

Mine Name	Mine ID	Operator	Activity Type	Region	Activity Date
Grosvenor Coal Mine	M102976	Anglo Coal (Grosvenor Management) Pty Ltd	Inspection	Central	11/02/2016

Vision: Our Industries Free of Safety and Health Incidents

## 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: Mr Jason Sharpe

Today I attended Grosvenor coal mine with Inspectors of Mines Richard Gouldstone and Fritz Djukic to carry out an announced inspection of the underground workings.

### **CONTRACTOR MANAGEMENT and RESPIRABLE DUST WORKING IN RETURNS**

#### 1.0 - Opening meeting

An opening meeting was conducted with the UMM Wayne Bull, Technical Services Manager David Thomasson and the Ventilation officer Mark Bobeldyk . We briefly discussed some of the matters from the investigation and inspection conducted on the previous day and then we were presented with information from the mines investigation into the methane emission that occurred in 101 MG at 24 c/t in 'C' heading. Mr Bobeldyk explained that information had been downloaded from the personal gas monitors worn by the ERZ Controller and Miner driver which showed no oxygen deficient atmosphere had been monitored and the maximum level of

methane recorded was 2.85% The down load from the Continuous miners gas monitoring also indicated that a concentration greater than 1% had been acknowledged by the alarm recording and no tripping of the Continuous miner occurred indicating that methane was not monitored at a level greater than 2% before the miner was manually tripped. An increase in the methane make in the return of the district had been recorded over a 15 minute period at the time of the incident which indicated a maximum general body concentration of 0.437% on the return 4 way sensor in the dog leg which equated to a maximum methane make of 160 Vs at the peak of the emission. Mr Bobeldyk then provided a number of calculations with various ventilation quantities and methane concentrations to demonstrate the conditions which would be required to form an oxygen deficient atmosphere at the continuous miner. From the

information provided from this and the ERZ Controllers statutory inspections it was evident that an oxygen deficient atmosphere would not have been present at the time of the incident.

Mr Bull explained that to ensure that should any further emissions occur the mine are implementing a procedure to ensure that the Continuous miner drivers wear personal gas monitors that are equivalent to those worn by the ERZ Controller to ensure that the levels of methane up to 5% are visibly evident and data recording is available to enable accurate **analysis** of any future events.

### **Is this commitment followed through in subsequent Methane HPI's?**

Inspectors Dobson and Gouldstone examined the material provided and from the findings of the inspection of the area yesterday with respect to the ventilation standards and gas monitoring were satisfied that the level of risk was acceptable to allow the resumption of mining operations in 101 MG at 24 c/t in 'C' heading.

**Inspectors find that increased monitoring makes resuming mining in MG 101 that the level of risk is acceptable? NO ACTUAL REDUCTION OF RISK JUST ADDITIONAL MONITORING,**

**Miner manually tripped by operator after personal gas detector alarmed 2.85% yet continuous miner seems to have only got to one percent. The lag time between the two is a real concern.**

**The 160 l/s of Methane sounds about right if there was around 10m<sup>3</sup>/s being delivered by the auxiliary fan to the face. Just need to remember that is less than one sixth of a m<sup>3</sup>/s.**

The Inspectors the discussed the purpose of the inspection today, this being the completion of the Development SIG with an inspection of MG 102 by Inspector Dobson, Inspector Gouldstone would be using the Ventilation SIG and reviewing documents provided, and Inspector Djukic was carrying out an inspection with regards to respirable dust exposures and reviewing documents for the control of this hazard.

#### 1 .1 - Contractor Management SIG

Inspector Dobson had previously received a number of documents that were requested in accordance with the detail in the Contractor Management SIG. These had been reviewed against the SIG and further clarification of these matters was sought. Inspector Dobson met the Contract Manager Peter Manning who arranged for the HR & Training Superintendent Matt Norris to provide further detail on outstanding SIG items. Mr Manning also committed to provide evidence of Audits undertaken by as required by section 5.6.1.3 of the Grosvenor Contractor Management Plan.

Inspector Dobson then discussed the following matters with Mr Norris.

- The on boarding process of contractors employed as full time equivalent employees.
- Training needs analysis and readiness for work of contractors employed as full time equivalent employees.

- The process for engaging specialist contractor activities and authority to work permits.

### **Contractor Management 1st and 2nd dot points**

**Where does the term full time equivalent come from?**

**Not mentioned in the Act or Regulations, it is an Industrial Relations expression.**

**A Coal Mine Worker is a Coal Mine Worker from contract cleaner through to the SSE.**

**Workers need to be trained for their positions no matter who or what they are.**

Inspector Dobson sighted documentary evidence of these matters which provided the detail explained by Mr Norris. This also aligned with the findings from the inspection on the previous day where the tripper drive installation at 15 c/t 'B' heading in MG 101 was being undertaken by Techserve contractors.

#### 1.2 - Ventilation SIG

Inspector Gouldstone undertook an examination of documents requested for the Ventilation SIG. The findings from this and the inspections of the Development panels will be the subject of a separate MRE.

#### 1.3 - Respirable dust

Prior to going underground the Inspectors reviewed personal and static monitoring results for works being conducted in returns during production. The personal exposure levels recorded during May 2015 were 6.5 mg/m<sup>3</sup> and 6.2 mg/m<sup>3</sup>. Review of these levels prompted development of RA and SWI which was also supplied to the Inspectors for review. The inspectors raised a number of issues with respect to the RA and SWI which lack appropriate levels of controls in accordance to the hierarchy of controls, and discrepancies with respect to the PPE requirements. The UMM advised that the work had only recommenced in the returns for approximately the last 3 months. During this time no personal monitoring had been conducted to demonstrate the effectiveness of the controls or understand the coal mine worker exposure profile. Some fixed position (static) monitoring had been conducted and although this Cannot be compared against the personal exposure standard it did confirm that the controls were ineffective.

**Over 6mg/m<sup>3</sup> is very high and it is for workers employed in the return roadway. For a start should not be happening at all because dust levels are too high. Also exposed to potential greater than 2.5% methane.**

**Inspectors say static readings are very high but not how high.**

**Just "Controls are ineffective"**

### 2.0 - Underground inspection

Inspector Dobson and Inspector Djukic were accompanied on the underground inspection by UMM Bull, Operations Support Superintendent Scott Barker, and Dayshift Undermanager Neal Bryan.

## 2.1 -MG 102

### 2.1.1 - Conveyor drivehead change over

We first inspected the Techserve contractors engaged in the rethreading the conveyor belt from the development conveyor drive units to the Longwall conveyor drive units. We entered MG 102 'B' heading from the mains via the double doors which had minimal leakage. When travelling inbye at the intersection of MG 102 'B' heading with 14 c/t 'B' heading of the Mains, no segregation was evident. Mr Bryan explained that the airflow ran inbye to 18 c/t in the Mains and went directly to the main return. Inspector Dobson enquired as to where the CO sensor for this was, which was at 18 c/t 'B' heading of the Mains. A discussion took place with regards to the adequacy of this alarming and Mr Bull initiated the resighting of this to 14 c/t before the conveyor was to be restarted.

**No segregation stoppings. Should be illegal under Regulations**

#### **CO sensor not in right place**

The ERZ Controller in this area was Adam Cruze who gave an explanation of the activities being undertaken in his area of responsibility. We were introduced to the Techserve contractors involved in this changeover activity who provided a detailed JSA and explanation of the No go zones to be implemented when the pulling of the conveyor belt was to commence. SLAMS were also sighted for the tasks involved.

### 2.1.2 - MG 102 development activities

The condition of travel. road surfaces in the Maingate travel road was acceptable and the application of combustible dust was good. The crib room was at 9 c/t which was of an acceptable standard. The ERZ Controllers statutory report was compliant and the emergency equipment was in order. The afternoon shift crew had just arrived and were waiting for the ERZ Controller.

As we travelled inbye we met the district ERZ Controller Adam Maggs who explained what activities were being undertaken in his district and he was in the process of commencing the afternoon shift with their briefing and implementation of risk management process for the activities about to be undertaken.

The DCB was sighted outbye of 10 c/t and was compliant. Inbye of 10 c/t 'C' heading overdrive was being ventilated by brattice and was adequately demarcated to prevent inadvertent entry due to low velocity's.

At 10 c/t 'B' heading the shuttle car was undergoing routine maintenance. The tradesmen had the area appropriately demarcated to prevent inadvertent entry and when questioned about the activities they were undertaking they provided adequate evidence of the use of appropriate risk management.

The bootend was outbye of 10 c/t in 'B' heading where all the area was free of spillage/fines, scrapers and skirts on the bootend were all serviceable and all guarding was in place. Cable anchorage for the shuttle car was an acceptable standard. Two auxiliary fans were installed

with only one operating which was ventilating 'B' heading. The operating fan was compliant and the methane sensor was reading 0.16%.

**Why is only one auxiliary fan running and only ventilating B heading? No reasons given. Extremely unusual with Inspectors present.**

**Is there enough air to run two fans at full capacity simultaneously?**

The Continuous miner was a Joy ED25 which was in 1 1 c/t driving from 'B' to 'C' heading and was about to be routinely maintained. Minor centreline cracking was evident, however strata conditions were stable. Inbye of 1 1 c/t 'B' heading overdrive was being ventilated by brattice and was adequately demarcated to prevent inadvertent entry due to low velocity's.

## 2.2 -TG 101

We travelled to 15 c/t to inspect coal mine workers who were working in 'B' heading, this being the return from the inbye development face. The operators were involved in the task of flitting the airtrack from 18 c/t to 14 c/t and were just inbye of 15 c/t. No signage indicating that this area was where high risk activities were taking place and had been inspected by an ERZ Controller was in place. Mr Bull said that signage had been ordered for this and would be installed as soon as it arrived. The panel was on planned maintenance and some continuous miner activities where floor brushing had been planned for to prepare for concreting. Visible airborne dust was evident in the ventilation stream with the belief that this activity had been completed earlier in the shift. Mr Bryan believed that the panel was now on development production activities.

The operators provided a risk assessment for installing megabolts in the returns and had completed SLAM'S for the task they were undertaking. However the risk assessment and SWI for working in the returns was not in the document folder on the air track. When the operators were questioned about these documents they believed they had previously sighted the risk assessment, but their knowledge on the detail with regards to the controls that were required was limited. All operators were wearing P2 respirable dust masks. A discussion took place about the controls and process for implementing these.

**Working secondary support in Returns Installing megabolts.**

**No signage or indication been Inspected by ERZC Controller.**

**A Sign board is on order. None in the store? Do not believe none are available.**

**Here is the sign that roof support when developed is inadequate.**

**Hence mega-bolts being installed**

**No Risk assessment, Standard Work Instruction.**

**Obviously never seen document or trained in it. It is their primary if only task.**

**Not possible to that unaware if properly trained and competent.**

## 3.0 - Close out meeting

A close out meeting was conducted with Inspectors, UMM Wayne Bull, and Operations Support Superintendent Scott Barker where we discussed the following matters:

- The SIG Contractor management still required clarification on providing evidence of Audits undertaken by as required by section 5.6.1.3 of the Grosvenor Contractor Management Plan. Inspector Dobson committed to send an email for the detail required for this.

**Does not appear to comply with its own Contractor Management Plan. Indicates no audits available in the system**

**Was the Dobson email ever sent?**

- The findings from the inspections of coal mine workers who were working in the returns from the production districts with the examination of the procedural documents and risk assessments to mitigate the exposure of respirable dust and silica to coal mine workers did not demonstrate that controls were adequate for this. Inconsistencies in the documents and the use of discretionary controls did not demonstrate that adequate controls would be consistently implemented. A Directive to suspend all working activities in returns during development production was issued by Inspector Dobson. This will require the risk assessment for this matter to be reviewed and controls to be implemented. Given that the last results for the personal monitoring of coal mine workers involved in these tasks had exposures of 6.5mg/m<sup>3</sup> and 6.2 mg/m<sup>3</sup> any future work of this nature will require the use of personal real time monitoring to ensure that the regulatory level of exceedance is not breached whilst conducting all working activities in returns during development production.

Number	Directive	Due Date
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Pursuant to section 167 of the Coal Mining Safety and Health Act 1999

1	Prevention of exposure to Respirable dust and Silica with working activities in returns during development production.	16/02/2016
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To suspend all working activities in returns during development production. This will require the risk assessment for this matter to be reviewed and controls to be implemented. This will also require the use of personal real time monitoring for coal mine workers involved in any of these tasks with any future work of this nature to ensure that regulatory level of exceedance is not breached whilst conducting all working activities in returns during development production.

**Dust Directive background and then Directive on page 5. In Place for 5 days only**

**Can only resume with real time personal monitors. Not aware of their use anywhere at that time. Companies kept saying they were not approved for underground use Which Inspector followed up? Was it Dobson?**

Shaun Dobson  
Inspector of Mines

Fritz Djukic  
Inspector of Mines

Richard Gouldstone  
Inspector of Mines (Coal)

Central Region

(Occupational Health) Central Region

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



### CONTRACTOR MANAGEMENT and RESPIRABLE DUST WORKING IN RETURNS

#### METHANE HPI

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### **DIRECTIVE**

*Pursuant to section 167 of the Coal Mining Safety and Health Act 1999*

*Prevention of exposure to Respirable dust and Silica with working activities in returns during development production. 16/02/2016*

*To suspend all working activities in returns during development production. This will require the risk assessment for this matter to be reviewed and controls to be implemented. This will also require the use of personal real time monitoring for coal mine workers involved in any of these tasks with any future work of this nature to ensure that regulatory level of exceedance is not breached whilst conducting all working activities in returns during development production.*

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