



## Queensland Mining Industry Health and Safety Conference 2003

### Innovation Awards

### Application Form

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***Innovation title:***

Tail Light Cleaning Sprays for 773 Water Cart

***Brief description:***

The *Tail Light Cleaning Spray* is a manually operated water jet located below the rear tail lights of a 773 water cart. The water jet is activated from the rear of the water cart and enables the vehicle's tail lights to be easily cleaned by spraying water directly onto the lights. This increases the tail lights' visibility by vehicles travelling behind the water cart.

***Benefits/effects:***

Dirt and dust often builds up on the tail lights of 773 water carts, making the vehicle's presence, the braking indicator and indicators less visible to other vehicles.

The *Tail Light Cleaning Spray* helps to reduce the risk of tailgate collisions by ensuring the tail lights are continuously cleaned, increasing the visibility of the water cart.



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### ***Significance***

The development of the *Tail Light Cleaning Spray* is a significant innovation for the mining industry due to the relatively high frequency rate of vehicle collisions across the industry.

At South Walker Creek Mine, this innovation enhances safety management by ensuring risks associated with site layout and operating conditions are significantly reduced.

### ***Applicability/Transferability to industry***

The risk of tailgate collisions involving water carts and vehicles exists on many mines. The *Tail Light Cleaning Spray* is therefore an initiative that is relevant across the industry. In addition, the spray is easily implemented into water carts and through a simple modification to plant can also be transferred across similar equipment fleets.

The *Tail Light Cleaning Spray* can be installed in about four hours and costs approximately \$500 (\$300/parts, \$200/labour) to implement.

### ***Innovation and Originality***

The *Tail Light Cleaning Spray* is an original concept and design (to the knowledge of site personnel).

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Please complete this application form and forward to:

Conference Secretary  
Queensland Mining Council  
Level 13 / 133 Mary Street  
Brisbane QLD 4000  
Ph: 07 3295 9560

Fax: 07 3295 9570

email:safeconf@qmc.com.au



# Queensland Mining Industry Health & Safety Innovation Awards



## TAIL LIGHT CLEANING SPRAYS FOR WATER CARTS



Presentation by: Brett Illguth  
4 August 2006



**THIESS**  
South Walker Creek Project



# BACKGROUND



- Located 130km west of Mackay
- Owned by BHP Billiton Mitsui Coal
- Thiess on site since May 1996



## *background ...continued*



- As Principle Contractor, Thiess undertakes overburden removal (inc. dragline operations), mining, coal processing and handling, and train load out
- Contract recently extended to June 2006





# PRODUCTION



→ Current rate: 3.9M product tonnes/annum



→ Rising to 4.3M product tonnes over term of contract

→ Overburden removal of 60M BCM over term of contract





# PLANT & EQUIPMENT



→ Liebherr R994 Excavator



→ Marion 8050 Dragline

→ Caterpillar 785 trucks

→ Caterpillar D11, D10 and D9  
Dozers



→ Caterpillar 988 and 992 Front End  
Loaders



# HEALTH & SAFETY



→ 1998 – SWC first Australian mine to receive 5 star rating under the NOSA 5 Star System



→ 2000 – NOSA audit score improved, with a 93.2% rating



→ Today's innovation - another example of our commitment to high standards in work safety





# THE INNOVATION



# TAIL LIGHT CLEANING SPRAY



# WHY THIS INNOVATION?



## Problem

- Dirt and dust build up on tail lights of 773 water carts, making vehicle, braking indicator and indicators less visible



## Purpose

- Enables tail lights to be easily and continuously cleaned, increasing visibility





# DESCRIPTION



→ Manually operated water jet



→ Located below rear lights

→ Turned on via the active plumbing at the rear of the water cart



→ Sprays water directly onto the rear lights

*description ... continued*



## Rear view of water cart



*description ... continued*



Nozzles are activated on rear spray control circuit



*description ... continued*



One small spray cleans immediately



*description ... continued*



## Low maintenance set-up



*description ... continued*



Sprays will be linked with intermittent greasing activator switch







# BENEFIT



By increasing the rear visibility of the water cart and the vehicle's braking indicator and indicators ...



the TAIL LIGHT CLEANING SPRAY ...

**reduces the risk of tailgate collisions**





# COST



For a caterpillar 773:

- Installation – 4 hours (approx.)
- About \$500 – \$300 parts / \$200 labour





# TRANSFERABILITY



→ Risk of tailgate collisions involving water carts exist on many surface operations



→ Tail Light Cleaning Spray therefore relevant across industry

→ Transferable across similar equipment fleets



→ Easily implemented



# IN SUMMARY



→ Relatively high frequency rate of vehicle collisions across industry



→ Significant innovation

→ Helps reduce the risk of tailgate collisions





## *summary...continued*



## At South Walker Creek:

- Enhances safety management by ensuring risks associated with site layout and operating conditions are significantly reduced





**People | Pride | Performance**

