



Queensland Government

Mackay District Office

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Mine Name	Mine ID	Operator	Activity Type	Region	Activity Date
Grosvenor Coal Mine	MI02976	Anglo Coal (Grosvenor Management) Pty Ltd	Investigation	Central	09/02/2016

Our Vision: **Zero Serious Harm**

Mine Record Entry

This report forms part of the Mine Record under s68 of the Coal Mining Safety and Health Act 1999. It must be placed in the Mine Record and displayed on Safety Notice Boards.

Note that inspection or audit activities conducted by the Mines Inspectorate are based upon sample techniques. It remains the primary responsibility of Mine Personnel to identify hazards, and risks associated with Operations and ensure those risks are at an acceptable level.

Site Safety & Health Reps Consulted: Jason Sharpe

This MRE deals solely with the investigation by Inspectors Richard Gouldstone and Shaun Dobson, into elevated gas emission at the development face, MG 101 C heading.

It was investigated by the inspectors during a planned routine inspection. The content of the planned inspection involved -

- Structured Inspection Guides associated with Ventilation and Contractor Management
- Examination of Management of Respirable Dust

and is contained in separate MREs.

1.0 Investigation Day 1 – 09/02/2016

On Tuesday 9 February 2016, at 5pm, Inspector Richard Gouldstone and Acting District Inspector Shaun Dobson attended Grosvenor Mine. The attendance was prompted by a telephone call, at 12:30pm to Inspector Dobson, from Mr Brad Watson (Operations Manager), informing him that an incident of elevated gas emission had occurred at the development face MG 101 C heading, and that men had withdrawn from the immediate area. The incident was 15 minutes in duration and no person had suffered adverse effects.

The incident occurred at approximately 11:05pm Monday 8 February 2016 and the

site remained isolated.

After consideration of the initial information the decision was made by the inspectors to travel immediately to the Mine to investigate the matter.

1.1 Opening Meeting

The Inspectors were met and fully briefed on the circumstances of the incident by -

Mr Adam Foulstone (SSE)

Mr Brad Watson (Operations Manger)

Mr Mark Bobeldyk (Ventilation Superintendent/Officer)

Mr David Thomasson (TSM)

1.2 Incident Description

Work was in progress at MG 101 24CT C Heading, bolting the roof and both ribs when a 'bump' was heard by operatives. It was noticed that floor heave was occurring and witnesses reported an unusual odour. The gas monitoring devices held by ERZ Controller and a CMW began alarming. The CMW hit the Estop on the continuous miner (12CM12) dropping power to the machine.

Real time monitoring at the outbye end of the return C heading showed that GB methane had risen from 0.38 to 0.437 returning to 0.4 in approximately 15 minutes. There was uncertainty in regard to oxygen fluctuation as the reported levels from witnesses differed from the real time monitoring. The download information from hand held sensors would be available within 24 hours and could confirm the actual oxygen levels.

The Inspectors were provided with -

- 5x photographs of the scene showing the floor lift/fissure
- Copy of the Underground Strata Inspection Report showing geology mapping/observations, tell-tale monitoring results, minor faulting in ribs
- Permit to Mine MG 101-105 Version B

The Mine had progressed significantly towards completion of their investigation into the incident and will provide a copy for the inspectorate upon completion.

The form 1A will also be provided.

1.2 Proposed Action

It was agreed that mining could not continue, in MG 101 C heading, until the download of data from personal hand held gas detectors was received and interpreted in relation to comparison with witness accounts and data from other monitoring equipment. Hand held sensors were -

- CMW sensor - Altair ALT4X – 215285
- ERZ Controller sensor - Altair ALT5X - 39382

The Inspectors indicated that they would return to inspect the site of the incident at 8am the following day.

The additional controls to be in place in MG 101 B heading, pending completion of the investigation were -

- An ERZ Controller to be present with coal mine workers at all times when they are working at the face of the heading.
- Arrange for all continuous miner drivers to be issued with the same type of gas detector issued to ERZ Controllers.
- In future download data from all detectors used on a shift by shift basis to obtain more accurate data on transient fluctuations in gas levels.

It was accepted by the Inspectors that the level of control associated with the ventilation standards is of good standard and the course of action taken throughout was appropriate.

In this incident, elevated methane and alleged lowered oxygen content have been experienced associated rapid floor heave in close proximity to the working face.

Rapid floor heave has been encountered in a similar fashion on previous occasions but usually further from the working face. There has been no record of associated gas level fluctuation.

Attempts should be made to identify the frequency and magnitude of those fluctuations in future.

The incident, which was subjected to inspection by geologists and geotechnical personnel at the Mine did not include characteristics which suggested it may have been an outburst.

2.0 Investigation Day 2 10/02/2016

The Inspectors returned to the Mine at 8am Wednesday, 10 February 2016 and were met by -

Mr Adam Foulstone

Mr Brad Watson

Mr David Thomasson

The situation was reviewed when Mr Wayne Bull (UMM) arrived shortly afterwards. At that time the stored data from the hand held sensors had not been obtained.

2.1 Underground Inspection MG 101 C Heading

The personnel who travelled underground were –

Inspector Shaun Dobson

Inspector Richard Gouldstone

Mr Wayne Bull

Mr David Thomasson

Mr Neal Bryan (Shift Undermanager)

The party were met by ERZ Controller Mr Alan McPhail and accompanied to the site of the incident.

We observed –

a) A fissure in the floor extending back from the continuous miner between 100-130m chainage CT23. Post incident activity of stonedusting and access for investigation purposes meant that the fissure had been 'trampled'. More care should be exercised in future instances so that continued ground movement can be measured. Indications were that the floor lift and extension of the fissure continued beyond the first 15m but at a substantially slower rate.

b) Rib and roof conditions did not look significantly more disturbed than drivage to that point.

c) Conditions that were not indicative of an outburst

Discussions with a cross-section of miners confirmed that similar experiences had been encountered but not necessarily as noticeable. The details were as described by Mr Watson when first reporting the incident.

2.2 Debrief Meeting

The party emerged from the Mine at 6pm.

Present at various times during the debrief meeting with the Inspectors were –

Mr Brad Watson

Mr Adam Foulstone

Mr Wayne Bull

Mr Michael Webber

Mr Mark Bobeldyk

Mr David Thomasson

The hand held sensor data download had revealed that –

- Methane peak 2.85% on Altair 5x
- Oxygen content lowest level 19.5% on Altair 4x

This information dispelled any suggestion that the oxygen content had fallen below 19% and calculations conducted by the ventilation department, from real time mine monitoring, confirmed, that with the known ventilation quantity in the circuit concerned, it was impossible for <19% oxygen to have been present at the time of the incident. Maximum methane make was calculated at 160l/s.

The Mine then produced and passed to the inspectors, an interim report summarising the circumstances. The inspectors then agreed that mining could re-start in MG 101 C heading subject to the action listed in 1.2 above as they were satisfied that risk was at an acceptable level.

An ICAM is to be conducted including recommendations for future drivage. A copy of this is to be forwarded to the inspectors upon completion. Feedback will be provided after consideration by the inspectors.

The inspectors departed the Mine at 7pm.

Richard Gouldstone
Inspector of Mines

Shaun Dobson
Inspector of Mines (Coal)
Central Region