

# SAFETY ALERT



## CONCRETE BLOCK WALL COLLAPSES

### INCIDENT

A concrete retaining wall used to separate sales products collapsed. The wall fell onto a loader that was being used to clean up the remains of a stockpile.

### CIRCUMSTANCES

Concrete blocks were stacked vertically to construct a series of bays to separate sales products. The structure that collapsed was the back wall of a bay that was full of material. Normally, another bay of material was stored up against the back wall. The operator emptied this bay and was in the process of completing the final clean up when the wall collapsed behind the loader.



### INVESTIGATION

The investigation found the following issues contributed to the incident:

- Blocks were installed without considering foundation preparation.
- Blocks were stacked 3 and 4 high without interlocking the structure, as per their design.
- Over a period of time the concrete walls were raised as stockpile sizes needed to grow.
- The slope of the ground meant that adjoining stockpile bays were at different floor levels.
- No engineering design exists for safe use of the concrete blocks, e.g. the height of the block is out of proportion to the area of the block making it top heavy.
- Three different size blocks were found in the wall.

### RECOMMENDATIONS

1. All mines put in place a program to review the design, construction and installation criteria for use of fabricated concrete blocks.
2. All mines review stockpile areas, specifically looking at:
  - location of sales area, and visitors parking in relation to concrete block walls;
  - procedures for the maintenance and operation of sales areas and activities; and
  - safe working procedures for work in and around all structures.
3. All mines selling fabricated concrete blocks to the public seek advice about legal responsibilities. Responsibilities may extend beyond OH&S Act 2000, Section 11. Suppliers of products provide users with relevant safety information, including instructions for use and design limitations.

A handwritten signature in black ink, appearing to read 'R Regan'.

R Regan  
ASSISTANT DIRECTOR SAFETY OPERATIONS