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| --- | --- | --- | --- | --- | --- | --- |
| Date | Time of  Exceedance | s243(a) Sensor ("149 Sensor") | Tailgate Sensor — 400m outbye  ("Inbye Sensor") | Tailgate Sensor — 34 c/t  ("Outbye Sensor") | Time over 2.5% | Factors mentioned |
|  |  |  |  |  |  |  |
| 1. 10/07/2017 | 12:10am | Unknown | 3.07% | 3.00% | 30 Minutes | Surface goaf drainage tripped at 11:45pm. 1.2% in TG.  Goaf plant restarted .  1.3% at 2:30am |
| 1. 15/11/2017 | 3:18ppm | Unknown |  | >2.5% | 18 Minutes | Machine Door LW 101 Chute Road and Mains A7 left open retrieving Stonedust pod.  **Was there only 1 door as implied?**  **Why not double doors?** |

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| Date | Time of  Exceedance | s243(a) Sensor ("149 Sensor") | Tailgate Sensor — 400m outbye  ("Inbye Sensor") | Tailgate Sensor — 34 cit  ("Outbye Sensor") | Time over 2.5% | Factors mentioned |
| 1. 06/01/2018 | 12:10am | Unknown | 2.35% | 2.53% | 2 Minutes | Shearer stopped At Chock #127  Goaf Fall #149  Retreated 29m since LW102 start |
| 1. 08/01/2018 | 3:00am | Unknown | 2.15% at 2:45 approximately | 2.57% | 15 Minutes | Shearer stopped At Chock #110. Stopped 55 minutes #149 advanced  Retreated 40m |
| 1. 08/01/2018 | 12:06pm | Unknown | 2.06% at 11:57pm | 2.56% | 17 Minutes | Shearer stopped At Chock #66  Retreated 40m |
| 1. 08/01/2018 | 12:54pm | Unknown | 2.07% at 12:39pm | 2.53% | 13 Minutes | Shearer stopped At Chock #66  Retreated 40m |
| 1. 08/01/2018 | 9:45am | Unknown | 2.09% at 9:32 am | 2.56% | 17 Minutes | Shearer stopped At Chock #104  Retreated 40m |
| 1. 26/01/2018 | 1:26am | Unknown | 2.28% at 1:11am | 2.52% | 3 Minutes | Shearer stopped At Chock #38 TG-MG  Retreated 180m |
| 1. 04/03/2018 | 6:21am | Unknown | 2.52% | Unknown | 2 Minutes and 22 seconds | Shearer stopped At Chock #115 TG -MG  Outbye belts down |
| Date | Time of  Exceedance | s243(a) Sensor ("149 Sensor") | Tailgate Sensor — 400m outbye  ("Inbye Sensor") | Tailgate Sensor — 34 cit  ("Outbye Sensor") | Time over 2.5% | Factors mentioned |
| 1. 08/03/2018 | 4:28am | Unknown | Unknown | 2.53% at 3:13am  2.54% at 4:39am | 4 Minutes  22 Minutes | Double Chocking.  2 events. Stopped double chocking in between.  Longwall stopped at 1:44am high gas in TG. *Only* 5 shears previous 12 hours |
| 1. 12/03/2018 | 10:55pm | Unknown | 2.61% | Does not change  **WHY?** | 1 Minute | Goaf Flushing around #149 |
| 1. 13/03/2018 | 8:09am | Unknown | 2.87% | 2.79%  11 minutes later | Unknown | 3 Cuts TG to bring TG forward due to poor roof.  Gas Flush when chocks advanced  *Daily TG gas M’ment IMT* |
| 1. 13/03/2018 | 2:55pm | Unknown | 2.52% at 2:55pm  2.53% at 4:23pm | 2.53% at 3:06pm  2.60% at 4:36pm | 8 Minutes | 2 Cuts TG to bring TG forward due to poor roof  Gas Flush when chocks advanced |
| 1. 13/03/2018 | 23:54pm | Unknown | 2.76% |  | 70 seconds | Cut into TG  Shearer parked at #115.  Crew started bringing over chocks |
| Date | Time of  Exceedance | s243(a) Sensor ("149 Sensor") | Tailgate Sensor — 400m outbye  ("Inbye Sensor") | Tailgate Sensor — 34 cit  ("Outbye Sensor") | Time over 2.5% | Factors mentioned |
| 1. 14/03/2018 | 3:37am | Unknown | 3.21% | 2.65% | 1 Minute | Shearer Cutting TG corner of face |
| 1. 14/03/2018 | 4:51amam | Unknown | 2.56% | 2.73% | 5 Minutes | Poor Roof Conditions in TG Ventilation path restricted |
| 1. 14/03/2018 | 7:20am | Unknown | 2.7% | 2.59% | 5 Minutes | 2 Cuts TG to bring TG forward due to poor roof  Gas Flush when chocks advanced  Shearer stopped at time |
| 1. 14/03/2018 | 1:29pm | Unknown | 2.53% |  | 9 Minutes  **Were workers in TG working in greater than 1.25%?** | Shearer parked at MG Maintenance since 8:40am, Workers in TG supporting roof.  **Attributed to goaf fall** |
| 1. 14/03/2018 | 2:47pm | Unknown | <2.5% | 2.59% | 45 Minutes | Shearer parked at MG Maintenance since 8:40am |
| 1. 15/03/2018 | 11:18pm | Unknown | Unknown  <2.5% | 2.62% | 33 Minutes | Longwall not producing  Goaf Flushing #149  AFC run gas goes <2.5% |
| Date | Time of  Exceedance | s243(a) Sensor ("149 Sensor") | Tailgate Sensor — 400m outbye  ("Inbye Sensor") | Tailgate Sensor — 34 cit  ("Outbye Sensor") | Time over 2.5% | Factors mentioned |
| 1. 22/03/2018 | 10:15pm to 11pm | Unknown | Unknown | >2.5% | 3 Exceedances in 45 Minutes >2.5% | TG Cut once.  Shearer at # 130.  TG roof flush 1.5m in front of face.  Vent Restricted.  3 exceedances |
| 1. 01/04/2018 | 2:27am | Unknown | Unknown | 2.5% | 50 seconds dropping to 2.11% after 10 Minutes | Shearer cut into TG |
| 1. 05/04/2018 | 1:16am | Unknown | Unknown | >2.5% | 54 Minutes | LW not cutting at time.  Goaf well 11 changes flow and purity  *Suggest significant goaf event some distance from face.*  *745m Retreat* |
| 1. 21/04/2018 | 1:13am | Unknown | 2.53% | Unknown | 30 Seconds | Face at 1840m  Shearer at #139 cutting into TG  TG roof hanging 5 to 6m back then flushed to rear #149  Goaf Well 17- 865l/s  Goaf Well 18- 29l/s at 1850m |
| Date | Time of  Exceedance | s243(a) Sensor ("149 Sensor") | Tailgate Sensor — 400m outbye  ("Inbye Sensor") | Tailgate Sensor — 34 c/t  ("Outbye Sensor") | Time over 2.5% | Factors mentioned |
| 1. 14/05/2018 | 9:48pm | Unknown | 2.72% at 9:48pm  3.22% at 12:07am  3.61% at 12:39am | Unknown | 71 Seconds  8 min 26 sec  2 min 51 sec | Cavity LW face  TG roadway Goaf Flush level #149 Shearer opened airway |
| 1. 29/10/2018 |  |  |  |  |  |  |

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| Date | Time of  Exceedance | s243(a) Sensor ("149 Sensor") | Tailgate Sensor — 400m outbye  ("Inbye Sensor") | Tailgate Sensor — 34 cit  ("Outbye Sensor") | Time over 2.5% | Factors mentioned |
| 1. 18/03/2019 | 2:34pm | Unknown | 2.57% | 2.71% (at 2:56pm) | 90 Minutes approximately | Shearer stopped At Chock #130  Goaf Fall #149 |
| 1. 21/03/2019 | 5:17am | Unknown | 2.62% | 2.85% (at 5:32am) | Unknown | Shearer stopped At Chock #129  Stone Rilled #149 |
| 1. 05/04/2019 | 3:30am | Unknown | 2.63% at 3:47pm | 2.68% at 4:01am | 90 Minutes Approximately | Stone Rilled #149  Vent Change 04/04 to reduce CH4 in TG  Face at 2600m |
| 1. 20/04/2019 | 4:02am | Unknown | 2.63% | 2.86% | 1 Minute | Shearer stopped At Chock #126  TG Chocks advanced |
| 1. 21/04/2019 | 12:40pm | Unknown | 2.2% at 12:27 pm | 2.50% at 12:40 | 1 Minute | Shearer stopped At Chock #83 cut to #90 |
| 1. 21/04/2019 | 3:07pm | Unknown | 2.29% at 3:05pm | 2.67% at 3:18pm | 53 Minutes | Shearer stopped At Chock #90  No production occurring for 2hours |
| 1. 22/04/2019 | 11:00pm | Unknown | 2.22% at 10:49pm | 2.55% | 5 Minutes | Cavity #119 -#127  Shearer at #117 |
| 1. 22/04/2019 | 11:44am | Unknown | 2.68% at 11:44 am (7minutes) | 2.97% at 11:57am | 33 minutes | Cavity #119 -#127  Shearer near cavity outbye |
| 1. 24/04/2019 | 3:25am | Unknown | 2.36% at 3:13am | 2.51% at 3:25am | 40 Sec | Shearer stopped At Chock #109 then at #145 |
| 1. 31/05/2019 | 11: 48pm | Unknown | 4.46% | 5.47% at 12:03am | 8 Hours | Cavity #142 -#149  Partial airway restriction |
| Date | Time of  Exceedance | s243(a) Sensor ("149 Sensor") | Tailgate Sensor — 400m outbye  ("Inbye Sensor") | Tailgate Sensor — 34 cit  ("Outbye Sensor") | Time over 2.5% | Factors mentioned |
| 1. 03/06/2019 | 3:26am | Unknown | 4.46% at 4:10 am | 4.04% at 4:24am | 4 to 5 Hours | Cavity #142 -#149  Partial airway restriction |
| 1. 05/06/2019 | 8:03am | Unknown | 2.92% at 8:04am | 2.14% at 8:13am | Unknown | Cavity #142 -#149  Partial airway restriction |
| 1. 05/06/2019 | 8:47pm | Unknown | 2.97% at 9:55pm | 3.30% at 10:36pm | 5 Hours approximately | Cavity #142 -#149  Partial airway restriction |
| 1. 12/06/2019 | 3:02pm | Unknown | 2.35% at 2:54pm | 2.53% at 3:02pm | 3 Minutes | Shearer stopped At Chock #113  Vent reduced 8m3/s less than D/S |
| 1. 15/06/2019 | 3:31pm | Unknown | 2.07% at 3:20pm | 2.56% at 3:31 pm | 3 minutes | Shearer stopped At Chock #135 |
| 1. 22/06/2019 | 3:15pm | 2% at 2:38pm | 2.72% at 3:10am for  7 minutes | 2.69% at 3:25pm for  9 Minutes | 9 Minutes | Cavity #148 -#149  Shearer stopped At Chock #130 |
| 1. 02/07/2019 | 2:27pm | Unknown | 2.36% | 2.52% | Unknown | Shearer stopped At Chock #139 |
| 1. 03/07/2019 | Unknown | Unknown | Unknown | Unknown | Over 1 hour | floor blower located at #55 roof support released approximately 2,463m3 after 1 hour |
| 1. 11/07/2019 | 1:36am | Unknown | Unknown | .2.50% | Unknown |  |
| Date | Time of  Exceedance | s243(a) Sensor ("149 Sensor") | Tailgate Sensor — 400m outbye  ("Inbye Sensor") | Tailgate Sensor — 34 cit  ("Outbye Sensor") | Time over 2.5% | Factors mentioned |
| 1. 14/07/2019 | 11:25am? | Unknown | 2.3% | 2.52% |  | Ventilation change implemented On 15 July to reverse ventilation direction Of perimeter  completed - increasing quantity of air along LW face |
|  |  |  |  |  |  |  |
| 1. 15/07/2019 | 1:49pm | Unknown | Unknown | 2.27% | Unknown | Control room operator noticed TG gas rising, LW contacted |
| 1. 21/07/2019 | 1:05pm | Unknown | Unknown | 2.89% | Unknown | flushed in beside TG #149 causing temporary restrict |
| 1. 22/07/2019 | 3:44pm | Unknown | Unknown | Unknown | Unknown | Cutting TG to MG, cavity formed on LW face from support #45 to #27.  Methane spike in TG |
| 1. 23/07/2019 | Unknown | Unknown | Unknown | Unknown | Unknown | Dealing with cavity at TG area of LW103, shearer cut out TG area and retreated  All goaf drainage holes operating at peak capacity with producing gas as planned. |
| Date | Time of  Exceedance | s243(a) Sensor ("149 Sensor") | Tailgate Sensor — 400m outbye  ("Inbye Sensor") | Tailgate Sensor — 34 c/t  ("Outbye Sensor") | Time over 2.5% | Factors mentioned |
| 1. 24/07/2019 | 12:16pm | Unknown | Peak of 3.39% CH4 TG | Unknown | Unknown | At 12.15pm goaf fall took place. |
| 1. 24/07/2019 | 1:54pm | Unknown | 2.7% | 2.55% at 2:01pm | Unknown | LW advanced last four TG shields. Cavity above #145-#149 |
| 1. 17/08/2019 | 3:29pm | Unknown | 2.2% | Unknown | Unknown | Initial cause of exceedance not clear; ventilation crew sealing 30m 0B |
| 1. 19/10/2019 | 4:31pm | Unknown | Unknown | Unknown | Unknown | LW103 cutting MG to TG - shearer paused at #115 by automated CH4 control system |
| 1. 07/11/2019 | 3:08am | Unknown | 2.56% | Unknown | Unknown | LW104 Cutting into TG shearer positioned at #140 |

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|  | Time of  Exceedance | s243(a) Sensor ("149 Sensor") | Tailgate Sensor — 400m outbye  ("Inbye Sensor") | Tailgate Sensor — 34 cit  ("Outbye Sensor") |
| 18/03/2020 | 21:33 | 0.97% | 2.56% | 2.3% |
| 19/03/2020 | 06:50 | 0.94% | 3.01% |  |
| 20/03/2020 | 02:30 | 0.81% | 2.84% | 2.57% |
| 20/03/2020 | 03:30 | 0.85% | 2.55% | 2.1% |
| 20/03/2020 | 14:36 | 0.99% | 3.55% | 3.1% |
| 22/03/2020 | 22:22 | 1.08% | 2.54% | 2.54% |
| 23/03/2020 | 06:28 | 0.8% | 1.99% | 2.55% |
| 04/04/2020 | 02:22 | 2.97% | 1.34% | 1.87% |
| 06/04/2020 | 23:31 | 1.36% | 2.12% | 2Æ6% |
| 07/04/2020 | 14:21 | 1.1% | 2.04% | 2.52% |
| 21/04/2020 | 00:58 | 3.08% | 1.48% | 1.49% |
| 21/04/2020 | 01:54 | 2.55% | 1.66% | 1.49% |
| 21/04/2020 | 13:06 | 2.66% | 1.6% | 1.42% |
| 21/04/2020 | 23:06 | 5.04% | 1.47% | 1.38% |

TWO DISTINCT TYPES OF EVENTS.

THOSE IN YELLOW COMING FROM FACE or FLOOR. S243 Sensor in the Tailgate does not change

THOSE IN BLUE COMING AT TAILGATE END OF ROADWAY FROM GAS MIGRATION FROM GOAF. The 400m and Outbye Sensor quantities at no stage go near 2%.

21/04/2020. 5% Explosive

From Incident Report 6th May 2020

Longwall Production Crew — Commenced work activities in LW104

• Dropping rocks off the roof supports

• Trying to get tips up to get the shearer underneath TG roof supports

• Turned shearer on at #139 roof support at 10:48

• Operating the roof supports at the TG end of the face in particular from

#140 to #149 shields to improve clearance to allow the shearer to pass

Undermanager arrives at longwall face. Conditions noted during inspection (from post event statement):

• Goaf was right at back of #149 roof support

Cavity was from #144-149 and had not propagated into roadway

General Body gas at TG Drive was 0.6% CH4

1.4% CH4 at around midface in rear walkway

IN DIRECT OPPOSITION THAT IT IS SUDDEN FALLS IN TAILGATE OF GOAF THAT CAUSES ELEVATED METHANE

• Roof was heavy in TG roadway

Duster was running approximately 10m outbye of face

A lot of buildup (of material) at TG Drive from cavity

Venturi running at — #90 roof support and also one running in TG Drive area

Butcher's flaps in front of legs of TG roof supports

Shearer at #145 roof support. Crew trying to get tip of #145 up

Deputy contacted Longwall Coordinator to update on the plan and organize three prop setters and a chain saw down to last open cut through (35c/t) in case required to assist in getting tips up.

Deputy and Undermanager returned to TG end of face and communicated plan to crew.

Shortly after, advanced past #145 roof support and cut into tailgate and back out.

Pushed TG and advanced roof supports.

Got tips up on #145 and #146 roof support

Shearer stopped at #120 roof support.

Crew working on double chocking roof supports from #125 to #138. Material observed dropping from above the roof support.

Deputy walked to Maingate to contact Longwall Coordinator and advise that pumping was not required.

Sequence of Events for roof support movements over an approximate 44 second period (as recorded from the Joy PRS Data System):

• PRSI 37 Adjacent advance

• PRS137 Adjacent set

• PRS137 Adjacent sprag set

• PRS137 Tip up

PRS136 sprag Extended

PRS136 Adjacent advance.

PRS136 Tip Down (note — button press for 0.1 second only)

WHEN THE IGNITION OCCURRED TIP DOWN OPERATES 0.1SEC