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| **Change Note** | | **CN-052** |
| **Change to:** Technical Assumption 67 | | |
| **Description:** Scaling assessment primary return temperature criteria | | |
| **References:** Test regime paragraph 2.26, Scaling assessment | | |
| **Change originator:** FV | | **Date of request:** 30/06/21 |
| **Rev:** 01 | **Date authored:** 21/09/21 | **Proposed change to assumption:** N |

1. Proposed Approach

During tests 2a and 3a, t12 shall not exceed 60 °C at any point of the test.

Criteria as previously.

1. Rationale (underlying basis for the change)

The build-up of scale will reduce the outputs of plate heat exchangers and lift return temperatures, so ultimately requiring the plate heat exchanger to be descaled or replaced. Scale also provides a medium for bacteria to grow on, so avoiding scaling can reduce associated risk from biological contamination.

At temperatures above 60 °C, the rate of scale precipitation significantly increases, hence the Test has some criteria that seek to indicate if the DHW exceeds 60 °C at any time in DHW plate heat exchanger.

Scale will form at lower temperatures so the criteria is 55 °C for conditions where the plate heat exchanger will be at the this temperature for longer periods e.g. during standby or at the end of a DHW draw-off.

1. Impact of change (e.g. implications for test rig)

N/A

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| **Evaluation of change** | | | |
| **Date evaluated:** 30/06/21 | **Those present:** GJ, RH, SC, MO & FV | **Additional info required?:** N | **Modification to proposed approach?:** N |
| **Details:** Confirmation of scaling assessment criteria | | | |
| **Signed off: Yes** | | | |