

**METER ERROR REPORT****FINAL**

Reconcile?	Y
------------	---

Safety Issue?	N
---------------	---

Thesis Report No.	
-------------------	--

**1. EXECUTIVE SUMMARY**

SITE NAME	Ross WM
LDZ	West Midlands
START DATE (actual)	17 <sup>th</sup> October 2009
LAST GOOD DATE	
END DATE	17 <sup>th</sup> October 2009
SIZE OF ERROR (No reconciliation required if under 0.1%)	9422.6 scm over-registration (equivalent to 2.742%)
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 West Midlands network, at Ross FWACV offtake. The site metering system comprises a single Orifice meter with an isolated bypass.

On the 17th of October 2009 the pressure transmitter locked up for some undiscovered reason for a period of 2 hours 39 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 8 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 were calculated. By comparing these calculated flows over the period of the PT locking up it was estimated that orifice metering system over-registered 9422.6 scm of gas.

From HPMIS, the Dvol for Gas Day the 17th of October 2009 was 0.343578 mscm so the over-registration equates to 2.742 % of Dvol. A spreadsheet detailing the calculations is available on request.

The error would have had a minor affect on odorisation.

## 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>19/10/2009</i>