



Mr Duncan Pendrigh  
 Hazelwood Inquiry Coordinator  
 Earth Resources Regulation  
 Department of Economic Development Jobs,  
 Transport and Resources  
 Level 9, 121 Exhibition Street  
 Melbourne VIC 3000  
 (email; Duncan.Pendrigh@ecodev.vic.gov.au)

7 December 2015

Dear Mr Pendrigh,

**Final AECOM Report entitled '*Estimation of Rehabilitation Costs – GDF SUEZ Hazelwood Mine*'**

I refer to the report of AECOM entitled *Estimation of Rehabilitation Costs for the GDF SUEZ Hazelwood Mine* dated 13 November 2015 (**AECOM Report**), which was provided to GDF SUEZ Australian Energy (GDFSAE) on 27 November 2015 via email.

The AECOM Report was provided to GDFSAE on the day after the solicitors representing GDFSAE in the Hazelwood Mine Fire Inquiry (King & Wood Mallesons) wrote to DEDJTR's solicitors (the Victorian Government Solicitors Office) in response to the Witness Statement of Mr Luke Wilson, Lead Deputy Secretary, Agriculture, Energy and Resources, DEDJTR dated 20 November 2015 (**Wilson Statement**). King & Wood Mallesons' letter raised the following issues:

1. The Wilson Statement referred to certain key milestones in the Project Plan for DEDJTR's Bond Review Project having been completed, or purportedly being underway, as follows:
  - a. Final [URS / AECOM] reports due: 13 November 2015;
  - b. Develop bond level position: 18 November 2015; and
  - c. Determine bond levels, discuss the mines, and finalise: ongoing,

however GDFSAE had not received a copy of the AECOM Report from DEDJTR, or received any communications from DEDJTR in relation to the AECOM Report - other than the discussions at the meeting held on 13 October 2015, and limited email correspondence between GDFSAE and URS / AECOM in October and November 2015; and

2. GDFSAE required the following materials and information as soon as possible, in order for GDFSAE to have an opportunity to adequately prepare for the hearings of the Hazelwood Mine Fire Inquiry insofar as the Bond Review Project is concerned:
  - a. An unredacted copy of the AECOM Report with respect to the Hazelwood Mine;
  - b. Details of DEDJTR's "bond level position" with respect to the Hazelwood Mine (which the Wilson Statement indicated was to be determined by 18 November); and

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HAZELWOOD POWER ABN 40 924 759 557, a partnership comprising National Power Australia Investments Limited ABN 51 075 257 537 (incorporated in England & Wales), Australian Power Partners BV ARBN 075 477 208 (incorporated in the Netherlands), Hazelwood Pacific Pty Ltd ABN 19 074 351 376 and Hazelwood Churchill Pty Limited ACN 164 079 403




- c. Details of DEDJTR's proposed processes for further consultation with GDFSAE in relation to the outcomes of the Bond Review Project (which the Wilson Statement suggested was "ongoing").

As at the date of this letter, GDFSAE has received no response to the requests outlined in items 2 (b) and (c) above.

### **(1) GDFSAE's concerns in relation to the AECOM Report**

#### **(a) Estimated closure costs**

As regards the "Risk Costs" referred to in Table 1 (Summary of Closure Costs), not only is the table difficult to reconcile with the detailed cost estimates in the appendices, the information provided with respect to the specific "Key Risks" that have been included in the costings is incredibly high level in nature. For example, as regards batter failure (p.10):

*"Batter failure in an area where infrastructure is affected:*

- *The risk event is that a slope failure occurs where there is major public/private infrastructure that requires stabilisation;*
- *The consequence includes estimates of costs for both long term slope stabilisation, rehabilitation and compensation;*
- *The likelihood was based on whether there had been any historic events and other information provided on geotechnical stability of the batters."*

These limitations mean that it is not possible for GDFSAE to meaningfully assess the costings presented in the AECOM Report, which are disputed by GDFSAE.

#### **(b) Issues with methodology and assumptions**

In your email dated 27 November 2015 forwarding a copy of the AECOM Report, you indicated that:

*"the earlier preliminary estimates that we discussed with you on 13 October were amended following consideration of the information you supplied."*

Based on its preliminary review of the AECOM Report, GDFSAE disagrees that its feedback on the draft AECOM report (provided at the meeting on 13 October 2015, and in subsequent email correspondence between James Faithful of GDFSAE and Bryan Chadwick of AECOM) has been satisfactorily addressed.

In particular, GDFSAE is concerned that a number of the fundamental methodological issues and incorrect assumptions which it had previously raised with respect to the draft URS / AECOM Report have not been addressed by AECOM in its final report, including:

1. **End of Mine (EoM) liability assessment** – the assumed date for the mining operations in the "End of Mine Life" scenario is 2026. This assumption is in conflict with:
  - a. the approvals for the Phase 2 West Field Development of the Hazelwood Mine (which themselves followed a lengthy Environmental Effects Statement and Planning Panels process) - which contemplate that the mining activities will continue to 2031;
  - b. the Work Plan Variation for the Hazelwood Mine approved by DEDJTR in May 2009, which also contemplates active mining operations continuing to 2031; and
  - c. the current Mine Plan – discussed at length with DEDJTR officers and to be formally reflected in a further Work Plan Variation application in early 2016 – contemplates mining operations continuing to 2033.

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- Further, from the limited information presented in the AECOM Report, it is not possible to assess:
- a. the assumed size of the Mine void in 2026. The Mine void at that time will be smaller than the final Mine "footprint" outlined in the Work Plan Variation (which will not be achieved until 2031); and
  - b. the extent of the progressive rehabilitation works which AECOM has assumed will have been completed as at 2026.
2. **Assumed filling time for the pit lake** – the AECOM report assumes that the future lake will take 21 / 28 years to fill. This is in direct conflict with:
- a. water balance studies referred to in the Work Plan Variation (forming part of the EES Report), which found that the lake will fill to the point at which weight balance is achieved (RL - 22m) within 7 years; and
  - b. more recent studies undertaken by GDFSFAE (including the report of GHD entitled '*Hazelwood Groundwater Management Report*' at Annexure 14 of the Witness Statement of James Faithful prepared for the Hazelwood Mine Fire Inquiry) which indicate that the point of weight balance will be reached within 6 years.
3. **Incorrect and uncommercial 'base case assumptions' for the relevant works** –including in the case of the Early Closure detailed costings, assumed requirements to:
- a. re-shape 100 metres (vertical height) of batters in certain areas of the Mine - In circumstances where it is only approximately 80 metres of coal batters (above RL – 22) that will require reshaping;
  - b. source and transport large volumes of overburden from outside the Mine void to cover exposed coal batters – in circumstances where it is internally sourced or adjacent overburden that is proposed to be used;
  - c. purchase water in order to fill the Mine void, at rates other than those currently reflected in GDFSFAE's Water Services Agreement and Groundwater Licence;
  - d. install large areas of rip rap as an erosion protection measure, every few decades, for a period of *500 years*, at a cost of \$85.38 million;
  - e. install 331 horizontal drains throughout the Mine – without any explanation as to how this requirement was derived;
  - f. buttress the east field northern batters with 2.5 million cubic metres of material (at a cost of \$14.38 million);
  - g. erect a security fence – in circumstances where the Mine site is already fully fenced;
  - h. utilise standard plant (as opposed to mining plant, which provides substantial efficiencies) to undertake the batter rehabilitation works;
  - i. pay a third party workforce mobilisation/demobilisation and engineering procurement and construction management fees, in the order of \$41.39 million; and
  - j. undertake *100 years* of monitoring and maintenance, at a cost of \$58.89 million.

GDFSFAE is concerned to note that AECOM Report was finalised on 13 November 2015, in circumstances where James Faithful of GDFSFAE was in communication with Mr Bryan Chadwick of AECOM until

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16 November 2015, raising issues with respect to the methodology adopted by AECOM, and seeking to arrange a meeting to further discuss.

Whilst it is acknowledged by GDFSAE that Mr Chadwick purported to respond to GDFSAE's feedback in a table attached to his email dated 16 November 2015, GDFSAE considers the responses provided to be unsatisfactory. A copy of the relevant email correspondence is **attached** to this letter.

## **(2) DEDJTR processes for Bond Review Project**

Given that the Hazelwood Mine Fire Inquiry hearings on TOR 8 – 10 commence tomorrow, GDFSAE reiterates its earlier request for urgent advice from DEDJTR in relation to status of the Bond Review Project, including advice as to:

1. whether GDFSAE will have an opportunity to provide comments or make submissions on the AECOM Report;
2. the reliance which DEDJTR and the Minister for Energy and Resources intends to place upon the AECOM Report; and
3. whether DEDJTR intends to consult with GDFSAE in relation to the AECOM Report, and the status of the Bond Review Project more generally.

Please contact George Graham, Asset Manager, on (03) 5135 5100 should you wish to discuss.

Regards,

A handwritten signature in black ink, appearing to read "George Graham", written over a horizontal line.

Attach.

**Heffernan, Emily (AU)**

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**From:** Faithful, James <james.faithful@gdfsuezau.com>  
**Sent:** Monday, 16 November 2015 1:10 PM  
**To:** Chadwick, Bryan  
**Cc:** Wilkinson, Garry; Duncan.Pendrigh@ecodev.vic.gov.au  
**Subject:** RE: Response to DEDJTR/URS Data Request

Hi Bryan,

Thanks, on your comments;

1. The 2009 WPV refers to the EES, see Page 1.1.
2. What indications have SRW given that we can't use our full licence amount?
3. Define "reasonable" scenario's when it comes to use of mining plant and costs, your costs are for small road construction plant.

So, we can debate these items and the others over email or we can speak in person, if Duncan is able to arrange another visit?

Also what happened with the variation in area calculations, considering there was a large discrepancy, I didn't see anything come back.

Thanks,

**James Faithful**  
 Technical Services Manager - Mine  
**Hazelwood**  
 GDF SUEZ Australian Energy

**GDF SUEZ**



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**From:** Chadwick, Bryan [mailto:bryan.chadwick@aecom.com]  
**Sent:** Monday, 16 November 2015 8:17 AM  
**To:** Faithful, James  
**Cc:** Wilkinson, Garry; Duncan.Pendrigh@ecodev.vic.gov.au  
**Subject:** Response to DEDJTR/URS Data Request

James,

Thanks again for the information you provided to our data request.

**Cc:** Wilkinson, Garry; [Duncan.Pendrigh@ecodev.vic.gov.au](mailto:Duncan.Pendrigh@ecodev.vic.gov.au)  
**Subject:** RE: URS Closure Cost Estimate - Data Request

Hi Bryan,

Have got it, being reviewed, as well as the report, you won't have it until next week though.

Close of business, Tuesday.

Thanks,

**James Faithful**  
Technical Services Manager - Mine  
**Hazelwood**  
GDF SUEZ Australian Energy



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**From:** Chadwick, Bryan [<mailto:bryan.chadwick@aecom.com>]  
**Sent:** Thursday, 5 November 2015 12:21 PM  
**To:** Faithful, James  
**Cc:** Wilkinson, Garry  
**Subject:** URS Closure Cost Estimate - Data Request

James,

Just a quick email to see how you are going with our data request. Are you still planning on getting us any information by tomorrow?

Please call if you have any questions.

Cheers

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Page Number	Paragraph	Comment	Response (16 Nov 2015)
3	Closure Costs Estimates	Mining licence expires in 2026, but the life in Approved 2009 WPV is 2031, mine plan is currently 2033.	We have assumed for the EoM liability assessment that at 2026 the pit has reached its maximum approved extent (ie that the disturbed footprint is at its maximum). The 2026 was selected based on when the MIN licence expires. It is recognised that mine plan shows maximum extent of pit will not be achieved until well beyond 2026, but our instructions were to use the MIN expiry for the EoM date. It should be noted that the 2026 date is used for discounting purposes for EoM, so is irrelevant for current liability assessment
4	Current Mine Status	What is the Main Field?	Old terminology, which has been removed.
6	There is no indication...	The Approved 2009 WPV refers to the 2004 Environmental Effects Statement (EES), this lists the sources of water to fill the lake and the time. Please remove this comment or alter it to reflect the state of knowledge in the 2004 EES.	The rehabilitation details relevant to closure that are provided in the 2009 WPV (Section 6) makes no reference to EES or any technical documents. Our instruction were to use only that which is outlined in Work Plan.
7	Background	Please refer to the EES, this has the detail.	see comment above
8	Domain 4 - Pit	Where did the assumption for the 28 years fill time come from? Please see the EES, this states 6, recent modelling is 7 for a much larger void.	Time to fill is based on pit void and use of BWE and mine's current groundwater extraction use only. No other sources of water are considered available at this time.
9	Domain 4 - Pit	Rip rap, only required on some slopes, non disperse clay on others and "beach zones" to dissipate wave action energy.	The philosophy we are following is that this liability assessment is a base case for a range of items that are not documented in the WPV. In regards to rip rap we have assumed it is needed around entire lake given there is no document which shows an alternative strategy is appropriate. Once an assessment has been undertaken on what is the optimal wave erosion control measure, and endorsed by ERR, the liability assessment can be updated.
9	Domain 6 - Pit Lake Filling	GEL is actually 23GL/Year.	The information provided shows the mine's groundwater licence limit is 22.5GL/yr. However, URS have assumed that the mine's current usage (~12 GL/yr) is a more appropriate volume to what SRW may allow for pit filling in the long term.
9	Domain 6 - Pit Lake Filling	Where did the assumption on the 28 / 21 years fill time come from? Please see the EES, this states 6, recent modelling is 7 for a much larger void.	see comment above
10	Domain 6 - Pit Lake Filling	This is incorrect, the water balance study was completed for EES.	see comment above
10	Domain 6 - Pit Lake Filling	This is incorrect, there is sufficient water.	see comment above
10	Timing of Closure	This is an incorrect assumption that no progressive rehabilitation will take place, it assumes the mine does nothing and the mining regulator does nothing, this is not realistic.	URS report has been updated to take into account the rehabilitation as reported in your Sept'15 document, and provided herein. It should be noted that we have included a risk that a portion of this rehabilitation may need re-work for final closure (and thus has been included in the Risk Costs)
11	Timing of Closure	Where did the 28 / 21 years fill time come from? Please see the EES, this states 6, recent modelling is 7 for a much larger void.	see comment above
11	Summary of Assumptions	Approved 2009 WPV states life at 2031.	see comment above
11	Summary of Assumptions	Some batters have already been reshaped.	see comment above
11	Summary of Assumptions	I presume you have only battered back at 1:3 those slopes above the RL-22 level? There is no need to batter the slopes back below the water line.	Correct. Area of batter for re-shaping and rehabilitation is above -22mRL to crest.
12	Summary of Assumptions	What work went in to set the 2.5mbcm buttress dimensions?	Volume was provided by ERR
12	Key Risks	Coal fire, how, all coal is covered?	It should be noted that the risk cost are for events that could occur during the closure period. Therefore, assuming coal is exposed below -22mRL for a period prior to filling of lake there is a risk of a coal fire during that time.
13	Key Risks	Statement re; 2009 WPV water balance, take out or put in line with the EES findings.	see comment above
17	Key Contributors to Cost	Why are you trucking overburden? Why aren't you pushing overburden down from adjacent strip as a first option and then using truck and shovel on remainder?	Base case assumption is that material needed to cover batters is to be source outside pit. The cost rate range used accounts for material sourced adjacent to pit and where a reasonable haul distance is required.
19	Key Contributors to Cost	See 17.	see comment above
20	Rawlinson's Reference	If these costs have been used from this guide, halve them for major mining plant, you would rehabilitate as efficiently as possible and campaign over summer months with much larger plant and this would also reduce any possible risk exposure times.	Rawlinson has been used to ensure the rate range used covers all reasonable scenarios.