Task Group on Canopy Connection Set Point
Teleconference Meeting Summary
March 10, 2025

Participating Members:

Steve Williams (NSF)
Bill Peters (NuAire, Inc.)
Jim Wagner (Controlled Environment Consulting)
Tori Fincham (Labconco)
Dave Phillips (Thermo Fisher Scientific)
Mark Lenart (Clean Air Testing, Inc.)

Absent Members:

Bill Sage (NSF)

Participating observers:

Al Rose (NSF)
Cassandra Leone (NSF)
Nat Regis (National Institute for Public Health and the Environment (RIVM)
Shawn Donaldson (ENV Services, Inc.)

Supplemental Materials Referenced

- BSC-2024-05 - Canopy Connection Set Point
- BSC JC Meeting Summary - 2024-06-20 – Canopy Connection Set Point Excerpt

Discussion

B.Sage is the TG Chair and was unable to attend, so S. Williams became the proxy chair. He welcomed everyone and called the meeting to order. A.Rose read the anti-trust statement and took attendance. Six of the 7 voting members were present (86%) representing a quorum. A.Rose presented the agenda indicating there was one item, specifically issue paper **BSC-2024-05 – Canopy Connection Set Point**.

S.Williams recapped the previous work and the language drafted by B.Sage

Meeting notes:

- **Canopy Connection Requirements:**
  - **Requirements Overview:** S.Williams explained that canopy connections need a setpoint to ensure proper performance and compliance with standard 49. He mentioned that manufacturers like NuAire and Labconco require a specific velocity range at the canopy connection intake slots, while others like Esco specify a range for duct pressure.
  - **Performance Variability:** S.Williams noted that when manufacturers do not provide any setpoint, the performance of the canopy connections becomes highly variable. This inconsistency can lead to issues in maintaining proper inflow velocity and alarm functionality in the event of an exhaust system failure.

- **Proposed Language for Section 5.22.4:**
  - **Proposal Introduction:** S.Williams introduced B.Sage's proposal to add new language to section 5.22.4, requiring manufacturers to provide a specified setpoint for canopy connections.

This setpoint could be in the form of gap velocity, duct pressure, or another method to ensure proper setup and performance.
  - **Additional Sections:** S.Williams mentioned that B.Sage also included similar language in sections N1.13 and N5 to ensure consistency across the standard.

- **J.Wagner's Perspective on Setpoints:**
  - **J.Wagner's Experience:** J.Wagner stated that he has rarely encountered situations where a specific gap velocity or duct pressure was required. He typically follows the test outlined in Annex 5, which involves placing smoke at the canopy and verifying that alarm signals are triggered before reaching a critical point.
  - **Field Observations:** J.Wagner noted that while NuAire might have specific requirements, he has not seen similar specifications from other manufacturers. This lack of standardization in the field highlights the variability in canopy connection setups.

- **Field Certifiers' Concerns:**
  - **Challenges in Setup:** D.Phillips and S.Williams discussed the difficulties field certifiers face, such as the need for duct traverses to set up canopies and the challenge of obtaining accurate measurements. These challenges underscore the importance of having clear setpoints or setup instructions from manufacturers.
  - **Importance of Setpoints:** S.Williams emphasized that having a setpoint or setup instructions from the manufacturer is crucial for ensuring proper performance and compliance. Without these guidelines, the setup process becomes more complex and prone to errors.
  - **Certifier Preferences:** D.Phillips mentioned that while some certifiers might not prefer methods like duct traverses, having a setpoint or setup instructions would simplify the process and ensure consistency in canopy performance.

- **Manufacturer's Instructions:**
  - **Consensus on Instructions:** B.Peters and S.Williams agreed that manufacturers should provide setup instructions for canopy connections.
  - **Flexibility in Setup:** By providing setup instructions, manufacturers can ensure that their canopies are set up correctly without mandating specific setpoints. This flexibility allows for different methods to achieve proper performance.
  - **Ensuring Compliance:** S.Williams highlighted that having setup instructions from manufacturers that are followed in the field, is essential for ensuring compliance with standards and maintaining proper performance. This approach helps avoid variability and ensures that canopies function as intended.

- **Importance of Setup Instructions:**
  - **Inflow Velocity Requirement:** S.Williams explained that setup instructions are crucial for ensuring compliance with the 10 feet per minute inflow velocity requirement. This requirement is important for maintaining proper performance and alarm functionality in case of exhaust system failure.

  - **Alarm Functionality:** S.Williams emphasized that proper setup instructions help ensure that the canopy's alarm functionality is maintained. This is critical for alerting users to issues and preventing potential hazards.
  - **Exhaust System Failure:** In the event of an exhaust system failure, following setup instructions in the field ensures that the inflow velocity does not drop significantly, maintaining the safety and effectiveness of the canopy.

- **Agreement on Setup Instructions:**
  - **Group Consensus:** There was consensus that manufacturers should provide setup instructions for canopy connections. Field certifiers would then only need to verify smoke capture and alarm functionality, simplifying the process and ensuring proper performance.
  - **Verification Process:** By focusing on verifying smoke capture and alarm functionality, field certifiers can ensure that canopies are set up correctly without adding unnecessary tests. This approach streamlines the certification process.
  - **Manufacturer Responsibility:** Manufacturers are responsible for providing clear setup instructions, ensuring that their canopies meet performance standards. This responsibility helps maintain consistency and reliability in canopy setups.

- **Review of Proposed Language:**
  - **Language Review:** The group reviewed the proposed language changes and reached consensus to modify the wording to "canopy connection setup instructions." This change aims to provide clear guidance on setting up canopies.
  - **Approval Process:** The group decided to send the revised proposal to B.Sage for approval. Once approved, the proposal will proceed to a JC approval ballot, ensuring that all stakeholders have a chance to review and approve the changes.
  - **Consensus on Changes:** The group reached a consensus on the proposed language changes, emphasizing the importance of clear setup instructions for canopy connections. This consensus reflects the group's commitment to ensuring proper performance and compliance.

Action Items:

- **Proposed Language for Section 5.22.4:** Send the proposed language for section 5.22.4 to Bill Sage for review and approval before sending it to the JC approval ballot. (A.Rose)