

METER ERROR REPORT**FINAL**

Reconcile?	Y
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Safety Issue?	N
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Thesis Report No.	
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1. EXECUTIVE SUMMARY

SITE NAME	Blackrod
LDZ	North West
START DATE (actual)	9 th December 2011 03:30
LAST GOOD DATE	
END DATE	9 th December 2011 05:34
SIZE OF ERROR (No reconciliation required if under 0.1%)	121703 scm over-registration (equivalent to 1.29%)
ESTIMATE – Y/N?	N
ROOT CAUSE	Pressure transmitter lock up
ANALYSIS	HPMIS RBD data
METER TYPE	Orifice Plate
AUTHOR	Piers Eldridge
CHECKED BY	Andrew Finch
ACCEPTED BY UKD NETWORK	

2. BACKGROUND

Gas is supplied to part of the North West Network at Blackrod FWACV offtake. Blackrod is a dual stream orifice plate meter site using a gas chromatograph for RD and CV determination and PTZ correction.

On the 9th December 2011 the pressure transmitter on MTB locked up for some undiscovered reason for a period of 2 hours 4 minutes. This caused the standard flow rate to be incorrectly calculated. The condition was rectified by turning the power to the transmitter off and then on again.

3. ERROR QUANTIFICATION AND IMPACT

The RBD data was reviewed before and after the pressure transmitter (PT) locked up. The ten PT readings prior to and after the locking of the PT were averaged to estimate the actual pressure reading during the period of the PT locking up.

Using the orifrun with the 4 minute RBD and gas composition data, the volume flow for the period where the PT locked was calculated. In each instance, the volume flow for the locked up PT and the estimated PT reading was calculated. By comparing these calculated flows over the period of the PT lock up, it was estimated that the orifice metering system over-registered 121703scm of gas.

From HPMIS, the Dvol for Gas Day 8th of December 2011 was 9.528 mscm so the over-registration equates to 1.28 % of Dvol. A spreadsheet detailing the calculations is available on request.

The error would have had a minor affect on odourisation.

4. CAUSES

HPMIS (RBD data) should continue to be monitored to identify any such future errors. Should the error re-occur an assessment of the transmitter may be required to ensure its integrity.

REFERENCES

ISO 5167
HPMIS database

VERSION HISTORY

<i>Version</i>	<i>Changes</i>	<i>Author</i>	<i>Date</i>
<i>Rev 1</i>	<i>Final</i>	<i>Piers Eldridge</i>	<i>23/12/2011</i>