

**FW: Grosvenor Gas Plan**

**From:** "Griffiths, Trent" <[REDACTED]>  
**To:** "Mohr, Logan" <[REDACTED]>, "Badenhorst, Casper" <[REDACTED]>, "Niehaus, Wouter" <[REDACTED]>  
**Cc:** "Nowell, Rob" <[REDACTED]>  
**Date:** Thu, 11 Jul 2019 13:21:06 +1000

Gents,

See update from Dieter regarding Grosvenor Gas Management below.

Within the next week please ensure our LW TG Gas Management IMT is reconvened and Action Plan is updated to cover all of these dot points / commitments so we are 100% transparent with minutes sent to the workforce and that we are all singing from the same page.

Thanks.

Regards,  
 Trent Griffiths  
 Site Senior Executive  
 General Manager



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**From:** Griffiths, Trent  
**Sent:** Thursday, 11 July 2019 1:11 PM  
**To:** Haage, Dieter <[REDACTED]>; Britton, Glen <[REDACTED]>  
**Subject:** RE: Grosvenor Gas Plan

Dieter,

Appreciate the feedback and support.

I'll get Logan to ensure our IMT Action Plan that we communicate to the workforce is updated so we are all singing from the same page.

Also perimeter road ventilation reversal risk assessment that was done in 2018 was reviewed onsite this week so it will be going through final sign off process ready to upload onto the SHMS in the coming week.

Regards,  
 Trent Griffiths  
 Site Senior Executive  
 General Manager



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**From:** Haage, Dieter  
**Sent:** Thursday, 11 July 2019 9:37 AM  
**To:** Britton, Glen <[REDACTED]>; Griffiths, Trent <[REDACTED]>  
**Subject:** FW: Grosvenor Gas Plan

Glen, Trent, below is the gist of the actions for Grosvenor Gas mitigation. We will further refine as we go along, but what we have is reasonably sound.

The plan as I have it is ....

**Establish where the elevated SGE's are coming from :**

1. Review again the gas emissions from Arrow history from the GM and P seam to correlate against the current experience. ( Jul / Aug 19 - Russel Packham)
2. Drill and measure subsided potential target seams (P seam, Fairhills Seam) to establish post mining gas content for accurate mining process emissions. Mid August 19. (Exploration)
3. Drill and measure pre-drainage gas content and permeability at 3 positions (Inbye, Mid Panel, Outbye for panels 104, 105, 106). (H2 2019 and H1 2020) (Plan to be finalised by Casper Badenhorst and included in the 2020 BP)

**Dealing with elevated SGE's**

1. Increased Tailgate Goaf Gas holes with infill holes to bring spacing down from current 50m to 25m. (Commencing August and continuing through 2019 – 2020.) Casper Badenhorst
2. Reduce spacing of Maingate holes from current 300m to 150m, commencing outbye of river bed undermining, Q4 2019. (Casper Badenhorst)
3. Prepare plan and provide budget for 3 X 12" lateral goaf drainage holes in the P seam for LW104 and beyond, drill in 2019 Q4 (New idea, partially successful previously, will be refined for 104. (Russel Packham)

4. Increase gas handling infrastructure on surface to manage additional volumes including increased blower / compressor capacity from current 9000l/s to increase to 17000l/s (TBC once detailed modelling completed). Increase by adding 4 additional blowers and duplicating pipeline for increased volume. Completed by December 2019 (Casper Badenhorst / Russel Packham)

**Manage Tailgate Gas Spikes. (Spikes exceeding 2.5% are now reportable, not as in the past where the TG was effectively ERZ 0 with no limits)**

1. Resolve TG dogleg sensor inaccuracy compared to Tube Bundle system. (Over reading by 0.4%) (Q 3 2019)
  - a. Increase sensor head replacement frequency from 3 months to weekly (Logan Mohr TSM Grosvenor July 2019)
  - b. Review the option of swapping out Gasguard system for Trolex system (Logan Mohr July 2019)
  - c. Engage regulator to de-rate the inaccurate sensing system by the variance to accurate tube bundle if above measure not successful. (Bharath Belle July / August 2019)
- Reduce goaf perimeter road pressure differential: (Needs to be fully risk assessed as the risk of Sponcom is elevated and requires substantial controls) (To be risk reviewed by Roy Moreby and if supported locked in to by 19 July 2019 and implemented by Q4 2019)
  - a. Place the perimeter road on return by:
  - b. Installing a Set of Robust Tripple Machine Doors in TG101 B 1-2 cts
  - c. Remove stoppings between B & C hdgs at 2 & 3 cts TG101
  - d. Regulate MG103 inbye the face (could be a single regulator in the companion road immediately inbye the face & / or second one further inbye to share pressure loss)
- Reduce seal leakage by applying Russian goaf management system. (To be reviewed) Possible by H1 2020. (Russel Packham)

**Reduce intake Air contamination:**

1. Construct and commission intake inbye shaft in MG 103 to reduce intake contamination. (December 2019) This will reduce intake contamination from 0.4% to 0.1% potentially (Malcolm Smyth)

We are implementing the above and making provision in the BP as appropriate.

We will prepare a Grosvenor gas mitigation plan tracking sheet and Trevor will distribute weekly.

Regards

Dieter