Incident periodical

Recent High Potential Incidents
Learnings and Recommendations
Communications

September 2023

Coal Inspectorate

Resources Safety & Health
Queensland

1. Surface Incident – Vehicle collision near miss

- A light vehicle (LV) turned left after stopping at a T-intersection and entered a haul road in front of an empty rear dump truck (RDT) travelling in the same direction.
- The RDT took evasive action to avoid a collision, stopping 10 to 15m from the LV.
- No injury or damage was reported, however, the potential existed for a serious incident to occur.
- Investigation findings included:
  - LV operator mistook the flashing blue light on the haul truck as an indicator that the truck was turning left at the intersection.
  - The LV operator was distracted at the time, talking to a vehicle passenger.
  - Prior to the incident the RDT was travelling faster than permitted.

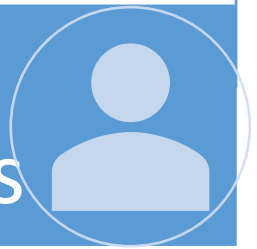
Recommendations

- Review mine road rules including;
  - rules for vehicles proceeding through intersections
  - function, operation and visibility of clearance and indicator lights, assessing risks where vehicle lights have dual functions
  - speed limits and road signs for loaded & unloaded vehicles.
- Reinforce expectations re-CMWs focusing on the task at hand e.g., driving and not being distracted or complacent.
- Implement vehicle proximity detection.

Site Senior Executive

- Review and communicate mine road rules with relevant CMWs.
- Communicate to all CMWS awareness information re-
  - risks and controls associated with vehicle interactions with all road users
  - Including not proceeding through intersections unless certain of other vehicle intentions
  - being task aware and reducing the risk of becoming distracted or complacent.

OCE and Supervisors



- Understand and comply with current mine road rules, training and signposting.
- Inform supervisors or report potential hazards such as confusing lighting, indicators, signs etc.
- CMWs in charge of operating plant must focus on the task, not be complacent or be distracted by undertaking other tasks such as talking, radio chatter.
- Only proceed through intersection when intentions of other vehicles are clear and known.

Coal Mine Workers

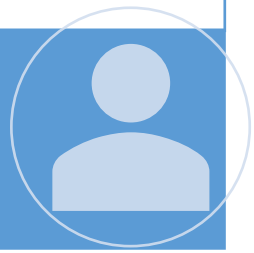
2. Surface Incident – Rear dump truck tyre fire

- An excavator operator observed a small flame coming from pos 5 tyre tread on a rear dump truck during loading.
- The truck operator exited without incident, ERT responded and extinguished the fire using a water truck. An exclusion zone was established.
- Investigation findings included:
  - that the external tyre fire was likely caused by tread separation due to a rock cut from road debris or unfavourable ground conditions.
  - inadequacies in site procedures & communications for dealing with suspected tyres incidents.

Recommendations

Site Senior Executive

- Review and update site procedures for dealing with hot tyres & tyre fires including communication requirements, scene security, exclusion zones and actions to be undertaken considering the “life” of a hot tyre event over multiple shifts.
- Review and incorporate learnings from previous hot tyre and tyre fire events into the mine's procedures.
- Investigate alternate technology that may be used to assess tyre tread separation and hot tyres to assist visual inspection processes.
- Review procedures with operational supervisors.



OCE and Supervisors

- Regularly audit roads and work areas for compliance with mine operating standards.
- Take actions to make sure roads are maintained to mine operating standards and minimise risk of tyre damage.
- Communicate to all CMWs site procedures for dealing with suspected hot tyres, tyres fires & tyre monitoring.

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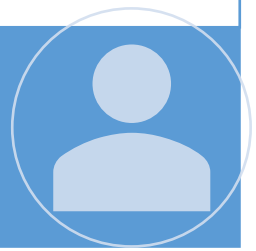
- Report road and work area defects that may affect tyre condition and life as per the mine reporting systems.
- Understand and comply with site procedures for dealing with hot tyres, suspected tyre fires.



3. Surface Incident – Serious hand injury

- A CMW suffered a serious hand injury whilst replacing a load roller on a dozer.
- The load roller moved unexpectedly, crushing the CMWs finger between the roller and track.

- Investigation findings included:
  - Supervision & planning inadequacies.
  - Communication issues.
  - Inadequate manning when spotter reallocated to another task.
  - Lack of risk management, JHA, SOP.
  - Lack of specialised tooling.

Recommendations

- Review supervision and manning requirements for tasks.
- Review and communicate site risk management, isolation and tagging procedures.
- Provide suitable tooling to eliminate the need for hands to be in any pinch / crush zone.
- Implement a “Hands Free” work initiative
  - Establish work registers for Hands Free tasks
  - Provide suitable tooling
  - Make sure SOPs for the tasks are available and utilised.

Site Senior Executive

- Supervisors to plan and adequately resources tasks.
- Make sure risk management processes including SOPs, JSAs are supplied, followed and their use monitored.
- Make sure specialised tools are maintained and provided to CMWs as required.
- Communicate and reinforce mine risk management processes.

OCEs and Supervisors

- Follow mine risk management procedures. This includes completing on the job hazard analysis.
- Utilise specialised tools to eliminate need for hands to be in any pinch / crush zone.
- Where tasks being undertaken change from the plan; stop and re-evaluate risks following the mine procedures.
- Actively practice risk management strategies with fellow workers.

Coal Mine Workers

4. Surface incident – Potential crush injury

- A CMW was pinned between a slow-moving light vehicle (LV) and a stationary exploration driller's water truck.
- The CMW was able to extricate themselves from the small gap between the vehicles.
- Soft tissue injuries and bruising to the lower torso was suffered.
- Investigation findings included:
  - Mine transport rules were not followed.
  - The vehicle was not parked fundamentally stable before the CMW got out of the LV.
  - The LV was left with the engine running, in gear and the hand brake not engaged.

Recommendations

- Communicate expectations with CMWs to comply with mine standards and procedures.
- Re-communicate mine transport rules, including those related to leaving vehicles unattended and fundamentally stable.
- Make sure an effective means of communication is in place for all remote workers such as exploration crews.
- Determine and document communications coverage on all surface access areas and provide to affected CMWs.

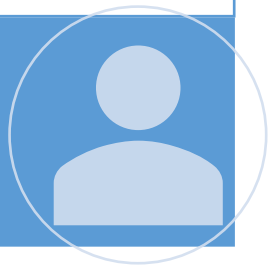
Site Senior Executive

- Make sure CMWs under supervision understand expectations on safety behaviours, compliance with mine standards and rules; including vehicle transport rules.
- Monitor compliance with rules and standards and take proactive action to support positive safety behaviours.

OCEs and Supervisors

- Comply with mine vehicle rules:
  - Park vehicles as per site expectations
  - Make sure the vehicle is fundamentally stable before exiting.
- Guard against complacency.

Coal Mine Workers



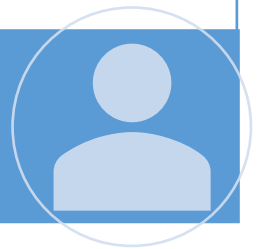
5. Underground Incident – CMW struck by projectile

- A CMW was manually operating the longwall AFC push function at the TG end of the longwall.
- A dog bone dislodged under tension, a retaining hockey stick failed, and a piece of the hockey stick ejected striking the CMW in the back.
- The CMW was transported to hospital for assessment and treatment for soft tissue injuries to their back.
- Investigation findings included:
  - Manual operations were being used to push the AFC instead of the auto function. This placed additional strain on components.
  - Similar issues had occurred on previous shifts and had not been communicated.
  - Non-engineered components & inadequate instructions.

Recommendations

Site Senior Executive

- Ensure fit for purpose equipment installed and operated.
- Make sure change management processes are in place, understood and utilised when alternate or modified components are proposed.
- Ensure longwall operation and maintenance procedures are current and communicated.
- Update commissioning documents, including installation requirements for dog bones and retaining pins.
- Initiate an audit of longwall equipment against site installation and commissioning documentation.



ERZs and Supervisors

- Make sure CMWs are aware and understand equipment installation standards and requirements.
- Ensure equipment no-go zones are communicated and delineated.
- Make sure CMWs understand operations procedures and comply with no-go zones.
- Complete audits of equipment to make sure it is installed and operated as intended.
- Follow site change management procedures when changes to equipment are contemplated.

Coal Mine Workers

- Install equipment such as dog bones and retainers as per mine installation and commissioning plans.
- Replace components with like for like.
- Operate equipment within operating parameters and comply with no-go zones.
- Report defects using the mine defect management processes.

6. Underground Incident – Foot trapped in machine door

- A CMW was completing underground conveyor roadway inspections. He approached a set of machine doors that were half open.
- Pushing on the door, the door released and shut very quickly trapping his foot between the doors.
- The CMW required assistance to remove himself from the door.

- Investigation findings included:
  - The door was not operating correctly. It should have opened and closed when actuated.
  - The door system had not been appropriately maintained.
  - Compressed air water drains had been closed and a bent air ram was found.

Typical machine door

Recommendations

Site Senior Executive

- Ensure systems and procedure in place to make sure ventilation machine doors and man doors are properly inspected and maintained.
- Audit inspection and maintenance systems to make sure system requirements are being followed.
- Review the effectiveness of site defect management system for capturing and addressing ventilation system defects.
- Initiate site wide audits of all doors to make sure they are fully functional.
- Ensure no-go zones and access procedures for doors are clearly delineated and communicated.

ERZs and Supervisors

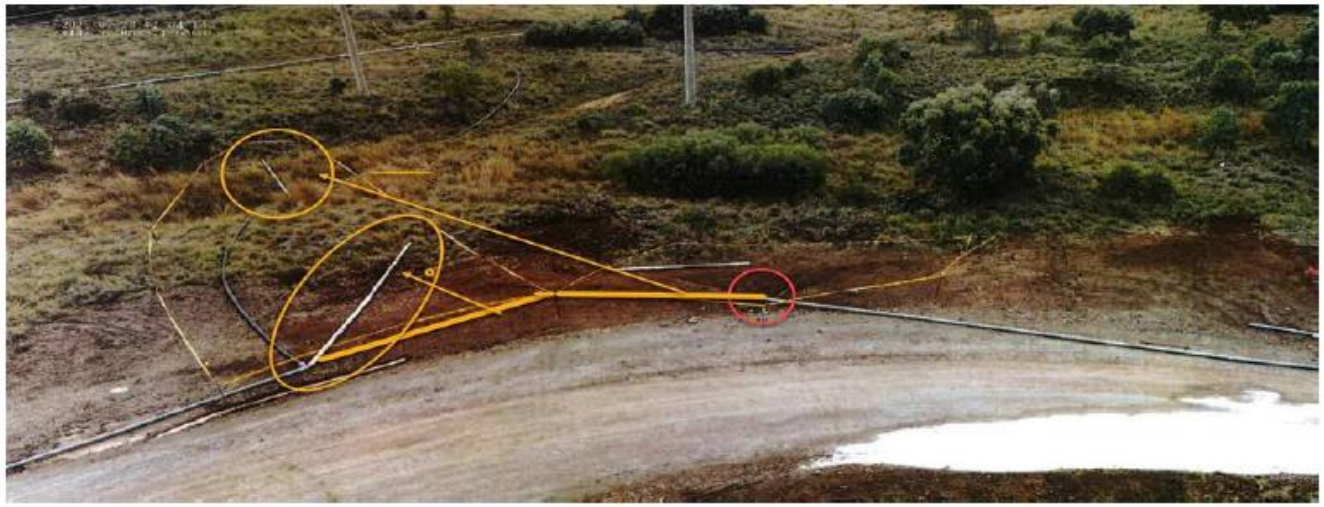
- Ensure site inspection and maintenance procedures for ventilation devices are implemented and followed.
- Communicate door no-go zones to all affected CMWs.

Coal Mine Workers

- Proactively report defects.
- Comply with site door access procedures.
- Follow site requirements related to no-go zones, especially around ventilation machine and man doors which can close unexpectedly.

7. Underground Incident – Pipe coupling failure

- CMWs were using a battery powered impact wrench to tighten coupling bolts on a leaking shouldered pipe coupling when the coupling has failed catastrophically.
- Workers were thrown back suffering injuries to face and arms. A section of pipe and the impact wrench were found several metres from the incident site.
- Investigation findings included:
  - The pipeline had not been isolated and depressurised prior to work commencing.
  - The style of coupling could be overtightened.
  - Impact torque settings were higher than recommended by the coupling supplier.



Red circle shows IW position yellow indicates pipe pre and post clamp failure

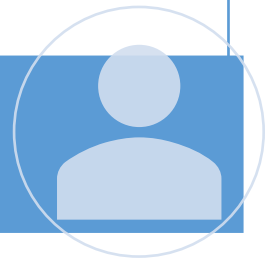
Recommendations

Site Senior Executive

- Reinforce mine isolation and de-pressurisation requirements when working on fluid power systems.
- Review style and type of shouldered pipe clamps used at the mine.
- Make sure clamp designs do not permit the assembly to be overtightened and fail catastrophically.
- Ensure technical specifications and installation procedures for plant are available to CMWs and supervisors.

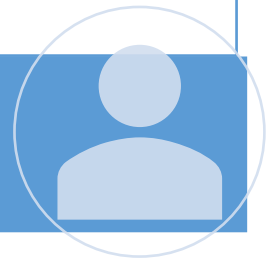
ERZs and Supervisors

- Communicate mine isolation and depressurisation procedures for fluid power systems to all affected CMWs.
- Confirm work instructions including requirements to isolation and de-pressurise before working on pressurised systems.
- Make sure CMWs are applying risk management practices for all tasks.
- Make sure CMWs are provided with relevant technical information and the information is understood.



Coal mine workers

- Take the time to consider and address risks involved in all steps of a job being undertaken.
- Follow site isolation and de-pressurisation rules when working on fluid power systems.
- Make sure correct torque settings are known and applied before using powered wrenches.



COMMUNICATIONS

- Request for feedback from RSTWG on spontaneous combustion management
- Request for feedback from QMI – Draft Guidance Note: Dust in electrical cabinets
- 2022 Level 1 Mine Emergency Exercise report now available
- BOE – Surrender of Certificate of Competency
- Gazettal of Recognised Standard 11: Training in coal mines
- BOE – Requirements for applying to sit for Certificates of Competency from 1 July 2023

RECENT SAFETY NOTICES

Safety Bulletin 215 Counterfeit items	**Safety Alert 434** Drear dump truck rollver	**Safety Alert 433** Unplanned movement of bulldozer into reclaim feeder	**Safety Bulletin 214** Dozer falls into coal stockpile void	**Safety Bulletin 213** Dozer rollovers

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2023 Safety Reset

Periodicals

Coal Mining Safety and Health Act 1999

Safety Notices

Board of Examiners

FREE Registration for the PCS Scheme

Mining Hazards Database

Recognised Standards