approaches to various severe weather scenarios and can be developed for specific parts of the mine or petroleum site, depending on the required actions.

Recommendations

The work health and safety legislation of NSW requires mine and petroleum site operators, contractors and other persons conducting a business or undertaking at mine and petroleum workplaces to conduct risk assessments to identify potential emergency situations caused by severe weather and natural disasters.

Mine and petroleum site operators must ensure that they have adequately assessed the risks associated with severe weather events and have suitable and sufficient, safety management, emergency response and recovery plans in place.

As severe weather is often infrequent and localised, it is important that everyone on a mine or petroleum site, including contractors and visitors, are made aware of the site's emergency plan, emergency response and rescue systems.

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 common area, such as your notice board where appropriate.

Visit our [website](#) to:

- find more safety alerts and bulletins
- use our searchable safety database
- sign-up to receive mine safety news.

Other websites:

- www.emergency.nsw.gov.au
- [NSW Health – Beat the heat](#)
- [NSW Rural Fire Service](#)

- [Fire Rescue NSW](#)
- [NSW State Emergency Service.](#)

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