18 October 2013

Please see below British Gas' comments on the joint SMER produced by the two ITE's.

- There are some questions surrounding the errors at the low flow rates. As the system was probably being operated below the contractual low flow limit and hence at high uncertainties, the results pertaining to the lowest flows should not be discounted simply because of the high uncertainty as these flows did occur in the measurement system. The flows rates should be as close to the actual flow rates irrespective of the uncertainty in the readings.

- In table 2 the mean error was 70.556% with SD of 3.068% for the experimental error versus 70.574% with an SD of 0.678% for the CFD determined error. As expected the error at lower flow rates will have a greater uncertainty as shown by the two standard deviations. However, the actual errors from the testing and CFD are with 0.018%, as commented at the meeting the CFD has been a good tool for supporting the analysis and in this case validates the error very well which otherwise would have a large uncertainty if relying entirely on the empirical data.

- It is not clear if the combined results in table 2 are for all the flow rates, high medium and low, whereas table 3 refers only to the low flow rates, after the rejected points have been removed, clarification on this would be useful.

- In figures 5 and 7 it would be useful to include all of the low flow rate data included including the rejected test points if they are not already included (not stated in the description).

- In tables 4 and 5, it is not clear how the flow range has been determined (is it from the dataset?), e.g. low flow limit in table 4 is <1.477Mscm/d whereas it is <0/577 Mscm/d in table 5.

Graham Wood
British Gas

07979 567686
graham.wood@britishgas.co.uk