

Government of Western Australia Department of Mines and Petroleum Resources Safety

Mines Safety Significant Incident Report No. 182

Whirlwind carries transportable ablution block 50 metres

Summary of incident

A whirlwind picked up a transportable ablution block and moved it about 50 metres to a vacant haul truck parking area.

Fortunately, both the building and parking area were unoccupied at the time and no-one was injured.

Probable causes

Direct:

• The wind-load was higher than the building anchorage capacity.

Contributory:

- Tie-downs were not used on the building.
- The design, including anchorage specifications, did not consider the effect of wind acceleration caused by other buildings, structures and clearings in the area.

Actions required

- Competent persons should develop and implement rigorous risk management processes for the safe design, construction and installation of buildings and structures, whether permanent or temporary, used at mining operations. Compliance with Australian Standards and the Building Code of Australia may not be sufficient to cover specific conditions encountered on mine sites. Standard design parameters may not consider abnormal conditions experienced as a result of terrain changes and building configurations at the mine.
- Incorporate site-specific wind-loading criteria for buildings and structures, based on the environmental and surface conditions present.

Further information

Visit the publication section of the Resources Safety website at <u>www.dmp.wa.gov.au/ResourcesSafety</u> for the following safety alert and code of practice.

- Mines Safety Significant Incident Report No. 148 Tropical Cyclone George
- Safe design of buildings and structures code of practice.

Also check the latest relevant Australian Standards and building codes, some of which are currently being updated with more accurate data for design loadings, such as:

• Australian/New Zealand Standard AS/NZS 1170.2:2011 Structural design actions – Wind actions.

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Andrew Harris As delegate for the STATE MINING ENGINEER 1 May 2013