WA Gas Networks Pty Ltd
ABN 90 089 531 975

12-14 The Esplanade
Perth WA 6000

GPO Box W2030
Perth WA 6846

p. 08 6213 7000
f. 08 6213 7001

www.wagn.com.au

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Jennifer Hughes
Economic Regulation Authority
Level 6, Governor Stirling Tower
197 St Georges Terrace
Perth Western Australia 6000

Dear Jennifer

ESD Report – Request for Further Information

In the report provided to ERA in respect of WA Gas Networks historical and proposed network related capital expenditure, *EnergySafety* made a number of comments. The following comments and attachment to this letter may assist in providing further substantiation of the capital expenditure:

1) a number of adjustments to the historical and forecast capital and operating expenditure have been made as a result of the incorrect classification of certain expenditures notably condition assessments and transducer and false alarm mitigation works. These have been reclassified from capital expenditure to operating expenditure. This amendment results in a $59k reduction in historical capital expenditure and a $154k reduction in the capital expenditure forecasts. A corresponding increase in actual and forecast operating expenditure has also be made as a result.

2) many of the capital expenditure items noted as repeats by *EnergySafety* arise because:

- Different classification categories under NGR 79(2)(c) have been used for the same type of expenditure. We have reviewed and resolved the classification issues and as a result many of the individual projects can be grouped. The results of this exercise are reflected in the tables in the attachment to this letter;

- In a number of cases a work program is carried out over multiple years but individual projects have been raised within our accounting system for each annual component. We have now amended the reporting of these work programs so that they are reflected as one project spanning a number of years. The results of this exercise are also reflected in the attachment to this letter.

3) Since lodgement of WA Gas Networks' revisions to its access arrangement, further work has been completed on the analysis of the slabbing project on which *EnergySafety* sought further detail.

Many high pressure (HP) natural gas pipelines previously built in Australia including those owned and operated by WA Gas Networks, were designed and built to satisfy structural yield stress calculations depending on service conditions and location class. Recently there have been significant enhancements to the relevant Australian Standards resulting in improvements to pipeline safety. Risk assessments, no-rupture designs and energy release rate limits now not only apply to new pipelines but are also retrospectively applied to existing pipelines.

Class 600 High Pressure steel pipelines form part of the WA Gas Networks' gas distribution system. The construction of these pipelines predates AS2885.1-2007 and complied with applicable standards at the time of construction (AS1697 and previous versions of AS2885).

AS2885.1-2007 introduces a number of new requirements for the design and construction of the pipelines. Section 1.3 of AS2885.1-2007 indicates that modification of existing assets constructed to a previous standard or edition to a Standard is not required, with the exception of matters that relate to public safety in high consequence areas. In addition, where AS2885.3 refers to AS2885.1, the relevant provisions of the most recent edition of AS2885.1 must be complied with. Special provisions for High Consequence Areas are:

- *Clause 4.7.2 NO RUPTURE*
  In Residential (T1), High Density (T2), Industrial (I), Heavy Industry (HI) and Sensitive (S) location classes, the pipeline shall be designed such that rupture is not a credible failure. This shall be achieved by either one of the following:

  (a) The hoop stress shall not exceed 30% of SMYS.

  (b) The largest equivalent defect length produced by the threats identified in that location shall be determine. The hoop stress at MAOP shall be selected such that the critical defect length is not less than 150% of the axial length of the largest equivalent defect.

- *Clause 4.7.3 MAXIMUM DISCHARGE RATE (MDR):*
  ..... the maximum discharge rate shall not exceed 10 GJ/s in Residential (T1) and Industrial (I) locations or 1 GJ/s in High Density (T2) and Sensitive (S) locations.

[redacted]

[redacted]

In preparing an estimate for use in forecasts capital expenditure, WA Gas Networks undertook a preliminary desktop analysis of the length of high pressure pipelines which would require treatment. The analysis identified that approximately 6.1 kms of pipe, being 5% of the 65 kms of CL600 and 5% of 56kms of CL150 pipes, would be slabbed over 4.5 years commencing in 2011/12.

A detailed location analysis undertaken as part of the Formal Safety Assessment for compliance with the leak survey requirement in AS/NZS 4645 was completed at the end of June 2010 as per the WA Gas Networks Safety Case Implementation Plan. [redacted]

[redacted]

4) We note that *EnergySafety* has made no comment in relation to projects which it identifies as 'Business Operation'. We would appreciate clarification on whether the Authority requires any further action or information from WA Gas Networks other than the comments provided in the attachment and the ICT Asset Management Plan provided on 29 January 2010 and 13 September 2010.

WA Gas Networks is available to meet with yourselves or representatives from *EnergySafety* to further elaborate on the additional information should this be useful.

Please do not hesitate to contact me if you require clarification of the information provided.

Yours sincerely,

Deborah Evans

Manager Regulatory Affairs and Risk