METER ERROR REPORT

FINAL

Reconcile?	N
Safety Issue?	N
Thesis Report No.	

1. EXECUTIVE SUMMARY

SITE NAME	BRAISHFIELD A
LDZ	SOUTH
LAST GOOD DATE	29/06/11
START DATE	30/06/11
END DATE	16/07/11
SIZE OF ERROR (No reconciliation required if under 0.1%)	12 – 100 %
ESTIMATE – Y/N?	N
ROOT CAUSE	LDP ZERO DRIFT
ANALYSIS	Appendix A
METER TYPE	ORIFICE
AUTHOR	T Roberts
CHECKED BY	B Purl

2. BACKGROUND

Gas is supplied to part of the SoE network at Braishfield A FWACV Offtake which employs an orifice plate meter to measure the volumetric flow rate in accordance with BS EN ISO 5167.

Following the 2011 ME2 revalidation in June 2011 System Control noted intermittent un-commanded indications of flow through the A system. Analysis of HPMIS RBD data indicated that the LDP cell output was drifting above the low flow cut-off resulting in the 'in-use' dp value being computed as actual flow. Comparisons with the corresponding HDP and SDP outputs confirmed that the LDP transmitter was drifting in isolation rather than an actual dp being present.

The LDP transmitter was replaced on 16/7/11 so the period affected is from 30/6/11 to 16/7/11.

3. ERROR QUANTIFICATION AND IMPACT

11 days between 30/6/11 and 16/7/11 were recorded in HPMIS as having DVOL figures while Gemini data recorded only 4 days, confirming that in-day corrections were made by system operators. Of the four days in Gemini only the first 3 require reconciliation as the fourth did not suffer any flow attributable to the drifting LDP transmitter.

For each of these 3 days HPMIS RBD data was used to identify the 4 minute data readings affected by the LDP transmitter drift. The average flow for these in-error 4 minute readings was then used to derive an error volume that was then deducted from the Gemini value for that day.

Data for the 3 days requiring correction has been tabulated in Appendix A

4. CAUSES

Unstable zero dp output from LDP transmitter.

5. RECOMMENDATIONS AND LEARNING

The as-found drift between the 2010 and 2011 ME2 revalidations should have instigated a more rigorous examination of this transmitter.

Consideration should also be given to training technicians in the background and interpretation of high static pressure checks as the as-left results from the June 2011 ME2 revalidation immediately preceding this error give cause for concern.

REFERENCES

HPMIS records

Gemini records
2011 ME2 revalidation results
Ad-hoc ME2 covering LDP replacement

VERSION HISTORY

Version	*Changes*	*Author*	*Date*
Rev O	*First draft*	*T Roberts*	*02/12/11*
Rev 1	*Checker comments*	*T Roberts*	*14/12/11*

DISTRIBUTION

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Appendix A

Gasday	Flowrate	Gemini mscm	over read mscm	corrected Gemini mscm
30/6/11	mixture of real and spurious	0.183	0.085	0.098
1/7/11	mixture of real and spurious	0.179	0.019	0.160
2/7/11	small spurious flow	0.015	0.015	0.000