



Trade &  
Investment  
Mine Safety

# Overview of Safety in the NSW Coal Industry 2011-12

Check Inspectors Safety Seminar  
5 September 2012

# Incidents reported to NSW Mine Safety

- 12 month period between  
1 April 2011 to 31 March 2012

U/G 2,041

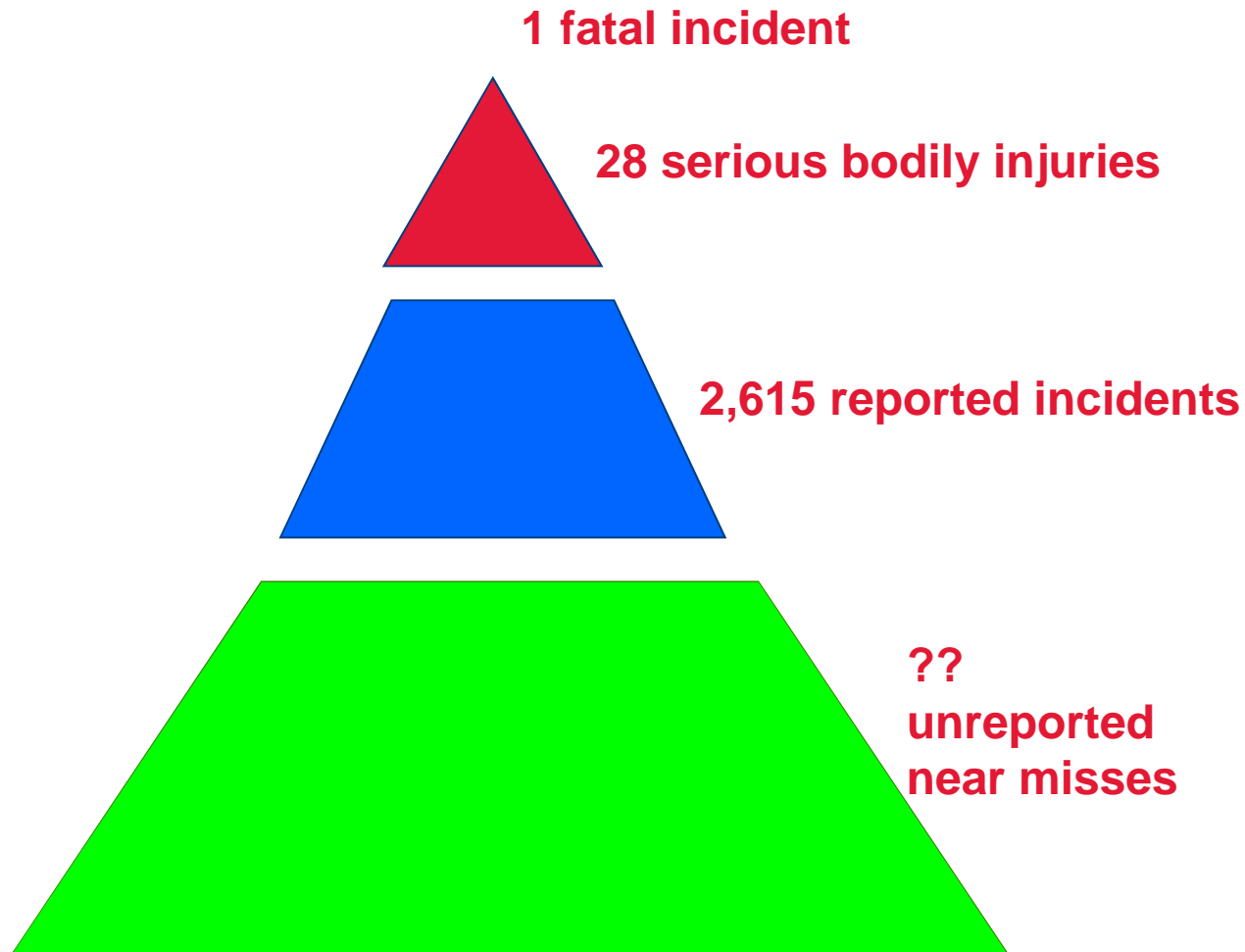
O/C 574

**2,615 incidents reported**

**28 Serious bodily injuries**

**1 fatal incident UG coal (3 June 2011)**

# The incident triangle for 2011/12



# Serious bodily injuries

- 24 fractures
- 3 amputations
- 1 fracture of vertebral column

## Outcomes of injuries

- 84 hospital in patients
- 433 injuries of greater than 7 days lost time

# What are the reported issues

- Collision on surface                      100 O/C                      32 UG  
Mobile plant >2 tonne
- Unintended activation of                      151 O/C                      211 UG  
machinery no threat to life  
or injury

# People and machines



If you saw this scenario

What is acceptable ?

Machine isolated ?

Load restraint ?

Persons in bucket ?

# People and machines

2 persons in the bucket



Now what is acceptable, with persons still in the bucket?

What if the bucket was then suspended over a mine shaft ?

Safety Alerts

SA 11-02

SA 11-07

SA 11-10

SA 11-13

SA 12-03

# Gas and a means to ignite gas

- Gas trips 616 UG
- In-service failure of explosion protected equipment 377 UG

Gas and source of ignition can be a lethal combination



# Gas and sources of ignition



Pike River Mine NZ  
19 November 2010  
2 walked out  
29 fatalities

South Blakefield Mine NSW  
5 January 2011  
Approx 50 underground  
No fatalities

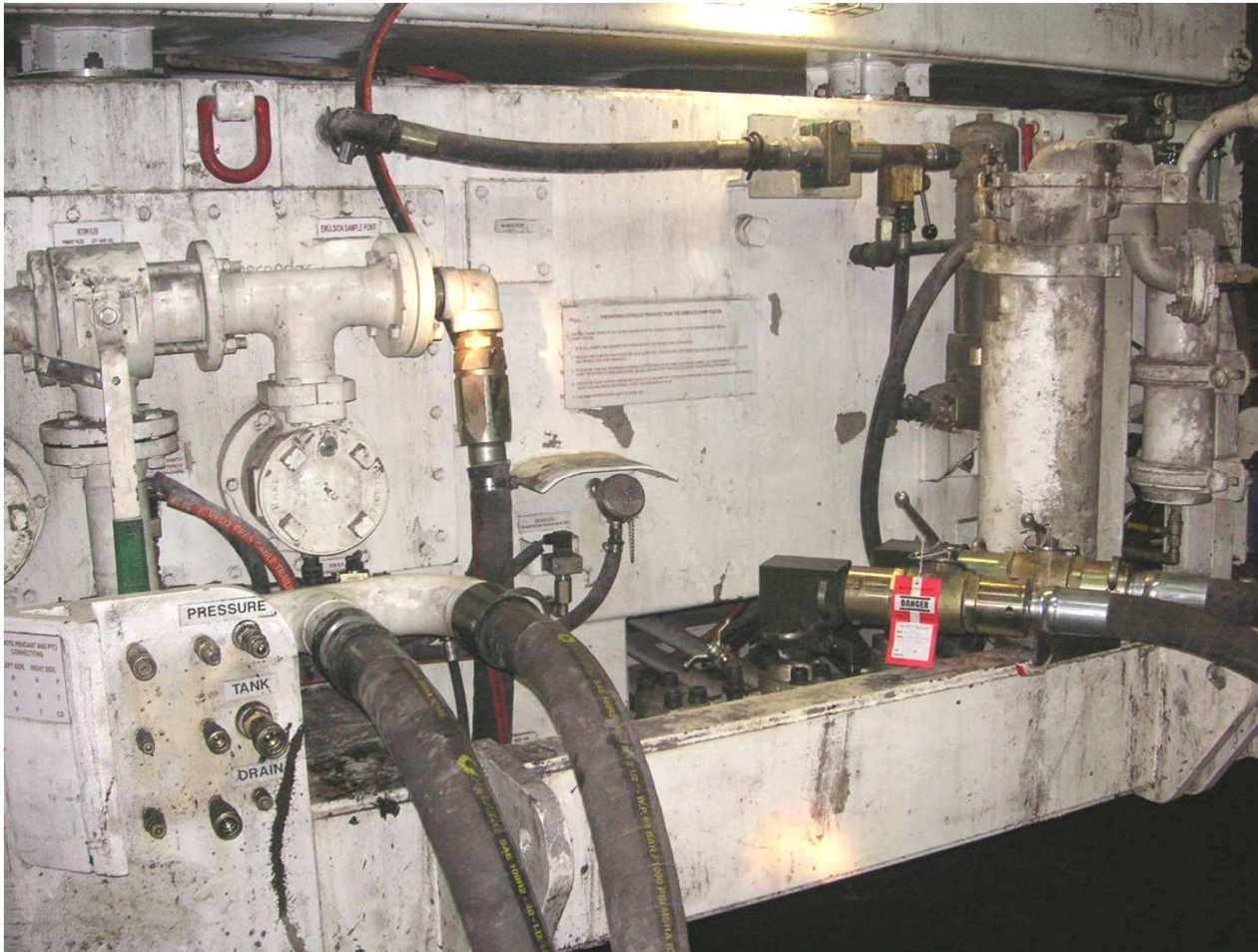
Safety Alerts  
SA 11-05  
SA 11-06  
SA 11-12

# Contact with Energy

- Electrical energy contact            13 O/C            8 UG
- Escape of fluid/pressure            3 O/C            190 UG  
that could place a  
person at risk

**HIGH Potential for a fatal outcome**

# Contact with energy



How do you consider energy risks ?

Do you treat these items differently:

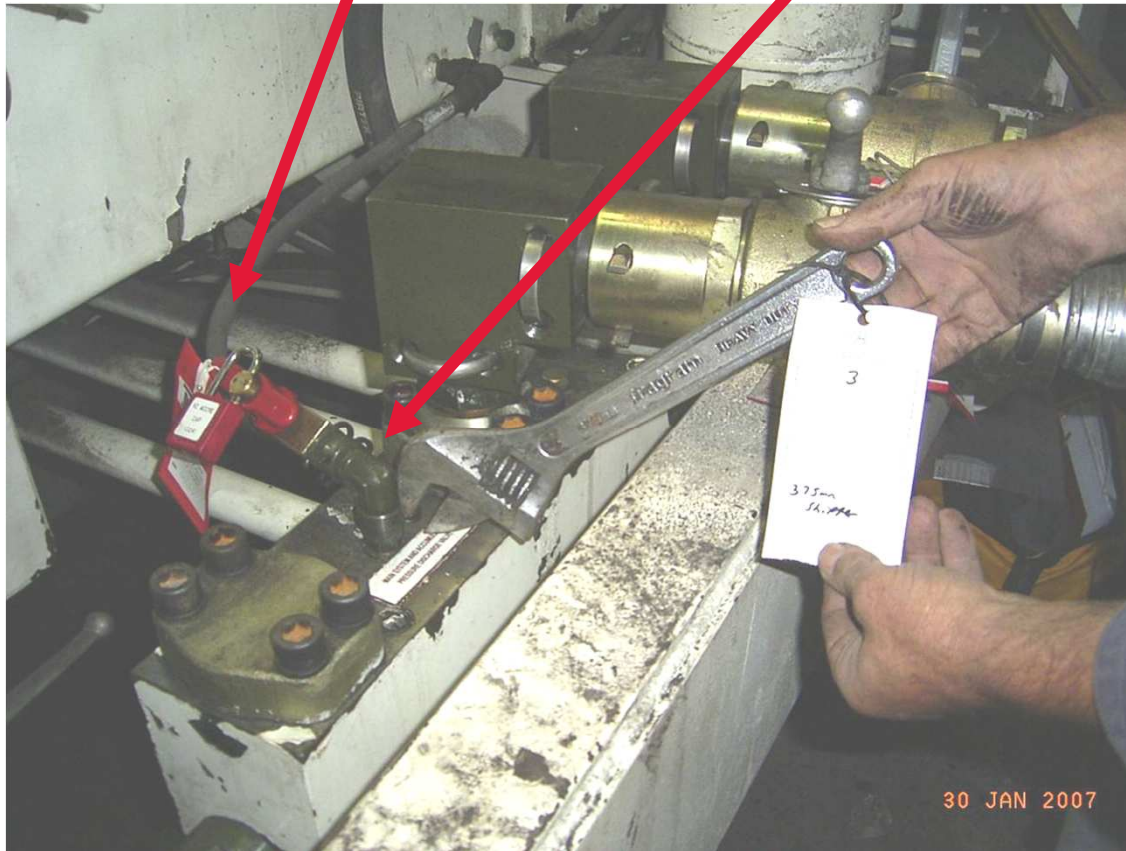
- 11kv cable
- 1,000v miner cable cable damage
- 305 bar (4,400 psi) Hydraulic hose



# Contact with energy

Low pressure side

High pressure side



Hydraulic hoses  
305 bar (4,400 psi)

What would you  
consider necessary  
before removing  
a staple with a shifter ?

Safety Alerts  
SA 06-16  
SA 11-04 ARC flash

# Cultural Issues

- Production pressures
- Silo effect – responsibility across different departments
- Risk blindness – aware of risk but accepts the risk
- Poor reporting – no JSA or SWP
- Supervision – complacency
- Leadership – no task observations, no auditing, no monitoring

# Some things to think about

- Do you review your mine incident reports and look for patterns of injuries.
- Can you become safety blind, by being too close to the action.
- Can getting the job done quickly affect the safety culture.
- Is the main aim of filling out the 5 x 5 matrix paperwork to get from red to green without taking time to properly understanding the task risks
- Are the risks being properly considered by the team and controlled
- Are job steps properly communicated to the person doing the job by the person writing the JSA or SWP
- Is the JSA written by a team of one