ISSUE PAPER

NSF standard(s) impacted: NSF/ANSI 58

Purpose and background:

Provide a one or two sentence statement explaining the purpose of your recommendation. Also please provide a brief background statement indicating the cause and nature of concern, the impacts identified relevant to public health, public understanding, etc., and any other reason why the issue should be considered by the Committee. Reference as appropriate any specific section(s) of the standard(s) that are related to the issue.

NSF/ANSI 58 Section 7.3 Data transfer protocol (DTP) requires testing in accordance with Section 6.8 to determine TDS reduction, recovery, and DPR. Section 6.8.6 requires an initial dynamic inlet pressure of 50±3psig.

Testing at a lower inlet pressure (i.e. 45psig) would be more conservative for TDS reduction compared to an inlet pressure of 50 ± 3psig. While testing is considered worst case, it may result in better TDS reduction ratios, which would allow a membrane supplier to transfer reduction claims to candidate systems.

Recommendation:

Clearly state what action is needed: e.g., recommended changes to the standard(s) including the current text of the relevant section(s) indicating deletions by use of ~~strike-out~~ and additions by highlighting or underlining; e.g., reference of the issue to a Task Group for detailed consideration, etc.

7.3.2.3 Required testing (membrane supplier)

a) The membrane element manufacturer shall supply membrane elements for testing to open atmosphere and for testing in a surrogate system. The surrogate system shall be a typical POU system and shall utilize an automatic shutoff valve and pressurized storage tank.

b) The membrane elements in the surrogate system shall be tested in accordance with Section 6.8 to determine TDS reduction, recovery, and DPR. Testing of the membrane in a surrogate system under more challenging conditions (i.e. inlet pressure of 45psi) is acceptable, if requested.

c) TDS reduction and DPR shall be tested with the system outlet open to atmosphere during Days 1 and 7 of the surrogate system testing. The TDS samples shall be taken at the end of the recovery test on Days 1 and 7. The DPR open to atmosphere shall be calculated from data collected during the recovery tests on Days 1 and 7.

   During the procedure for collecting open-to-atmosphere samples, the low flow of permeate from the membrane results in samples that reflect permeate that would be generated during normal closed spigot operation. The open discharge shall be operated long enough to ensure that all sumps and plumbing components have been cleared of all previous permeate. A minimum of five times the unit void volume

Item #: DWTU-2025-2

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of any internal component between the membrane element and the sample collection point shall be flushed from the system before collecting open to atmosphere samples.

d) The membrane elements in the surrogate system shall be tested in accordance with Section 6.8 to any of the allowed contaminants listed in Section 7.3.1 of the DTP.

e) Testing of units under Section 7.3.2.3.b and c shall be performed on the same units. Testing of units under 7.3.2.3.d may be performed on other identical surrogate systems.

Supplementary materials (photographs, diagrams, reports, etc.):

If not provided electronically, the submitter will be responsible to have sufficient copies to distribute to committee members.

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Submission date: 2/19/2025

Please submit to: Joint Committee Secretariat or to standards@nsf.org

**Type written name will suffice as signature*

Item #: DWTU-2025-2

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