



Assumption Change Control Sheet

Test	4a & 4b
Assumption	29. DHW flow rate prior to keep warm test

Change Originator	GJ
Change Request No.	018-Rev 2
Date of Request	22/09/2020
Proposed Change to Assumption?	N

Proposed Approach

Retain flow rate of 0.13 l/s.

Rationale (underlying basis for assumption)

The purpose of the pre-test flow rate is to ensure that the system is completely up to temperature, prior to commencing the keep warm test, with standardisation of conditions across test rigs and tests. As 0.13 l/s is the maximum flow rate used in the DHW tests, this is representative of a large DHW event prior to commencement of keep warm.

It was analysed if the temperature of the heating PHE at the time of the commencement of the test could affect the result of the test. A calculation was performed based on a 16 plate exchanger dropping from 52.5 temperature to 48 °C temperature at the end of the test. The estimated average heat loss at these conditions was 0.31W. Only a small part of this power would be transferred from heating PHE to the DHW exchanger, and therefore, it can be considered negligible comparing with the heat losses measured during the published tests.

Impact of Change (e.g. implications for test rig)

N/A

CHANGE EVALUATION

Date Evaluated	17/12/2019
Additional Information Required?	N
Modification to Proposed Approach?	N
Signed-off	Y