

Significant Incident Report

Mines

Mines Inspectorate

Significant Incident Report No. 78
10 August 2011

Longwall shearer frictional ignition hazard

Mine type: Underground coal mine — longwall

Incident: While cutting into an igneous rock intrusion, a damaged coal-cutting shearer (see photo right) created sparks that could have caused an ignition.

Hazard: Potential ignition of methane gas or coal dust.

Equipment: Damaged picks, pick sleeves, pick blocks, water sprays (see photos below)

Causes:

- Material in the intrusion was much harder than the coal, resulting in increased wear on the shearer and picks.
- The operator did not notice the damage to the cutting equipment.
- The possible consequences of continued cutting with damaged equipment were not identified.
- There was poor communication of, and lack of adherence to, the drum pick inspection regime.
- The management direction to the crew—i.e. to continue cutting to position the shearer at the maingate for maintenance—was not communicated to the coal mine Deputy.



Comments

Mine Management had previously identified hazards when mining through the hard rock intrusion. The shearer had been fitted with specialised drums to suit the changing conditions, and heavier bodied picks had been sourced and fitted for cutting the intrusion. Fortunately, in this incident, methane levels were insufficient to fuel an ignition.

Recommendations

1. Quantify the inspection regime and monitor use of inspection sheets, records of inspections and records of any damaged equipment changed out.
2. Increase frequency of cutting drum inspections when intersecting intrusions.
3. Implement appropriate controls for mining through methane drainage holes.
4. Ensure the appointed ERZ Controller is on the longwall face during intrusion intersection.
5. Before intersecting intrusions, conduct longwall crew training on additional hazards expected.
6. Conduct face-to-face handovers.

Gavin Taylor, Chief Inspector of Coal Mines

Contact: Tim Watson, Inspector of Mines, +61 7 4967 0648

Please ensure all relevant people in your organisation receive a copy of this document. Any such advice supplied to site should reach those who require it, and it should also be placed on the mine noticeboards. See more Safety Alerts, Safety Bulletins and Significant Incident Reports at www.dme.qld.gov.au/mines/safety_information_bulletins.cfm