



Queensland Government

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Mine Name	Mine ID	Operator	Activity Type	Region	Activity Date
Grosvenor Coal Mine	MI02976	Anglo Coal (Grosvenor Management) Pty Ltd	Inspection	Central	18/01/2018

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.

Today, Thursday 18 January 2018 arriving at 8:30 am, Inspectors Les Marlborough, Richard Gouldstone and Mechanical Inspector, Mick Scully conducted a routine announced inspection at Grosvenor Mine. The inspectors were greeted by Mr Trent Griffiths (SSE) and an introductory meeting was held.

1.0 Introductory Meeting

In attendance :-

Mr Trent Griffiths (SSE)

Mr Cec Ivers (UMM)

Mr Rob Nowell (Production Manager)

Mr Christopher Carroll (MEM)

Mr Michael Webber (VO)

Inspector Marlborough

Inspector Gouldstone

Inspector Scully

The principal reasons for the inspection were, to introduce Inspector Scully to the Mine and to review the series of methane exceedances which have occurred in the recent past as Longwall 102 has moved into production. Contribution was made individually and at times collectively on all introductory matters

1.1 Methane exceedances

The series of exceedances were explained by Mr Griffiths by reference to LW102 Goaf Holes GR02L005 which gave a 3D representation of goaf holes drilled at various angles/directions in an attempt to effectively capture methane liberated by the Longwall which has retreated c123m. These were related to anticipated caving angles and the pattern of volumes of methane. The Mine intend to build on this information and respond to the requirement to

produce an investigation into the HPIs associated with methane exceedances. It is accepted by the Department that one report covering all exceedances to this time will suffice.

The difficulties of providing effective drainage is due to the face start position being coincident vertically with the Isaac River and associated sands.

Mr Ivers also made reference to a methane exceedance at 4:40 am 17/01/18. A plug of methane from a drilling site reached and tripped a methane sensor inbye the location . This in turn tripped power to the adjacent development. The ERZ Controller in attendance bagged the fan but on return to the surface indicated that the GB methane level would exceed 2,5% which it later did ie 2.7% at 7:10 am . The ERZ Controller was on his own so there was no assistance present to allow him to safely restore ventilation. The Mine was asked to provide the Form 1a in the usual manner and a copy of the investigation which shall include consideration of the circumstances under which a fan in the same situation might be safely restarted rather than allow a gas-fast situation to develop.

Inspector Marlborough made reference to other experiences in the Bowen Basin at mines where exceedances had occurred. Following exerted pressure from the Department and greater recognition by Mines of the hazard of elevated methane levels, substantially more effort and investment had been made into methane drainage capacity and efficiency. This was clearly increasing the amount of gas drained, decreasing operational downtime by early intervention to avoid exceedances rather than cutting to trigger trip events. Most importantly risk was being reduced.

1.2 Hydraulic Integrity of Powered Support System

Mr Carroll gave an account of the work undertaken to rectify the problems identified when the hydraulic integrity of the powered support system on LW101 was fully investigated as the Longwall came to a finish. All supports were returned to the surface for a complete re-hose and strip-down of the POCV valves and filters. The pump feeds and returns were also addressed. In future regular endoscopic examination will be undertaken in cooperation with supplier to keep a closer health check upon the system.

The impact the problem had upon the roof control standards on the Longwall 101 cannot be quantified because of other variables but the revised health monitoring of the system on Longwall 102 should provide earlier indication of progressive deterioration in support performance.

1.3 Update on Development Floor Methane Emissions

The following comments were included in the Mine Inspection report completed by Inspector Gouldstone 26/10/17.

'MG 103 Development

The Development has progressed beyond 29CT where the sequence was amended to include a short drill stub in the 29CT to allow coring and two flanking holes for B and C headings.

The Mine has instigated a Floor Heave and Gas Release Management team who are continuously monitoring progress and all parameters to identify potential causes and solutions. I have read through the sets of minutes provided to familiarise myself with the action being taken.'

The outcome of the precautionary approach taken has largely confirmed that the emissions generated were due to floor coal being left capping the lower part of the seam below the Tonstein band which periodically ruptured. The thicker the floor coal the more significant the emission with examination of minor peaks traced as being

attributable to thinner floor coal.

Examination of micro-geological features from coring showed features of cleat and coal hardness variation u[on examination by subject experts.

This reinforced the TARP associated with a tolerance of floor horizon no more than 300mm.

1.4 Update upon Hand Injury Initiatives & Current ACOM approach

Mr Griffiths gave an update on the way in which the Mine was addressing hand injury issues and in summary he explained that the current focus was not necessarily upon physical solutions but rather addressing the behavioural/ personal analysis/acceptance of risk factors which lead to such a spate of incidents.

We were invited and later attended an address to the oncoming Crew which gave feedback on responses to questionnaires sent to all Mine employees on attitudes to safety at the Mine inviting constructive criticism as to how safety might better be managed. The address, which was well received, gave statistical feedback and concluded with a series of actions delegated to nominated personnel as follow-up to the process.

To conclude the address a Coal Mine Worker who lost both legs in a mine accident gave his personal account of what happened, the impact it had and is still having upon him and his family, friends and workmates. He strongly reinforced what might have been done to have avoided the incident.

In his address the SSE also made reference to the number of staff changes there had been at the Mine and the potential therein for mixed messages and/or inconsistencies in the way in which the Mine addressed all issues.

1.5 Recent HPIs elsewhere

Mr Marlborough made reference to the following incidents -

- Near collision between a UTE carrying four personnel and large dump truck at T intersection
- CMW hit by motor vehicle as it arrived for commencement of shift. Driver blinded by sunlight. Fortunately only bruising resulted
- 6-Wheel all terrain vehicle rolled over when cornering too tightly
- 340 vehicle fires in open cut mines in 2017 with a tyre fire last weekend completely consuming a large dump truck
- Boilermaker received serious facial injury when a wear-plate he was gouging, released sprung and struck him in the face. This despite the recent information circulated regarding a fatality in almost identical circumstances at a local open-cut mine late last year.

1.6 Crane HPI in Grosvenor Workshops

Mr Griffiths showed a recording of the incident where an overhead crane securing/suspending a Driftrunner moved while two personnel were working underneath. The unplanned movement could have resulted in a double fatality. We discussed the progress of the investigation which is still on-going. Inspector Scully is to be advised of progress and provided with a copy of the investigation.

1.7 DPM at Grosvenor

Mr Carroll presented a report on Diesel Particulate Matter. The report outlined the types of diesels in use at Grosvenor, raw gas test results and the minimum ventilation requirement for each machine. The information is used to determine the number of vehicles allowed in each panel. Vehicles access to the panels is controlled by a diesel tag board. The subsequent inspection provided the opportunity to verify that tag boards are in used effectively.

Mr Carroll confirmed that he has chaired the opening meeting of the Grosvenor DPM team, but Mr Troy Evans will be the site champion for DPM. It is noted that Grosvenor is scheduled to have a DPM audit on the week starting 27th February 2018.

The upcoming DPM audit will be conducted by Inspectors Scully and Kennedy, one of whom will contact Mr Evans to outline the detail of the audit and provide notice of documentation required.

2.0 Inspection

Prior to moving underground the Inspectors attended the ACOM address by Mr Griffiths. They were accompanied during the inspection of Longwall 102 by Mr Nowell, Mr Ivers and Mr Carroll.

2.1 Surface Issues

On examination of ERZ Controllers reports there are safety related items reported in production reports which have not been recorded on the statutory reports.

Inspector Marlborough on examining and questioning the Gas Alarm Log and CRO identified that ERZ Controllers, on receiving alarm notification are not recoding the detail and action taken in their statutory reports.

2.2 Underground Issues

The travel route inbye was the subject of diversions which were communicated to the crews at their shift start meeting, due to major concrete works at intersections near pit bottom to improve roadway conditions following the Longwall move. Road conditions in general through the Mine could be improved. Mr Nowell acknowledged this and stated that work was in progress on improving the road conditions throughout the Mine.

2.2.1 Crib Room

The Inspectors were met at the crib room, which was in good condition, by ERZ Controller of the Bull-gang. Inspector Gouldstone asked him about activity and issues in progress on the Longwall and he made reference to -

- Difficulty with alignment and connection to AFC of No 1 & 2 supports due to creep and coal fines from friable roof
- Rib spall block side of BSL
- General roof conditions along the face were good
- TG roadway beginning to take weight as the face neared Longwall 1021 start line
- On-going elevated methane in TG and methane drainage action in progress
- Effectiveness of the various dust suppression equipment in use and its maintenance
- Seal construction at the last open cut through in front of the Longwall

The response Inspector Gouldstone received were detailed, consistent with reports and with the evidence on the Longwall when it was inspected.

2.2.2 SLAMS

Inspector Gouldstone asked to view SLAMS for two separate teams of CMW's. Seal construction at the MG last cut through and camera installation at TG AFC Drive. In both instances they were sufficiently detailed and appropriate for the task and the CMW's delivered the content with confidence and clear understanding. Both groups reinforced the messages they had received at the Mine ACOM address.

Inspector Marlborough had discussions with several groups of coal mine workers. All were aware of the hazards and controls associated with their tasks. All had completed SLAMS and some work groups had completed SLAM as a group activity. Inspector Marlborough complimented these groups on this. Discussions were held with all groups about their awareness of respirable dust issues and controls, especially when on production. All CMW's showed a good understanding of the controls in place.

2.2.3 Face Conditions

The Longwall was on maintenance at the time of inspection. The face was in good condition and there was clear evidence of effective dust suppression. Any coal fines present were well wetted and unlikely to become airborne. There had been little production in the preceding 24 hours but both the ERZ Controller and CMW's indicated that there had been significant improvement on the previous Longwall principally from sprays directed onto the AFC and spray gutters on each support beam.

LW Creep was slightly towards the TG, but it was explained by Mr Trennaman that the Longwall had been negotiating with some roof cavities on the face and they had been reluctant to take the necessary fly cuts given the situation. Now that the roof was under control, the creep would be addressed.

At the TG end of the face, the additional standing support in the Longwall TG was approximately 10 m outbye of the current face position. This support was in place to provide additional support as the Longwall retreats through a stress notch at the TG end predicted to require additional support. The intent of the maintenance being completed at the time of inspection was to minimise any unnecessary maintenance windows while mining through the stress notch area.

2.2.4 Lifting Equipment

Two sets of lifting equipment were identified as out of date and a third had a damaged safety clip. None were in use. These were removed from service and improved vigilance is required in this respect.

2.2.5 Roof supports

Mr Carroll and Inspector Scully reviewed the roof supports. The roof supports having recently been re-hosed appeared to be in good condition. It was noted that, along the face the minor stage of the roof support leg cylinders were not all set to the same position. This can sometimes be an indication of problems with the "Blipper Valve". Checks should be made to ensure that the leg cylinders are not working on the minor stage of the cylinder, and therefore providing reduced force.

2.2.6 Fire-Fighting Equipment

It was also noted that the location of fire extinguishers along the face is difficult to identify and that the spacing between fire extinguishers does not appear to be consistent.

3.0 Close-out Meeting

The meeting was attended by Mr Griffiths, Mr Ivers, Mr Carroll and Inspectors Marlborough and Scully.

Inspector Marlborough raised the issue of ERZ Controllers not including on their statutory

reports information regarding gas alarms reported to them by the Control Room Operator. It is important the ERZ Controllers not only record these reports, but they should also write on their reports the results of their investigation into the alarm and any actions taken as a result. Inspector Marlborough suggested that the mine communicate this to their ERZ Controllers.

The observations made during the underground visit were discussed. We discussed the roadworks that the mine was undertaking and Mr Griffiths acknowledged that the roadway standards could be improved and he confirmed that the mine was working towards this.

The Longwall standards were good and the efforts made by the crews should be acknowledged. There was very little evidence of dust accumulations through the LW face and this is evident from the dust sampling results from the Longwall SEG (Similar Exposure Group).

The mine had done some good work in analysing the gas data to try to predict the time when a goaf drainage hole is likely to come on line. This work will assist in the planning of effective goaf drainage to maintain a high level of control over the level of methane produced during production operations on the Longwall.

Inspector Scully requested a copy of the Diesel Particulate presentation that we were shown earlier in the day which Mr Carroll agreed to forward to Inspector Scully.

The Inspectors thanked the mine for allowing us to be present at their presentations to the crew and complimented them on the initiative. The mine explained that these presentations had been conducted to all crews and staff persons at Grosvenor.

Richard Gouldstone
Inspector of Mines

Les Marlborough
Inspector of Mines (Coal)
Central Region

Michael Scully
Inspector of Mines (Mechanical)
Central Region