

## MDG 9 - Fatal Incidents on Shuttle Cars

<b>Incident Information</b>	<b>Agent of Fatality</b>	<b>Events</b>	<b>Recommendations</b>
<b><i>Coal and Underground</i></b>			
<b>9/04/2007 Australia Queensland Coal Underground</b>	Other	The crew miner driver was crushed between a shuttle car and the rib.	
<b>30/10/2006 United States Coal Underground</b>	Unintended Operation of Equipment	Operator was crushed between shuttle car and a coal rib. He was trying to fix a stuck brake without de-energizing the car or applying the brakes.	Proper maintenance of shuttle cars will be performed daily, remove immediately equipment known to be faulty, cars must be de-energized before maintenance takes place.
<b>20/04/2006 United States Coal Underground</b>	Fall of Roof/Sides/Highwall	Operator was travelling when a large section of rock fell and pinned him against the mine floor.	Change in the roof control plan and training to follow this correctly. Examiners also received more training as did workers in hazard identification.
<b>10/06/2005 United States Coal Underground</b>	Other	Shuttle car was running with the drivers attention diverted to another side, man was run over and only discovered when cables were not running well.	Audible warnings on shuttle cars to alert workers, starting a policy regarding being around moving equipment.
<b>21/12/2004 United States Coal Underground</b>	Uncontrolled Release of Energy	During installation of wheel and tyre, lock ring and flange separated and struck the victim	Mine changed from use of air filled tyres to foam filled tyres to prevent a re-occurrence.
<b>19/07/2003 United States Coal Underground</b>	Electrocution	An exposed trailing cable on one of the five shuttle cars caused water in the area to become energized and when they came into contact with victim he was electrocuted.	All of the cables in immediate area should have been de-energized and locked/tagged out, cables should be better protected from wear and not lying in any water.
<b>23/05/2002 United States Coal Underground</b>	Electrocution	While trying to remove a short circuit from trailing cable of a shuttle car, there was an explosion which severely burned the victim.	Never short circuit a trailing cable to remove a grounded phase.
<b>14/08/2000 United States Coal Underground</b>	Contact with Moving or Rotating Plant (Guarding/Access to Danger Zone)	A machine operator was fatally injured helping move a shuttle car to dump point. Victim was walking along side shuttle car when it became stuck against the roof. Operator lost sight of victim and as shuttle car broke loose it crushed victim against rib.	Before moving equipment, miners should make a visual check and sound audible alarm. All persons helping operators move mobile equipment be positioned a safe distance from equipment while it is in motion.
<b>10/04/2000 United States Coal Underground</b>	Other	A shuttle car operator received fatal injuries when he was crushed between operator's cab of a shuttle car and rib. Feeder location permitted shuttle cars to be close to rib. As operator exited cab, another car hit his car while he was between rib and car	Dump points be located with sufficient clearance between rib and operators cabin to allow equipment operator to safely enter and exit equipment. Equipment operators be instructed to ensure they have clearance when approaching dump points other equipment.

<b>24/08/1997</b> <b>United States</b> <b>Coal</b> <b>Underground</b>	Contact with Moving or Rotating Plant (Guarding/Access to Danger Zone)	During mining operations a fall of roof occurred and workers exited area. A shuttle car was accepting coal from a continuous miner. A continuous miner operator and helper ran while shuttle car was trammed out. Helper tripped and was run over by shuttle car.	
<b>9/12/1996</b> <b>United States</b> <b>Coal</b> <b>Underground</b>	Fall of Roof/Sides/Highwall	During a pillar recovery mining operation a shuttle car operator was seriously injured and later died from injuries. A fall of roof occurred when the shuttle car was advanced in by roof supports. Canopy was removed from car due to height restrictions.	
<b>1/11/1996</b> <b>United States</b> <b>Coal</b> <b>Underground</b>	Contact with Moving or Rotating Plant (Guarding/Access to Danger Zone)	A continuous miner operator was fatally injured as he was run over by a shuttle car during a fall of roof. When mining a new pillar block a fall occurred and all workers in area ran out by. Victim was last and when shuttle car was trammed out he was run over	
<b>29/10/1996</b> <b>United States</b> <b>Coal</b> <b>Underground</b>	Fall of Roof/Sides/Highwall	A shuttle car operator was fatally injured by a fall of roof. Victim was tramping shuttle car from dump to face when the fall occurred. Shuttle car canopy was removed due to height restrictions. Two roof bolts were earlier sheared off and not replaced.	
<b>30/09/1996</b> <b>United States</b> <b>Coal</b> <b>Underground</b>	Other	A shuttle car operator was tramping a loaded shuttle car from a continuous miner to dump point when he stopped to move a cable. As he started again he collided with another loaded shuttle and the operator in first car was hit and suffered fatal injuries.	
<b>12/09/1995</b> <b>United States</b> <b>Coal</b> <b>Underground</b>	Electrocution	A shuttle car operator was electrocuted when exiting his machine at a dump area. Investigators found damaged power conductor and a grounded phase in the trailing cable. The 2 faults combined with wet conditions resulted in a phase-phase voltage condition.	Electrical equipment and cables should have adequate insulation and grounding facilities. Accident scenes should not be altered and left in same situation until inspectors arrive. Electrical inspection should be done by competent persons.
<b>23/08/1995</b> <b>United States</b> <b>Coal</b> <b>Underground</b>	Other	A shuttle car operator was crushed between shuttle car and a scoop. Shuttle car was returning from face with a load of coal, when it lost all electrical power. Operator stopped to look at cable reel when a scoop struck shuttle car crushing operator.	Regular maintenance of equipment should be carried out including, cables on shuttle cars. Work safe procedures should be developed for mobile equipment in the mining area and personnel around this equipment. Hazard risk management should be implemented.
<b>12/05/1995</b> <b>United States</b> <b>Coal</b> <b>Underground</b>	Other	A shuttle car operator was fatally injured when he was struck by another shuttlecar. A loaded shuttlecar was coming out of a crosscut and hit the shuttlecar returning to face broadside. The deceased operator was pinned in operator's deck.	

<b>1989</b> <b>Australia</b> <b>New South Wales</b> <b>Coal</b> <b>Underground</b>	Other	As the shuttle car was taking coal from the miner to the Conveyor belt and when negotiating a turn the shuttle car lurched in one direction and crushed the deputy.	
<b>1987</b> <b>Australia</b> <b>New South Wales</b> <b>Coal</b> <b>Underground</b>	Other	Machine man suffered fatal injuries when caught between a shuttle car and the boom of a continuous miner.	
<b>25/06/1985</b> <b>Australia</b> <b>Queensland</b> <b>Coal</b> <b>Underground</b>	Fall of Roof/Sides/Highwall	Fatally injured when a section of a seven metre high rib fell on him during the removal of bottoms coal in the 4 South Section of the mine whilst he was driving a shuttle car, partially burying him.	
<b>14/12/1983</b> <b>Australia</b> <b>New South Wales</b> <b>Coal</b> <b>Underground</b>	Other	A shuttle car with an ineffective braking system rolled down an incline and pinned a man between the shuttle car and a continuous miner.	
<b>18/03/1981</b> <b>Australia</b> <b>New South Wales</b> <b>Coal</b> <b>Underground</b>	Fall of Roof/Sides/Highwall	Was buried while operating the tensioning device of a shuttle car by a roof fall in an area of high width.	
<b>20/07/1980</b> <b>Australia</b> <b>New South Wales</b> <b>Coal</b> <b>Underground</b>	Other	A man trespassing walked into the main drift and as struck by a dolly car on a return journey.	
<b>1975</b> <b>Australia</b> <b>New South Wales</b> <b>Coal</b> <b>Underground</b>	Fall of Roof/Sides/Highwall	Attempted to work under unsupported roof following it being dislodged by a shuttle car. The area should have been tested and had temporary support set.	
<b>1975</b> <b>Australia</b> <b>New South Wales</b> <b>Coal</b> <b>Underground</b>	Other	His head struck a wooden bar on the low clearance roof, which had been set in order to carry a water pipe and cable across the roadway.	
<b>19/03/1974</b> <b>Australia</b> <b>Queensland</b> <b>Coal</b> <b>Underground</b>	Other	Fatally injured when struck by a prop lying on the floor in the path of a shuttle car.	
<b>11/02/1974</b> <b>Australia</b> <b>Queensland</b> <b>Coal</b> <b>Underground</b>	Other	Fatally injured when a Torkar Shuttle Car moving down an incline ran over him.	
<b>1/01/1973</b> <b>Australia</b> <b>New South Wales</b> <b>Coal</b> <b>Underground</b>	Other	Shuttle car driver received fatal injuries when crushed between shuttle car and the roof.	

<b>18/05/1971</b> <b>Australia</b> <b>Queensland</b> <b>Coal</b> <b>Underground</b>	Unintended Operation of Equipment	Fatally injured when a pawl jumping out from a parking lock allowed a shuttle car to run back down the dip crushing Mr Lyon.	
<b>1971</b> <b>Australia</b> <b>New South Wales</b> <b>Coal</b> <b>Underground</b>	Fall of Roof/Sides/Highwall	Buried by a fall of roof at an intersection when he dislodged a support with a shuttle car he was driving	
<b>1971</b> <b>Australia</b> <b>New South Wales</b> <b>Coal</b> <b>Underground</b>	Unintended Operation of Equipment	Was crushed by a diesel shuttle car, while car was parked on grade with engine running. Vibration and wear caused the handbrake to work off and the car ran forward, trapping the workman.	
<b>1971</b> <b>Australia</b> <b>New South Wales</b> <b>Coal</b> <b>Underground</b>	Other	Died when run over by a shuttle car. Not determined why he wasn't clear of the car.	
<b>1970</b> <b>Australia</b> <b>New South Wales</b> <b>Coal</b> <b>Underground</b>	Other	Shuttle car slewed on a roadway and ran under the lip of a brushed section of roadway. Full width brushing would add additional height.	
<b>1967</b> <b>Australia</b> <b>New South Wales</b> <b>Coal</b> <b>Underground</b>	Fall of Roof/Sides/Highwall	Trapped against a shuttle car by a fall of rib coal which had occurred 25 feet back from the face. Neither side had been supported.	
<b>23/07/1966</b> <b>United States</b> <b>Coal</b> <b>Underground</b>	Gas Ignition Explosion	Methane explosion from a shuttle car arc	
<b>12/07/1966</b> <b>Australia</b> <b>New South Wales</b> <b>Coal</b> <b>Underground</b>	Other	Drove the shuttle car with his back towards direction of travel, he was trapped between the shuttle car and an overhanging rib	
<b>3/07/1966</b> <b>Australia</b> <b>New South Wales</b> <b>Coal</b> <b>Underground</b>	Other	Deceased workman had driven his shuttle car too close to the leg supporting a carrier bag bar at an intersection. The worker inadvertently hit the drive lever and was jammed between the shuttle car and the leg support.	
<b>9/11/1965</b> <b>Australia</b> <b>New South Wales</b> <b>Coal</b> <b>Underground</b>	Fire	Timber was found between the disc brake and drive shaft of a shuttle car which had heated and caused ignition. Ventilation was inadequate in this region.	Change the site of the shunting station and improve the mines ventilation plan.
<b>1965</b> <b>Australia</b> <b>New South Wales</b> <b>Coal</b> <b>Underground</b>	Other	Was hit and run over by a fully laden shuttle car	

<b>1962</b> <b>Australia</b> <b>New South Wales</b> <b>Coal</b> <b>Underground</b>	Electrocution	Battery type shuttle car was being driven outby from underground charging station when the car struck and damaged a 415V cable and the driver was electrocuted.	
<b>1960</b> <b>Australia</b> <b>New South Wales</b> <b>Coal</b> <b>Underground</b>	Uncontrolled Release of Energy	Broken down caterpillar coal loading machine was being towed from a working place by 2 shuttle cars. One of the chains dragging this failed and swung violently sideways, striking a workman, killing him.	
<b>1956</b> <b>Australia</b> <b>New South Wales</b> <b>Coal</b> <b>Underground</b>	Other	Being struck by a shuttle car	
<b>1956</b> <b>Australia</b> <b>New South Wales</b> <b>Coal</b> <b>Underground</b>	Other	Struck by a prop knocked out by a shuttle car	
<b>1955</b> <b>Australia</b> <b>New South Wales</b> <b>Coal</b> <b>Underground</b>	Contact with Moving or Rotating Plant (Guarding/Access to Danger Zone)	Becoming entangled in a brattice door while operating a shuttle car	
<b><i>Non-Coal</i></b> <b><i>Underground</i></b>			
<b>28/08/1998</b> <b>United States</b> <b>Non-Coal</b> <b>Underground</b>	Electrocution	A cable for a shuttle car was on the mine floor in water, which caused a circuit breaker to trip. After resetting breaker and hanging cable on rib a superintendent was electrocuted as he came in contact with damaged spot on checking the energized cable.	Ground faults should be repaired prior to energizing equipment or wiring. Cable damage should be corrected immediately. Insulated gloves should be used when handling energized cables. Power cables should be protected from damage.
<b>13/04/1956</b> <b>Australia</b> <b>Queensland</b> <b>Non-Coal</b> <b>Underground</b>	Contact with Moving or Rotating Plant (Guarding/Access to Danger Zone)	Fatally injured whilst endeavouring to jump clear of an impending collision and was crushed between the wall of the T56 drive and the rear cable bottom truck which was derailed.	
<b><i>Unknown</i></b> <b><i>Underground</i></b>			
<b>7/05/1980</b> <b>New Zealand</b> <b>Unknown</b> <b>Underground</b>	Other	Was killed when the machine he was driving dislodged some roof supports which fell on him	