

Task Group on Design and Construction Requirements
49i173Cr1 Straw Ballot
April 30, 2024

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Purpose

The purpose of this ballot is to affirm revised and new language related to the many design and construction requirements throughout Standard 49.

Background

Issue paper **BSC-2022-03 – Design and Construction Requirements** highlighted that the design and construction requirements in sections 4 and 5 haven't seen much evaluation in many years. The issue proponent suggested the establishment of task group (TG) to discuss these sections. This issue was presented to the JC during the 2022 Face-to-Face meeting at which time the TG was motioned into existence. Since that time, the TG has met four times and conducted a straw ballot with feedback in November 2023.

The straw ballot was quite extensive with good feedback, and the TG discussed breaking up the proposal into several subsection ballots to make the work more digestible. During the most recent meeting (April 22, 2024) the issue proponent presented 18 different subsections and the group agreed to send each to straw ballot first with this TG. Any subsections receiving no further revision proposals will then be sent to the full JC for approval ballot. In this manner, some if not all of the proposed revisions will be ready for the next publication and the entire ballot will not be held up by a few subsections.

This ballot language reflects **i173C – Canopy NOTE**

The **grey highlighted** portions of the language are proposed additions to the language of the standard.
The ~~strikeout~~ portions of the language are proposed deletions to the language of the standard.

An **affirmative (yes) vote** on this straw ballot means you agree with the revised language as submitted.

A **negative (no) vote** on this straw ballot means you disagree with the revised language as submitted. A negative vote must include an explanation of why you disagree with the revised draft.

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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 *red italics* and only used to add clarity; these statements will NOT be in the finished publication.]

NSF/ANSI International Standard for Biosafety Cabinetry —

Biosafety Cabinetry: Design, Construction, Performance, and Field Certification

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5 Design and Construction

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5.4 Canopy exhaust connection

If Type A1, A2, and C1 cabinets are connected to an exhaust system, it shall only be done so via a canopy connection; direct connections are not acceptable. They are exhausted with the assistance of a remote fan to the atmosphere. In normal operation, the volume of room air drawn into the canopy connection's openings or gaps shall be sufficient to ensure the capture of all of the BSC's HEPA filtered exhaust, as verified by a visible medium. The flow of room air into the canopy connection through openings, or gaps, or both, provides assurance of consistent BSC performance during fluctuations in exhaust system flow rate, or room pressure, or both.

For Types A1, A2, and C1 with a canopy connection, during an exhaust system failure:

- the canopy shall provide properly sized openings or gaps to allow for recirculation of HEPA filtered exhaust into the room;
- the BSC shall maintain an inflow velocity above the lowest value verified by the NSF/ANSI 49 biological challenge testing; and

Alternatively, the Type C1 canopy can direct the HEPA filtered exhaust into the exhaust duct during an exhaust system failure provided:

- the BSC shall maintain an inflow velocity above the lowest value verified by the NSF/ANSI 49 biological challenge testing if the unit is programmed to operate longer than 15 seconds after an exhaust system failure.

Note: for further details see section N-1.14