Newton, Bayda

From: Schiefelbein, Kelvin
Sent: Tuesday, 7 April 2020 5:07 PM
To: Newton, Bayda; Briese, Marree; Maskovich, Ruiha
Cc: Wynn, Damien; Cavanagh, Damian; McNally, Tim; Duffy, Joel; Smith, Braedon; Moreby, James; Black, Dennis
Subject: FW: Completed Mining incident report No. 144450 (30 - High potential no lost time [nmsf: 35])

Form 5a for gas exceedance 25/3/20

From: Confidential
Sent: Tuesday, 7 April 2020 5:04 PM
To: Confidential Schiefelbein, Kelvin
Confidential
Subject: Completed Mining incident report No. 144450 (30 - High potential no lost time [nmsf: 35])

This message originated outside Anglo American

Type of incident

Incident report number: 144450

Recipients: Confidential **and** Confidential

1 **Incident type:** 30 - High potential no lost time [nmsf: 35]

2 **Summary/title of incident**

A Gas Exceedance has occurred in the LW808 TG ROADWAY airway when the S243a sensor recorded gas concentrations exceeding 2.5%. The shearer had left the tailgate after the completion of the TG shuffle and was positioned at 182 shield when the exceedance occurred. (The TG shield is number 197.)(The TG Drive and shields were being pushed over)(The gas exceedance was believed to be due to gas being purged from the goaf due to the ventilation changes resulting from the shield movements and shearer position.) The gas accumulation caused an immediate trip of power supply to the AFC and shearer at 2% as per requirements. The gas accumulation did not present as exceedance at the TG drive gas sensors or at a TG roadway gas sensor positioned further Outbye. Around 1.6% was recorded further outbye. A peak reading of 2.63% was recorded during a period of 34 minutes where the concentration fluctuated as the gas layering cleared. The gas concentration exceeded 2.5% five times during that period. A thorough review of controls was undertaken and additional steps to control the situation included: 1 Changes to automation of the TG goaf shields to correct advance sequence occurs. - A digital play back of the automation of the shields revealed that a group of 4 shields had been left back. 2 Crew talks to include awareness of these issues and how to advance the shields without causing a gas exceedance. 3 Alteration of brattices in the TG. 4 Discovery that the next goaf drainage well had not come into production yet – subsequent mining of the next 4 meters brought the goaf drainage well into production and gas concentration reduced generally.

Incident Classification:	**Code:** 114 - Presence of gas [nmsf: 3827]
Breakdown:	**Code:** Machinery and (mainly) fixed plant [nmsf: 2836]
Sub-Breakdown:	**Code:** Other plant and machinery [nmsf: 2853]
Breakdown Class:	**Code:** Other and not specified production line type of plant or stand alone machinery [nmsf: 2949]

Detailed Classification: **Code:** Other and not specified production line type of plant or stand alone machinery [nmsf: 3357]

Compensation ID: 999999

Mechanism: **Code:** Sound and pressure [nmsf: 2787]

Sub-Mechanism: **Code:** Other variations in pressure [nmsf: 2810]

3 **Previously notified:** Yes

Date: 25/03/2020

Mine details

4 **Mine/quarry name** Grasstree Mine **Code:** M01459 **Old Code:**

5 **Mine type:** coalUnderground

6 **Company contact:** Kelvin Schiefelbein

Phone: Confidential

7 **Where in the mine did the incident occur?** LW808 A heading TG808 6-5ct **Code:** 507 - Coal face-longwall, stage loader/tailgate to 20 m [nmsf: 27]

Surface or underground? underground

Incident details

8 **Date of incident:** 25/03/2020

9 **Time of incident:** 17 50 (24 hr clock)

10 **Time shift started:** 10 30

Shift duration: 10 00

No. of complete shifts/day worked prior to accident: 6

No. of days in shift cycle: 14

No. of days rostered off prior to starting current shift cycle: 7

Total hrs worked in 24 hr period prior to accident, inc travel time: 7

Travel Time: 00 30

Rostered Travel Time: 06 30

Roster Pattern: 7on 7off

11 **Date of first full working day lost:**

12 **Primary equipment/tool involved in incident:** Longwall **Code:** 119 - Longwall-other equipment [nmsf: 3884]

13 **Describe exactly how did the incident occur:**

A Gas Exceedance has occurred in the LW808 TG ROADWAY airway when the S243a sensor recorded gas concentrations exceeding 2.5%. The shearer had left the tailgate after the completion of the TG shuffle and was positioned at 182 shield when the exceedance occurred. (The TG shield is number 197.)(The TG Drive and shields were being pushed over)(The gas exceedance was believed to be due to gas being purged from the goaf due to the ventilation changes resulting from the shield movements and shearer position.) The gas accumulation caused an immediate trip of power supply to the AFC and shearer at 2% as per requirements. The gas accumulation did not present as exceedance at the TG drive gas sensors or at a TG roadway gas sensor positioned further Outbye. Around 1.6% was recorded further outbye. A peak reading of 2.63% was recorded during a period of 34 minutes where the concentration fluctuated as the gas layering cleared. The gas concentration exceeded 2.5% five times during that period. A thorough review of controls was undertaken and additional steps to control the situation

included: 1 Changes to automation of the TG goaf shields to correct advance sequence occurs. - A digital play back of the automation of the shields revealed that a group of 4 shields had been left back. 2 Crew talks to include awareness of these issues and how to advance the shields without causing a gas exceedance. 3 Alteration of brattices in the TG. 4 Discovery that the next goaf drainage well had not come into production yet – subsequent mining of the next 4 meters brought the goaf drainage well into production and gas concentration reduced generally.

14 What hazards have been identified from this incident:

Uneven advance of shields in the TG causing goaf gases to expell. Spacing between goaf drainage wells causing less than adequate capacity and excessive gas make at the TG. Standard ventilation arrangements at the TG not being adhered to properly or not working effectively

Code: 112 - Flammable liquids/gases

Injured person details

15-21 Questions 15 through 22 not required for 'High potential no lost time' incidents

23 Description of personal damage:

nil

Is this a permanent incapacity? No

Incident causes

24 What happened leading up to the injury/incident/disease?

Organisational spacing between the goaf drainage wells are designed for an estimated gas make but in this case have failed to meet demand	**Codes**	102 - Design 106 - Incompatible goals 121 - Other org. factor
Task/environment conditions the gas make in a situation of insufficient goaf drainage tends to crowd towards the TG area and in this case any minor failure results in a gas trip. the ventilation arrangement have been failing to be effective in this crowded gas make situation	**Codes**	301 - Air/liquid pressure 315 - Wind/turbulence 320 - Task/environment factor (not specified)
Individual/team actions the advancement of shields has not been even due to application of automation in less than most suitable ways - staggered shield advances release more gas - crews may not have been aware of improved / changed procedures or did not apply them	**Codes**	202 - Awareness 201 - Attitude 207 - Supervision
Absent or failed defences the ventilation arrangements have not diluted the gas sufficiently in this case - in some measures the arrangement was in effective and in some measure the design was not adequately installed	**Codes**	400 - Absent/non-installation of safety devices 401 - Design defects 421 - Other absent/failed defence factor

Preventative action

25 Give details of any control measures/actions being considered and/or implemented to prevent recurrences

reinforcement of correct shield advance methods reinforcement of correct ventilation arrangements

Date: 07/04/2020

Your full name: Kelvin Schiefelbein

Position: Underground Mine Manager

Email: Confidential [redacted]

Office use

Inspector/inspection officer:

Signed:

Entered by:

User IP address: 172.18.4.56

User agent: Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/80.0.3987.163 Safari/537.36

Email address: Confidential [redacted]

Submitted Date/Time: 07/04/2020 16:40:14

The information in this email together with any attachments is intended only for the person or entity to which it is addressed and may contain confidential and/or privileged material. There is no waiver of any confidentiality/privilege by your inadvertent receipt of this material.
Any form of review, disclosure, modification, distribution and/or publication of this email message is prohibited, unless as a necessary part of Departmental business.
If you have received this message in error, you are asked to inform the sender as quickly as possible and delete this message and any copies of this message from your computer and/or your computer system network.
