



Mine Name	Mine ID	Operator	Activity Type	Activity Date
Moranbah North	MI00750	Anglo Coal (Moranbah North Management) Pty Ltd	Investigation - Continued	18/05/2021

Mine Record Entry

Site Safety & Health Reps Consulted: s.73 Irrelevant inform

Executive Summary

Mine Record Entry Detail

Today 18 May 2021, Inspectors returned to site for a continuation of an investigation into the overpressure event occurring on 20/02/21 at 18:42hrs. Inspectors met with members of the Senior Leadership team to discuss the scope of todays investigation.

Attending the meeting were:

Shaun Dobson, Deputy Chief Inspector of Coal Mines

Paul Brown, Inspector of Mines

Andrew Smith, Principal Investigations Officer

s.73 Irrelevant info, SSE

s.73 Irrelevant info Production Manager

s.73 Irrelevant info, Technical Services Manager

s.73 Irrelevant inform Ventilation Superintendent

s.73 Irrelevant inform Engineering Manager

s.73 Irrelevant info, SSHR was not in attendance for this meeting).

Also attending site today (not involved in opening meeting) Gavin Stratford and Martin Guzman representing Simtars, s.73 Irrelevant inform from Australian Forensic is a consultant engaged by RSHQ Mines Inspectorate.

A Directive was given by Inspector Dobson to the SSE as an outcome of todays continuation of the investigation. The Directive was given to review the current Goaf Well TARP.

As part of todays investigation, Inspector Dobson also inspected other parts of the mine, results of which are contained within this Mine Record Entry.

The salient points of discussion in the opening meeting were:

- The mines current gas trends and application of Inertisation. Mr s.73 Irrel identified there had been very little change in the gas trends and no change fro the Inertisation strategy.
- The TG real time gas monitoring systems and trip functions.
- MG112 Inertisation pipe line damage at 6ct has been repaired by running a new independent line across from TG112 via the cross drive.

- MG112 current goaf gas data / trends. Leakage of oxygen to MG112 goaf identified at the cross drive ground consolidation holes have now been sealed and the goaf atmosphere is returning to normal state.
- MG112 ventilation is still regulated at the 109 downcast shaft, Mr [s.73 Irre] explained the ventilation changes to increase ventilation to MG112-MG111 back bleed roadways are to be done slowly and gradually.
- MG112 water control currently at; 39ct 2m clearance, 44ct 8m clearance and 7ct 2.6m clearance.
- Comparisons between the old site GC and new GC were discussed specifically in the ability to detect presence of Ethylene at less than 1ppm.
- Inspector Dobson provided advice on the matter of requirements to be met for the current Directive pursuant to s167 of the CMSHA 1999. Importance placed on what is the Inertisation strategy and Monitoring Strategy.
- The current LFI for the overpressure event 20/02/21 does not currently identify controls to prevent reoccurrence, the site is required to complete the investigation.

Prior to going underground, Inspectors were made aware of a site incident report #9991, reports of a burnt charcoal type smell that comes and goes around mid face of LW605. GC data was reviewed of bag samples collected as a result of this incident report. Samples were collected at the locations the smell was detected, the results did not indicate a concern at this stage. While smell alone should not be solely relied upon it is an indicator within the TARP that must be monitored for. The target areas identified for the smell would be checked during todays investigation.

MG605

Accompanying Inspectors on the underground inspection were, Simtars representatives, External Forensic Consultant, SSHR [s.73 Irrelevant info] and members of the Senior Leadership Team [s.73 Irrelevant info] and [s.73 Irrelevant info]

An examination of the full extent of the LW605 faceline was conducted. Photographs were taken across all accessible areas under 0.5% methane for UPEE requirements and samples of particulate matter were also collected.

The zones currently quarantined will remain No Roaded until further samples from the rear of the shields can be collected and analysed.

Zones where the "Charcoal" smell had been detected were investigated, while there was nothing detected during the inspection by smell, and the levels of CO detected by PGD were within the realms of the current norm, Deputies must continue to monitor for this anomaly and anytime it occurs collect a bag sample from the location, it is important on every occasion this occurs it is also reported to gauge the frequency of it occurring and where it occurs.

Close out meeting

Attending the close out meeting were all persons listed at the start of the MRE for the opening meeting including [s.73 Irrelevant informa]

A Directive was given by Inspector Dobson to the SSE to review the Goaf Well gas management TARP.

Inspector Dobson provided the following feedback from his inspection of both Longwall and Development panels

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Inspector Brown provided a summary of the investigation on the faceline with input from external forensic fire expert, [s.73 Irrelevant informa]. The zones currently quarantined by a section 170 Directive will remain quarantined until sampling / analysis can be conducted. (After the meeting Senior Inspector / Hygienist [s.73 Irrelevant il] was consulted for advice on this matter, the advice was passed onto the SSE to allow the sites Hygienist to organise the samples to be taken and analysed).

Inspector Brown emphasised importance on the level of urgency required for internal notifications of abnormal conditions and or triggers reached in TARPs. The example discussed was the abnormal charcoal smell that has presented in places along the Longwall face, particularly during a drop in barometer.

There was further discussion regarding the information required to be provided to Inspectors for the existing 167 Directive suspending Longwall Operations, SSE [s.73 Irrelev] expected that documentation would start being provided possibly as soon as late Wednesday 19/05/21, when a full response has been provided and Inspectors have had time to review the information, a meeting shall be conducted to discuss the submission.

Paul Brown
Inspector of Mines

Andrew Smith
Authorised Officer

Shaun Dobson
Deputy Chief Inspector of Coal Mines



Mine Name	Mine ID	Operator	Activity Type	Activity Date
Moranbah North	MI00750	Anglo Coal (Moranbah North Management) Pty Ltd	Inspection	18/05/2021

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 in 1 or more conspicuous positions at the mine in a way likely to come to the attention of workers at the mine.

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: s.73 Irrelevant inform

Executive Summary

Mine Record Entry Detail

Today 18 May 2021, I attended Moranbah North coal mine with Inspector Paul Brown and PIO Andrew Smith who were continuing the investigation into the overpressure event occurring on 20/02/21 at 18:42hrs.

From the inspection activities conducted by myself I issued a section 167 directive to review the Gas drainage TARP and actions required by key obligation holders to ensure risk is maintained at a level as low as reasonably achievable. The detail of this is included in the MRE.

We met with members of the Senior Leadership team to discuss the scope of today's investigation.

Attending the meeting were:

Shaun Dobson, Deputy Chief Inspector of Coal Mines

Paul Brown, Inspector of Mines

Andrew Smith, Principal Investigations Officer

s.73 Irrelevant info, SSE

s.73 Irrelevant info, Production Manager

s.73 Irrelevant info, Technical Services Manager

s.73 Irrelevant info, Ventilation Superintendent

s.73 Irrelevant info, Engineering Manager

(s.73 Irrelevant info, SSHR was not in attendance for this meeting).

Also attending site today (not involved in opening meeting) Gavin Stratford and Martin

Guzman representing Simtars, s.73 Irrelevant informal from Australian Forensic is a consultant engaged by RSHQ Mines Inspectorate.

The salient points of discussion in the opening meeting were:

- The mines current gas trends and application of Inertisation. Mr. s.73 Irrel identified there had been very little change in the gas trends and no change from the Inertisation strategy.
- The TG real time gas monitoring systems and trip functions.
- MG112 Inertisation pipe line damage at 6ct has been repaired by running a new independent line across from TG112 via the cross drive.
- MG112 current goaf gas data / trends. Leakage of oxygen to MG112 goaf identified at the cross drive ground consolidation holes have now been sealed and the goaf atmosphere is returning to normal state.
- MG112 ventilation is still regulated at the 109 downcast shaft, Mr. s.73 Irrel explained the ventilation changes to increase ventilation to MG112 - MG111 back bleed roadways are to be done slowly and gradually.
- MG112 water control currently at; 39ct: 2m clearance, 44ct: 8m clearance and 7ct: 2.6m clearance.
- Comparisons between the old site GC and new GC were discussed specifically in the ability to detect presence of Ethylene at less than 1ppm.

Mr. s.73 Irreleva opened a discussion on the recommencement of production operations on LW605 I explained that the information currently provided to the Inspectorate had not clearly defined the causal factors of the event and the controls required to prevent a recurrence of another event. The gas monitoring system at the time of the event on 20/02/2021 did not identify any indicators of the hazard that eventuated. For compliance with the requirements of the current Directive pursuant to s167 of the CMSHA 1999 the SSE would need to demonstrate that operations on LW605 could recommence where any potential recurrence or escalation of the hazard previously identified would be evident to enable controls to be implemented to prevent an unacceptable level of risk eventuating.

I advised Mr. s.73 Irreleva that this would require the development of a strategy to ensure the monitoring of the goaf atmosphere would be representative of the environment and potential locations of sources of the event that occurred on 20/02/2021. This would also need to consider the geological and geotechnical circumstances and their influence on the retreating goaf area. Given that some of these conditions are still apparent mitigating controls would need to be included in this strategy.

Mr. s.73 Irreleva was also advised that the current LFI for the overpressure event 20/02/21 does not currently identify controls to prevent reoccurrence, compliance with Part 11 of the CSMH Act is still required.

Control room

Prior to going underground I went to the control room. I discussed the current gas chromatograph process and results. This included to capability to integrate samples of Ethylene to 0.1ppm.

When being shown the gas alarm log it was evident that Red level 3 TARP triggers were active for the goaf drainage boreholes on SO 867, 868, and 869. These are the boreholes located at the Tailgate being the first three sequentially behind the Longwall face. These were triggered by low methane being less than 30%, and the log indicated the Undermanager had been notified. When discussing this with the control room officer it was apparent that these had been in this TARP level for an extended period of time due to the current goaf environment in LW605. He then produced the Goaf gas drainage operations TARP which required no further ongoing actions for the CRO. I then discussed this with the Undermanager who was also aware of the trigger level and confirmed no further ongoing actions required as

the ventilation officer had been informed of the initial trigger. I then discussed this with the Technical services manager and ventilation superintendent with regards to ongoing actions with the continuation of a level 3 trigger, it was apparent that there are no documented review requirements or actions required. This is further detailed in the close out meeting.

LW605

I inspected the Longwall face area and tailgate area outbye of the Longwall face with Mr s.73 Irrelev. The area at the side of the last tailgate shield had mesh erected to prevent inadvertent entry into this area where the goaf stream samples were being taken through a tube. The block side rib had been shotcreted which had failed in the area subject to front abutment pressures that extended outbye to 1510 chainage. The immediate area outbye of the face had been no roaded to prevent access to this area.

The coal face was being prepared for consolidation with urea silicate resin where drilling activities were being conducted by coal mine workers using rambor pan mounted drilling equipment. I discussed the hazards that the coal face presented with the coal mine workers who were also aware of the fatal accident that occurred with the longwall face strata failure at Carborough Downs. The consolidation plan for this activity had been approved by the Underground Mine Managers delegate, however it is not evident how this approval process ensured that persons with the relevant competencies were approving these plans for the control of a principal hazard. This was discussed further at the close out meeting.

MG606

I inspected the development unit in MG606 with Mr s.73 Irrel and Mr s.73 Ir. The travel road conditions were acceptable with the exception of two pillars between 22 to 23, and 29 to 30 cut throughs. Mr s.73 Irrele committed to have these rectified by the night shift road works crew. The panel was being prepared for the recommencement of production with two continuous miners. One activity was to hole the ventilation shaft in the mid pillar stub in 49 cut through and the other continuous miner was preparing to cut the first pass of the LW606 installation face road. The ERZ Controller presented the permit to mine and risk assessment for the holing of the ventilation shaft. He explained the controls required to be in place immediately prior to holing to ensure that the risk of inrush was mitigated.

We discussed the HPI that occurred with the strata failure on LW605 installation face road, which Mr s.73 Irrele explained had been recognised with the sequence and practices changed to mitigate this.

The face areas were ventilated by two separate auxiliary fans with their own DCB's. I enquired as to the process where only one DCB was available as the DCB did not appear to have individual bypass arrangements for two fans. Mr s.73 Ir explained that there was a procedure for this and I requested a copy for review.

Close out meeting

Attending the close out meeting were all persons listed at the start of the MRE for the opening meeting including s.73 Irrelevant informa.

Inspector Brown provided a summary of the investigation on the faceline with input from external forensic fire expert, s.73 Irrelevant informa. The zones currently quarantined by a section 170 Directive will remain quarantined until sampling / analysis can be conducted. (After the meeting Senior Inspector / Hygienist s.73 Irrelevant was consulted for advice on this matter, the advice was passed onto the SSE to allow the sites Hygienist to organise the samples to be taken and analysed).

We further discussed the Goaf gas drainage operations TARP which had no further ongoing actions with the continuation of Red level 3 trigger. It was evident that there was not a documented review process when actions were required to mitigate escalation metrics and in this instance the focus was only recorded in the gas alarm log with regards to the low methane concentration trigger. I indicated that the escalation of a principal hazard should

have an evidence based review process as to the acknowledgment of the potential outcomes and mitigation controls required, as required when a spontaneous combustion trigger reaches level 2 and a review team is formed. Whilst key obligation holders were aware of the ongoing trigger level there was no evidence that other metrics in this TARP or Spontaneous combustion triggers in TARP 13 were being considered.

I orally issued a directive pursuant to section 166 to the SSE to review the Goaf gas drainage operations TARP. The detailed actions for key accountability holders in the escalation of trigger levels to prevent further escalation need to be reviewed and documented by the appropriate persons. The directive would be provided in writing with the MRE and would need to be complied with before operations were recommenced on LW605.

Shaun Dobson
Deputy Chief Inspector of Coal Mines

Andrew Smith
Authorised Officer

Paul Brown
Inspector of Mines

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