



Mine Name	Mine ID	Operator	Activity Type	Activity Date
Grasstree Mine	MI01459	Anglo Coal (Capcoal Management) Pty Ltd	Inspection - Unannounced	05/02/2019

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: Stephen Watts

Today, arriving at 8am, Tuesday 5 February 2019 Inspectors Richard Gouldstone and Geoff Nugent undertook an unannounced Inspection of Grasstree Mine.

We were met by Mr Damien Wynn (SSE) and Mr Kelvin Schiefelbein (UMM) and we discussed the format for the day.

1.0 Introductory Meeting - topics discussed

1.1 Mine Status

LW 909

Commencing on 14/15 January 2019, LW909 has retreated approximately 120m with caving well progressed but the goaf is so far not fully consolidated.

The district is ventilated by intake from the bleeder shaft and travel road. The belt road is homotropally ventilated, and air is added at 16 and 11 CT to the air returning from the longwall tailgate via twin shafts at both locations. The Mine has substantially increased its methane drainage capability in the last 2/3 years and the number of HPis related to methane exceedances has decreased significantly.

We asked about control of methane while installing supports transported through TG909 and were informed that at times transport had to halt because of methane levels.

LW910

This was driven to mid-point but is now on stand because in situ methane was not drained below compliance level. The remainder of that district will be driven from the maingate side. Methane drainage activity for the panel is in progress from 909MG both behind and in-front of the retreating longwall with the requisite gas monitoring requirements in place.

LW908 Sealing

Sealing was completed and the goaf stabilised by 18 January 2019. Mr Schiefelbein is preparing an incident report which was requested by Inspector Gouldstone in an email ie

“Please supply the ICAM into the 5x exceedances during LW908 seal up and LW909 commencement of production. There were, on the face of it a series of avoidable situations created at a time when the seal up was at a critical stage. There will be lessons to be learned for the next similar situation”.

We discussed the ‘balancing difficulties’ associated with stabilising a sealed goaf, to not over-drain in the process and, at the same time to commence production on an adjacent longwall. It is clear a routine sealing plan for Grasstree is emerging and Inspector Gouldstone encouraged the Mine to produce a successfully repeatable process and to prepare to contribute at the next sealing forum for underground mines.

Developments

East Mains/910MG

East Mains is developed to 69CT in all headings (ie Level with 910MG belt road) with B, C and D headings between 70 and 71CT. The Mains drivage is significantly disturbed by dykes necessitating recourse to shotfiring on a regular basis. B heading is driven just beyond 69CT and CM6 has reached 1CT in 910MG belt road (C heading) and now beyond dyke influence.

808 Panel

808MG (CM2) is driving East Mains 61a to 808MG travel road and both 808 MG and C headings entries off East Mains G heading have been made.

808TG is on stand while the 808MG conveyor is installed and the panel is set up as a super panel. It is complete to 1CT and the connection off East Mains G heading to 808TG conveyor road is also completed.

A coal mine worker reported feeling unwell (headache) after suffering exposure from exhaust fumes during last nightshift. He reported the matter and further DPM monitoring is planned. Intermittent spikes of 10ppm CO at the return sensor were reported on statutory reports. Some haulers were halted and vehicles limited to 6 in number. It was reported that the revised approach to managing diesel particulate matter is ready for release.

1.2 Grasstree High Potential Incidents

We discussed the following HPis –

21/12/18 Methane greater than 2.5% was found by ERZ controller during inspection of seals G heading East Mains from 37Ct to shaft 4.

It was explained that brattice in place to ensure that seal were scored had been disturbed by either overpressure from ventilation changes inbye and/or stonedusting equipment. Mr Schiefelbein indicated that the seals were not in disrepair and the matter was rectified. It is of concern that such matters are not rectified as the problem arises (disturbance) or basic checks are not undertaken post ventilation changes. Inspector Gouldstone made reference to an incident at Grasstree when a coal mine worker sustained a badly broken arm when it was trapped in a slamming air door. Both air doors at a cut through were opened short circuiting ventilation to the active longwall which also caused elevated methane levels.

30/12/18 GCV005 Conveyor isolation mechanism

This matter has been subject to attention from Electrical Inspector Neville Atkinson in consultation with EEM.

4/01/19 Uncontrolled movement of driftrunner

Clearly identified as a microsleep induced incident.

06/01/19 Methane exceedances x5 in 36 hour period

See section LW908 sealing earlier.

1.3 Industry HPIs and Bulletins/Alerts

Information was made available to the Mine during the introduction of the most recent alerts/bulletins distributed by the Department and in particular –

- New safety and health measures to safe guard miners including new competency requirements, improved contractor management, proactive officer obligations, compliance and enforcement and transparency and accountability
- Newsflash - Dump Truck Steering Failures
- Bulletin - Manual fire suppression activation units
- Revised Standard 14 - Monitoring Respirable Dust in Coal Mines
- Storm Season precautions
- Updated QGN 31 Tyre and wheel rim management
- Labour Hire Workers and provision of PPE and Health Assessments
- Alert No 354 - Persons and mobile plant falling over edges
- Alert No 355 - Grader falls of low loader
- Alert No 356 - Vehicle roll-overs
- Alert No 359 - Fatality involving plant at a quarry in which an employee was fatally injured when he was drawn into a conveyor tail end pulley.
- Alert 362 'Fatal incident as bulldozer overturns into pit'

The Mine was asked to confirm that all incidents had been communicated to them.

In addition to those matters Inspector Gouldstone explained the background of an instance where a small flame had been observed during rib bolting operations at a neighbouring mine. A short duration orange flame(1.5 seconds) was seen by coal mine workers which occurred while spinning the bolt where nut/bolt/mesh were closely involved. The supplier has been cooperating with the Mine in establishing a cause.

They are continuing to supply the same equipment to the mine in question but now wash the bolts to be free from any rust preventative oil which applied as part of the manufacturing process

- Importance of Mine officials exercising effective frontline controls
- The need to maximise automation
- Controlling personal positioning to mitigate exposure at all times
- Consideration of using other intervention strategies when adverse geological conditions are being encountered
- Inclusion of dust considerations in the daily planning process to involve all personnel whose actions may influence the outcomes

- The likelihood of the personal exposure limits being reduced with the review of this matter by Safe Work Australia.

2.0 Underground Inspection

2.1 ERZ Controllers Reports and shift briefing

At 0930 hrs Inspectors Nugent and Gouldstone attended the afternoon shift pre-start meeting in the main muster area. The MSO presented recent incidents, active TARP's throughout the mine, and current mine status.

TARP's displayed at prestart included;
 Yellow heat TARP LW909
 Orange sealed Goaf TARP LW905 O2 >8%
 Yellow Strata 808MG Rib conditions
 Yellow GB Gas TARP 808TG CO >10ppm.

On completion of the pre-start meeting Inspector Nugent reviewed the previous NS statutory Reports for LW909 Production zone and 808MG (Zone 8) development districts. TARP's communicated at the pre-start where also recorded on each statutory report. Both reports were countersigned by the oncoming ERZC with statutory reports completed to a satisfactory standard.

Time did not allow discussion or examination of the Control Room

2.2 District Inspections

The Inspectors were accompanied underground by Mr Schiefelbein (UMM).

Main Roads

The newly revised parking layout at pit bottom was observed with the area very tidy.

There was a marked improvement in the visibility provided by newly installed lighting through the travel route followed in the mains. Floor conditions throughout were good.

The vehicle was halted twice as we moved into the Mine since there was evidence of low slung hoses being impacted by the top of passing traffic. It is strongly recommended that the Mine conduct a clearance survey to pinpoint areas where other impacts are occurring or close to doing so and either remove unnecessary items or reinstall with safe clearance.

LW909

The travel road from 9CT to the longwall 26CT is very wet sludgy and rutted cutting by half the normal travel speed. Two secondary support groups were introducing centre cable bolts and also methane drainage drilling activity was introducing large amounts of water which is the main cause of the problem. The matter needs immediate attention and Mr Schiefelbein indicated that a plan had been created but little or no progress had been made. The roadway condition presents an extensive slip/trip hazard, will slow evacuation of the panel if it were needed in an emergency and/or for an injured person.

A Directive is given to reduce risk associated with the floor conditions in LW909 travel road.

The crib room at 25 CT was in good order and in particular the easy access to all relevant documentation for coal mine workers. It is suggested that the Mine consider a system for renewal and replacement of redundant or out of date documentation. All QDS pods examined (9 in total) had suitable compliance plates showing inspection dates and were in good order.

We spoke to two VLI methane driller operating in a stub inbye of 25CT. They were able to show a suitable drilling plan, explain the task being undertaken and report their attendance at the pre-shift briefing before proceeding underground. The stub was equipped with suitable monitoring and the pipework from drainage holes to the riser was effectively supported and well identified.

The area from the stub to the longwall was untidy and littered with discarded paper/PPE.

It was noticeable that the sprays over the conveyor just outbye of the BSL delivery point were raising, rather than quelling, dust and require adjustment. The BSL delivery itself was visibly virtually dust free. We met with the district official who gave us an explanation of the on face dust control measures which on the whole were very effective. The shearer was at 100 support cutting to the tailgate and clearly visible from the MG face end and, as we passed through the longwall reaching the shearer at about 130 support the visibility remained good throughout. However it was clear that the supports were not receiving regular hosing/cleaning as there was evidence of grey dry dust on them all. The 'soap sprays' on the AFC appear to be particularly effective.

The Mine is encouraged to emphasise that longwall control of respirable dust should give consideration to -

- Importance of Mine officials exercising effective frontline controls
- The need to maximise automation
- Controlling personal positioning to mitigate exposure at all times
- Consideration of using other intervention strategies when adverse geological conditions are being encountered
- Inclusion of dust considerations in the daily planning process to involve all personnel whose actions may influence the outcomes
- The likelihood of the personal exposure limits being reduced with the review of this matter by Safe Work Australia.

The PPE regime was being effectively managed.

Due to the increased depth of TG roof support canopies (monster chocks) a higher roof profile is required. At this time automation is unable to execute this profile cut and is achieved manually. A JSA was conducted on a previous shift and had been reviewed by the ERZC and operators on this shift. In discussion with the shearer operators at the TG the identified hazards and associated controls were explained thoroughly by the operators.

The intent of Grasstree Mine is to have the automation conducting the profile cut as soon as possible.

Developments

TG808

We accessed TG808 from East Mains G heading which had been fenced off both inbye and Outbye of the entrance to the district. We sought to locate the ERZ Controller.

We passed a team of coal mine workers installing the conveyor drive and loop in C heading which extended into the cross cut to the main conveyor system. We then progressed into through 1CT C to A and back towards the mains where we observed CM04 being trammed into the panel in readiness to set up a super panel. The CM was not moving but powered, and there was no barrier to prevent access to the heads.

At 1CT/A intersection there was a drill stub in which 3x VLI drillers were situated. They were aware of the tramping CM04 and uneasy about being instructed to remain in the stub as the miner trammed past.

With Mr Schiefelbein, we removed the VLI personnel from the stub and taped-off access. We then spoke with the district official.

The questions we asked were as follows –

Where was the entrance to the district, notice board and place of safety/crib room?

This had not been re-established as the district access and layout had changed.

On what basis did the official believe it was acceptable level of risk to leave VLI personnel in the drill stub while the CM04 trammed past and not have the CM04 flit route adequately barricaded to prevent inadvertent access by CMW's ?

The response was it was deemed a safe place for the VLI personnel as they could keep +10m distant. Our response was that since they could not continue working there was no reason to leave them in the drill stub but their removal ought to have been actioned irrespective of that matter.

In response to the inadequate barricading of the CM04 flit route the official stated he had installed caution tape and notified CMW's in the district that the flit was occurring. Our response was that effective no roading of all access to the flit route is the minimum control expected.

The official was able to give a full account of all the personnel on district and relate all activities however he indicated that he had not read and countersigned the previous shift's inspection report. He explained that he had inspected the district but had not yet written his statutory report. This then poses the question of how does the official know when the next inspection should be timed to comply with the Mine SOP for inspections – Section 309 (2) CSMH Regulation 2017.

The official was also questioned if he had signed the district notice board, and responded saying he had not and was not aware if one existed at the outbye boundary of the district he was responsible for.

At this point the inspectors gave consideration to stopping all operations until the situation was rectified. It was explained that the equipment required was available and had to be repositioned and supplemented.

A directive was given to review the safety and health management system, Section 168 CSMH Act 1999. Specifically this shall comply with s307 CSMH Regulation 2017, and section s310 notice of inspection results . The inspectors requested copies of the inspection reports for the shift in question and the preceding shift -

There was a failure to re-establish

1. a recognised new location for a district, crib room and boundary inspection board,
2. a place for ERZ Controllers reports to be readily available

The district had changed in layout in the preceding shifts and the official concerned was on his first shift in that district and the situation strongly challenges the effectiveness of the planning and execution of such matters.

We asked the Mine to conduct their own investigation into the circumstances which led up to the situation on the day in question. It is understood by the inspectors that there were other matters in progress to deal with the circumstances – eg safety dept ready to provide district rescue equipment. The inspectors will give feedback when a copy of the Mine investigation is provided.

3.0 Close-out Meeting

The inspectors met with Mr Schiefelbein, Mr Wynn and Mr Watts (SSHR) and discussed the content of the MRE above but specifically reinforced

1. The request for feedback in regard to documents/information/investigation.
2. The two directives given and the need to address those matters

<u>Number</u>	<u>Directive</u>	<u>Due Date</u>
1	Pursuant to section 166 of the Coal Mining Safety and Health Act 1999 A Directive is given to reduce risk associated with the floor conditions in LW909 travel road.	07/03/2019
A Directive is given to reduce risk associated with the floor conditions in LW909 travel road.		

<u>Number</u>	<u>Directive</u>	<u>Due Date</u>
2	Pursuant to section 168 of the Coal Mining Safety and Health Act 1999 A directive was given to review the safety and health management system Section 168 CMSH Act 1999.	07/03/2019
A directive was given to review the safety and health management system, Section 168 CMSH Act 1999.		

Please provide a written status report on each Directive together with the actions taken to address each item by their due dates

Geoff Nugent
Inspector of Mines

Richard Gouldstone
Inspector of Mines

