TO: Joint Committee on Recreational Water Facilities

FROM: Mr. Tom Vyles, Chairperson

DATE: October 19, 2022

SUBJECT: Proposed revision to NSF/ANSI/CAN 50 *Equipment and Chemicals for Swimming Pools, Spas, Hot Tubs and Other Recreational Water Facilities (50i187r2)*

Draft 2 of NSF/ANSI/CAN 50 issue 187 is being forwarded to the Joint Committee for balloting. Please review the changes proposed to this Standard and **submit your ballot by November 9, 2022** via the NSF Online Workspace (http://standards.nsf.org).

Please review all ballot materials. When adding comments, please include the section number applicable your comment and add all comments under one comment number whenever possible. If additional space is needed, you may upload a word or .PDF version of your comments online via the browser function.

Purpose
This ballot will revise and add language regarding interlocks and operational protection.

Background
The issue proponent notes that as currently written the Standard does not define "electrical interlock". This is commonly understood to mean that the chemical feeders must be powered only when the pump is powered, from the same electrical supply.
As currently written the standard does not consider the following:

- The circulation pump can be powered but not running.
- Water pressure interlock is a reliable means of ensuring that the circulation pump is generating output and, combined with flow detection in return to the water body (or to waste if waste treatment is required), ensures safety for chemical feed and equipment.
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Recommendations are that these Operational Protection issues be referred to Task Group for detailed consideration:

- "Electrical Interlock" be clearly defined in the standard.
- "Pressure Interlock" be considered as an Operational Protection

This paper was presented at the 2021 Joint committee on Recreational Water Facilities annual meeting, and a motion was approved there to create a Task Group and charge it with drafting language. That group has met twice to review proposed revisions, and the attached ballot is the culmination of its efforts.

If you have any questions about the technical content of the ballot, you may contact me in care of:

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[Note – the recommended changes to the standard which include the current text of the relevant section(s) indicate deletions by use of ~~strikeout~~ and additions by grey highlighting. Rationale Statements are in *italics* and only used to add clarity; these statements will NOT be in the finished publication.]

NSF/ANSI/CAN Standard

Equipment and Chemicals for Swimming Pools, Spas, Hot Tubs, and other Recreational Water Facilities

Evaluation criteria for materials, components, products, equipment, and systems for use at recreational water facilities

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3.XX Interlock: To interconnect equipment in such a way, in which the second (and subsequent, if applicable) equipment will not operate unless the circulation equipment operates under prescribed conditions.

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11 Mechanical chemical feeding equipment

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11.11 Operation and installation instructions

The manufacturer shall supply operation and installation instructions with each mechanical chemical feeder. These instructions shall include the following:

— diagrams and a parts list to facilitate the identification and ordering of replacement parts;

— installation, operation, and maintenance instructions;

— reference to flooded suction installation and prevention of cross connections;

— reference to recommended use chemicals and maximum use concentrations;

— caution statement to address potentially hazardous conditions due to chemical overdosing (see Section 11.10);

— reference to one or more methods to stop chemical feed automatically when no return flow to the swimming pool or hot tub exists;

— model number of the unit; and

— applicable caution statements (prominently displayed).

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19 Automated controllers

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19.7 Operational protection

19.7.1 The automated controller shall ~~have an automatic mechanism~~ interface to an interlock ~~for~~ to prevent~~ing~~ the operation of any chemical feeder actuated by the controller whenever water circulation at the chemical injection points is interrupted.

19.7.2 The controller shall automatically ~~turn off the equipment~~ disable chemical feed equipment actuated by the controller when:

— a parameter maintained by the automated controller remains outside the set point range ~~for~~ period longer than the manufacturer's recommended overfeed time limit; and

— an equipment operation cycle (e.g., chemical feed cycle) exceeds the manufacturer's recommended time limit.

19.8 Operation and installation instructions

The manufacturer shall supply installation and operation instructions with each automated controller. These instructions shall include the following:

— proper installation, operation, and maintenance instructions; installation instructions shall document how the controller should be wired in order to provide for electrical interlock for chemical feeders with a circulation pump;

— diagrams and a parts list to facilitate the identification and ordering of replacement parts;

— replacement probe or sensor model numbers;

— maximum external load rated in volts and amps;

— caution statement warning the user that the automatic controller should not be installed where it is accessible to the public; and

— applicable operating ranges (such as pH and ORP minimum and maximum) for the automated controller.