

NULL METER ERROR REPORT**FINAL**

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

SITE NAME	Fiddington	
LDZ	Wales & West Utilities	
START DATE (actual)	6 th April 2021	
LAST GOOD DATE		
END DATE	18th August 2021	
SIZE OF ERROR (No reconciliation required if under 0.1%)	0.073082 % under registration	
ESTIMATE – Y/N?	N	
ROOT CAUSE	Incorrect K Factors used in the Omni flow computer	
ANALYSIS	Application of Meter Calibration Curve	
METER TYPE	USM	
AUTHOR	J Hill	
CHECKED BY	C Litster	
ACCEPTED BY NETWORK		
RECONCILIATION	Distribution	Transportation

2. BACKGROUND

Fiddington Offtake has duty/standby ultrasonic meter streams, using a gas chromatograph for RD and CV determination and PTZ correction. During a metering audit at Fiddington on the 18th of August 2021 it was identified that the k-factors had been entered in reverse order to the frequencies entered in the Omni. It has been found the error occurred during the reinstatement of meter 12078552-5007 after its removal and re-calibration, and that the k-factors and associated frequencies from the calibration certificate were entered into the Omni flow computer in the reverse order. The error was corrected in the flow computer at the time of the audit.

3. ERROR QUANTIFICATION AND IMPACT

Using the meter calibration curve, the k-factors for the incorrect frequencies used were calculated. The applied and corrected k factors were then used to determine the applied and corrected volume and hence percentage volume error for each incorrect frequency used.

The volumetric error was calculated as the difference between the recorded and corrected volumes.

The overall error is an under-registration of 0.073082%.

4. CAUSES

Human error in reading and entering values from the calibration certificate to the Omni flow computer.

5. RECOMMENDATIONS AND LEARNING

Peer review of k-factor and frequency entries for existing and new USM/turbine installations.

REFERENCES

HPMIS Database

Meter 12078552-5007 calibration certificate

VERSION HISTORY

<i>Version</i>	<i>Changes</i>	<i>Author</i>	<i>Date</i>
<i>0</i>	<i>First Issue</i>	<i>J Hill</i>	<i>06/10/21</i>

DISTRIBUTION

Wales & West Utilities