

Newton, Bayda

From: Schiefelbein, Kelvin
Sent: Tuesday, 7 April 2020 4:16 PM
To: Newton, Bayda; Briese, Marree; Maskovich, Ruiha
Cc: Cavanagh, Damian; Wynn, Damien; McNally, Tim; Black, Dennis; Smith, Braedon; Moreby, James; Duffy, Joel
Subject: FW: Completed Mining incident report No. 144448 (30 - High potential no lost time [nmsf: 35])

Form 5a submitted

From: Confidential
Sent: Tuesday, 7 April 2020 4:13 PM
To: Confidential; Schiefelbein, Kelvin
 Confidential
Subject: Completed Mining incident report No. 144448 (30 - High potential no lost time [nmsf: 35])

This message originated outside Anglo American

Type of incident

Incident report number: 144448

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% at or about the TG intersection 6ct with the TG roadway. The shearer had left the tailgate after the completion of the TG shuffle and was positioned at 185 shield when the exceedance occurred. (The TG shield is number 197.) (The TG Drive and shields were beginning to push over as per normal sequence.) (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. A peak reading of 4.27% was recorded during a period of 15 minutes. A ventilation arrangement of flaps was installed / adjusted at 193 to the TG prevent further exceedances. A thorough review of controls was undertaken and additional steps to control the situation included: MG seal brattices to be renewed, MG shield brattices to be adjusted, TG 6ct man door adjusted, brattices and flaps adjusted and arrangement tested with smoke tubes, A goaf drainage borehole was late to become active at this location and this also contributed to the exceedance. This issue was verified as major factor as gassy goaf bleed was found issuing between shields 195-196-197 by the ERZC. Shields 196-197 were found to be left back and 193-194-195 were found to be forwards. Shields staggered in this way also contributed to ventilation obstructions and gassy ventilation from behind the shields.

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: Heat, electricity and other environmental factors [nmsf: 2789]

Sub-Mechanism:

Code: Exposure to other and unspecified environmental factors [nmsf: 2821]

3 Previously notified: Yes

Date: 20/03/2020

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 TG Roadway A Heading

Code: 507 - Coal face-longwall, stage loader/tailgate to 20 m [nmsf: 27]

Surface or underground? underground

Incident details

8 Date of incident: 20/03/2020

9 Time of incident: 12 00 (24 hr clock)

10 Time shift started: 06 30

Shift duration: 12 00

No. of complete shifts/day worked prior to accident: 1

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: 5

Travel Time: 00 30

Rostered Travel Time: 01 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% at or about the TG intersection 6ct with the TG roadway. The shearer had left the tailgate after the completion of the TG shuffle and was positioned at 185 shield when the exceedance occurred. (The TG shield is number 197.) (The TG Drive and shields were beginning to push over as per normal sequence.) (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. A peak reading of 4.27% was recorded during a period of 15 minutes. A ventilation arrangement of flaps was installed / adjusted at 193 to the TG prevent further exceedances. A thorough review of controls was undertaken and additional steps to control the situation included: MG seal brattices to be renewed, MG shield brattices to be adjusted, TG 6ct man

door adjusted, brattices and flaps adjusted and arrangement tested with smoke tubes, A goaf drainage borehole was late to become active at this location and this also contributed to the exceedance. This issue was verified as major factor as gassy goaf bleed was found issuing between shields 195-196-197 by the ERZC. Shields 196-197 were found to be left back and 193-194-195 were found to be forwards. Shields staggered in this way also contributed to ventilation obstructions and gassy ventilation from behind the shields.

14 What hazards have been identified from this incident:

Goaf drainage well barely meeting demand due to spacing longwall proximity to the Cut-through effects the pressure at the TG and increases gas make. uneven shield advance due to automation method

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

The goaf drainage well spacing is predetermined during design and based upon estimates - in this case design capacity is less than that necessary.

Codes 102 - Design
106 - Incompatible goals
121 - Other org. factor

Task/environment conditions

The proximity to the TG cut-through increases goaf pressure and gas make.

Codes 301 - Air/liquid pressure
315 - Wind/turbulence
320 - Task/environment factor (not specified)

Individual/team actions

the production crew have advanced shields unevenly due to the way automation mode was applied - this has made the situation worse and caused gas to flush out over the sensor when the shields have advanced

Codes 202 - Awareness
201 - Attitude
207 - Supervision

Absent or failed defences

the arrangement of flaps and brattices in the TG were not optimal for the situation and dilution of gas was not optimized

Codes 400 - Absent/non-installation of safety devices
405 - Inappropriate/inadequate safety features
421 - Other absent/failed defence factor

Preventative action

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

the ventilation arrangement of flaps and brattices was improved and design specified by the ventilation officer. the advance of shields automation mode was also specified.

Date: 07/04/2020

Your full name: Kelvin Schiefelbein

Position: Underground Mine Manager

Email: Confidential

Office use

Four sets of three empty rectangular boxes for stamping or marking.

Four horizontal lines for additional notes or information.

Inspector/inspection officer: _____

Signed: _____

Entered by: _____

Two horizontal lines for additional notes or information.

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 15:58:32

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