

2004 WINNER

INNOVATION: MODIFICATIONS TO VEHICLE LOADING CRANES (VLCs)

COMPANY: BMA BLACKWATER MINE

THE PROBLEM

In April 2002, a worker died as a result of injuries sustained after being crushed while operating a truck-mounted vehicle loading crane on the BMA Blackwater site.

THE SOLUTION

Modifications designed to prevent a recurrence were developed and implemented on all VLCs at Blackwater Mine and across BMA.

HARD CONTROLS:

- > An operational bump bar that allows only one control set to be operated at any one time.
- > Precise control over the movement of the crane in the operator zone – low speed.
- > Bump bar will cease operations if contacted.
- > Allows normal operation outside the operator zone.
- > Extreme difficulty operating the crane from the incorrect side.

SOFT CONTROLS:

- > No-go zones depicted by equipment maps/stickers.
- > Improved operational diagrams/decals.
- > Risk assessments.
- > Training packages that comply with the Black Coal Competency.
- > Training and awareness video.
- > Inspection checklist booklet.

BENEFITS/EFFECTS

- > Significantly reduces the risk of the operator being struck by the VLC.
- > Ensures an emergency stop can occur in the event of an unplanned movement.

- > Provides a significantly higher safety factor when operating the VLC, and moving and handling loads.
- > Cost-effective to implement: approximately \$7,200.

SIGNIFICANCE

- > A significant safety improvement/enhancement for all operators using VLCs in any industry.
- > Provides a significantly higher safety standard than the current standard.
- > Significantly reduces an operator's exposure to this hazard/risk as well as providing controls to prevent a recurrence.

TRANSFERABILITY ACROSS INDUSTRY

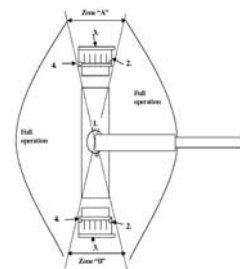
- > Applicable to all industries – the knowledge and technology is readily transferable. Can be implemented on all VLCs in all industries.
- > Australian Standards Committee has approved these modifications for their revised Standard.

INNOVATION AND ORIGINALITY

- > This is a significant innovation, providing hard and soft controls to prevent a recurrence.

APPLICATION OF RISK MANAGEMENT PRINCIPLES

- > Engineering: implement an engineering control to prevent the boom striking the operator.
- > Design: a system to tolerate human error in the operation of a vehicle loading crane.
- > Administration: training packages developed and delivered to the workforce.



'Go' and 'no-go' zones



Improved operational controls



BHP Billiton Mitsubishi Alliance

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