ISSUE PAPER

NSF standard(s) impacted: NSF/ANSI 40, 46, 245, 350

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 40, 46 and 245 are very proscriptive in defining the specific analytic methods to be used for sample analysis, often specifying *Standard Methods.* Over time, alternate and improved techniques become available as new analytical methodologies and instrumentation emerge, resulting in alternate methods that are often equivalent or superior to those methods specified in the standard. Additionally, as NSF standards are applied in other regions in the world, the methods employed by various qualified testing laboratories may reference ISO or standardized methods of analysis dictated in a specific region or country.

Other NSF Standards, including the drinking water standards NSF 60 and NSF 61, allow for the use of alternate analytical test methods when the laboratory is able to determine that the analytical test method is equivalent or superior to the method referenced in the standard. This allows for greater flexibility in test laboratory selection and prevents test labs from being required to maintain accreditation to rarely used test methods at significant cost when already accredited to an equivalent method.

NSF 350 does allow the use of alternate analytical methods, but only when using a method with the same measurement technique. The requirement to only allow alternate methods using the same measurement technique is overly restrictive and arbitrarily prevents the use of methods using different measurement techniques that are otherwise equivalent.

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.

NSF/ANSI 40

8.4 Analytical descriptions

8.4.1 pH, TSS, BOD_5, and $CBOD_5$

The pH, TSS, and BOD_5 of the collected influent and the pH, TSS and $CBOD_5$ of the collected effluent 24-h composite samples shall be determined with the appropriate methods in *Standard Methods*[4] or an alternate

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validated method with documented equivalent performance for each listed parameter. "Equivalent performance" means having the same or better sensitivity, accuracy, and precision over the expected measurement range for the same sample types. "Validated" means that the method was demonstrated to be fit for purpose with sensitivity, accuracy, precision and robustness via a formal validation study or published as a standardized method of analysis. Analytical test methods used shall be documented in the certifier's test report, and the certifier shall document all equivalency assessments and make them available upon request.

Grab samples shall be collected during the morning dosing period for gravity flow systems and during a time of discharge for systems that are pump discharged.

NSF/ANSI 46

7.2 All sample collection and analytical methods shall be those established in Standard Methods[3] or an alternate validated method with documented equivalent performance, except as otherwise specified. "Equivalent performance" means having the same or better sensitivity, accuracy, and precision over the expected measurement range for the same sample types. "Validated" means that the method was demonstrated to be fit for purpose with sensitivity, accuracy, precision and robustness via a formal validation study or published as a standardized method of analysis. Analytical test methods used shall be documented in the certifier's test report, and the certifier shall document all equivalency assessments and make them available upon request.

NSF/ANSI 245

8.3.4 Analytical methods

The appropriate methods in *Standard Methods*[4] or an alternate validated method with documented equivalent performance shall be used to complete the analyses indicated in Section 8.3.3. "Equivalent performance" means having the same or better sensitivity, accuracy, and precision over the expected measurement range for the same sample types. "Validated" means that the method was demonstrated to be fit for purpose with sensitivity, accuracy, precision and robustness via a formal validation study or published as a standardized method of analysis. Analytical test methods used shall be documented in the certifier's test report, and the certifier shall document all equivalency assessments and make them available upon request.

NSF/ANSI 350

8 Performance testing and evaluation

The analytical methods listed in Table N-1.2 shall be used for testing. Alternate validated methods with documented equivalent performance are permissible. ~~, provided equivalency is demonstrated by technical review and the review is documented. An equivalent method involves the same measurement technique. Equivalent methods are known to be capable of generating reliable results to equivalent quality requirements.~~ "Equivalent performance" means having the same or better sensitivity, accuracy, and precision over the expected measurement range for the same sample types. "Validated" means that the method was demonstrated to be fit for purpose with sensitivity, accuracy, precision and robustness via a formal validation study or published as a standardized method of analysis. Analytical test methods used shall be documented in the certifier's test report, and the certifier shall document all equivalency assessments and make them available upon request. All sample collection methods shall be in accordance with *Standard Methods*[5] unless otherwise specified.

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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: 8/15/2024

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

**Type written name will suffice as signature*

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