Summary of Substantive Changes
between the 2016 and the 2017 editions of
NSF/ANSI 53, "Drinking Water Treatment Units – Health Effects"

Presented to the IAPMO Standards Review Committee on April 9, 2018

General: The changes to this standard might have an impact on currently listed products. The substantive changes are:

- Added a sample collection method to use for systems containing multiple potable water outlets (See Section 4.2.3.4).
- Added performance requirements for drinking water treatment systems that are designed to reduce microcystins in public water supplies (See new Section 7.5).
- Added a requirement to include a statement of intended use for microcystins in the instruction documents (See Sections 8.1.1 and 8.4.1)
- Added a requirement to include a statement of intended use for microcystins on the data plate and a note allowing for exceptions to this requirement where the physical size of the system does not permit affixing the statement (See Sections 8.2.3 and 8.3.2)
- Removed the (TAC) and (MCL/MAC) evaluation criteria columns from Tables 4.1, 4.2 and 4.3. The evaluation criteria are now referenced in NSF/ANSI 61, Annex D, Table D1 (See Tables 4.1, 4.2 and 4.3).
- Added reduction claim requirements for microcystins (see Table 8.1).
- Annex J and Annex K were added to establish performance requirements for drinking water treatment systems that are designed to reduce microcystins in public water supplies.

Section 2, Normative references: Referenced standards were added, removed or updated as follows:

2 Normative references

21 CFR §. Parts 170-199. Food and Drugs[3]

[3] *USFDA –CFR Code of Federal Regulations Title 21*
https://www.accessdata.fda.gov/scripts/cdrh/cfdocs/cfcfr/cfrsearch.cfm
~~*USFDA Code of Federal Regulations, Title 21, (Food and drugs) Direct Food Additive Substances parts 170 through 199, April, 1 1992*~~

Section 4.2.3, Exposure: Added a sample collection method to use for systems containing multiple potable water outlets as follows:

4.2.3.4 *All samples collected shall be composited and analyzed in accordance the applicable methods referenced in Section 2. For multiple outlet systems, a composite sample shall be collected from all potable water outlets. The unit volume of the system shall be divided by the total number of potable water outlets and this amount shall be collected from each outlet.*

Section 7.5, Microcystins reduction claims: Requirements were added to establish performance requirements for drinking water treatment systems that are designed to reduce microcystins in public water supplies as follows:

7.5 Microcystins reduction claims
7.5.1 Microcystins chemical reduction testing
7.5.2 Apparatus
7.5.3 Analytical methods
7.5.4 Premature filter plugging
7.5.5 General test water
7.5.6 Cycle time
7.5.7 Methods
7.5.8 Sampling

Section 8.1, Installation, operation, and maintenance instructions: Added a requirement to include a statement of intended use for microcystins in the instruction documents in Sections 8.1.1 and 8.4.1 as follows:

8.1.1 *Information setting forth complete, detailed instructions for installation, operation, and maintenance shall be provided with each system. Specific instructions shall include:*
— complete name, address, and telephone number of manufacturer;
— model number and trade designation;
– …
– …
— statement that spent adsorption media will not be regenerated and used;
— statement that if adsorption media is affected by chlorine, influent will be treated to remove chlorine; and
— statement of intended use for microcystins: "WARNING: This system is for use on water supplies that have been treated to public water systems standards. This system has been tested to demonstrate effective reduction of microcystins, however, in the event of a reported cyanotoxin event in your water supply, other cyanotoxins may be present in the drinking water which may not be effectively reduced by this system. In the event of a cyanotoxin notification, follow the recommendations of your drinking water authority."

Section 8.2, Data plate: Added a requirement to include a statement of intended use for microcystins on the data plate and a note allowing for exceptions to this requirement where the physical size of the system does not permit affixing the statement in Sections 8.2.3 and 8.3.2 as follows:

8.2.3 *Where applicable and appropriate, the following information shall also be included:*
— model number(s) of replacement components;
— electrical requirements;
– …
– …
— statement for systems claiming arsenic reduction: "Conforms to NSF/ANSI 53 for arsenic (pentavalent and trivalent) reduction. See Performance Data Sheet and Arsenic Facts section for an explanation of reduction performance" and

— statement of intended use for microcystins: "WARNING: This system is for use on water supplies that have been treated to public water systems Standards. This system has been tested to demonstrate effective reduction of microcystins, however, in the event of a reported cyanotoxin event in your water supply, other cyanotoxins may be present in the drinking water which may not be effectively reduced by this system. In the event of a cyanotoxin notification, follow the recommendations of your drinking water authority."
NOTE — Where the physical size of the system does not permit affixing the caution statements, the statements shall be prominently displayed in the literature accompanying the system.

Table 4.1, Extraction testing parameters: Removed the (TAC) and (MCL/MAC) evaluation criteria columns from Tables 4.1, 4.2 and 4.3. The evaluation criteria are now referenced in NSF/ANSI 61.

Table 8.1, Performance data sheet reduction claims: The table was revised to add reduction claim requirements for microcystins.

The following annexes were added as follows:
Annex J (normative), Preparation of TOC solution using tannic acid.
Annex K (informative), Explanation of scope and purpose of microcystins reduction claim.