



## SAFETY BULLETIN NO: 63

### DOZER SAFETY IN OPEN CUT OPERATIONS

#### THE HAZARD

On the nightshift of Friday/Saturday, 18/19 May 2001, a fatality occurred at a large open pit mining operation in the northern Goldfields of Western Australia. A tracked bulldozer operator suffered fatal injuries after the dozer he was operating went over the edge of the pit and fell down a rill extending over some 90 – 100 vertical metres. The operator appears to have been thrown from the cab of the dozer, as his body was located some 15 – 20 metres up the rill, above the final position of the machine.

Until the investigation of this fatal accident is completed and an inquest has been conducted by the Coroner it is not possible to provide detail on circumstances and causal factors.

However it is important that a reminder in the form of this Bulletin is issued to the industry to assist in the process of managing risks associated with bulldozer operation in open pits.

It is not suggested that all (or any) of the following has relevance to the root causes of the incident described above.

#### PRECAUTIONS

Managers and supervisors in open pit mining operations are enjoined to check that their working procedures and operating policies make provision for the following:

- Adequate lighting of working areas should be provided at night. It is not sufficient to rely on equipment running lights. Fixed lighting or trailer mounted lighting plant should be maintained at working locations.
- Appropriate planned maintenance and fault repair, coupled with immediate, management-supported and mandated equipment shutdown in cases where problems cannot be fixed immediately.



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- Familiarisation of crews with pit geography and layout. This is particularly important where long distance commute systems of work are in place and crews may need to be updated on changes to their workplaces during their time off site. This should also be done after other absences such as annual leave.
- Rigorously controlled procedures for movement of equipment from one location to another within the pit working environment, with special emphasis on the movement of slow-moving, itinerant equipment such as excavators, tracked dozers and drills. Such procedures should require clear and definite instructions from the supervisor before movements take place and report-back when movement is complete.
- Where open pits are underlain by mine workings (current or abandoned) standard safe work procedures must be developed and enforced.
- Reporting of unusual or unexpected conditions to the supervisor.

In particular it is important to be vigilant in examining areas near the edges of benches for cracking or slumping which may indicate potential failures of bench faces.

The condition of the face of the bench above the working horizon should be regularly checked for signs of instability, both local, and more widespread. Signs may include cracking and small volume rock failures, as well as bulging or swelling of the face or toe of pit walls. Strong hand torches will be needed at night.

It is important that checks are made regularly, and always after blasting and after rainfall.

Any new water make from the ground, and changes in existing water make should be reported.

- Operating practices established at the mine for bulldozers must be adhered to and regularly monitored. The practices and procedures will be determined by the mine management in consultation with the equipment supplier and the plant operators. These practices will take account of the capacities and limitations of each unit type and include working grade limits and specific precautions, as well as safe use of all implements. All standard procedures need to be developed within an effective risk management framework.
- Strict enforcement of the wearing of seatbelts by all operators of and passengers in mobile plant, at all times when the equipment is operating.

Where adequate procedures are already in place, the requirements of the management and supervisory team should be emphasised and made plain to employees, and rigorous enforcement of clearly articulated policy and practice should be ensured at all levels of the organisation. At all times, the risks associated with these types of operations need to be properly assessed and appropriate controls put in place to ensure the safety of employees.

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