



MEETING LOG

SUBJECT: ANSI/CSA FURNACE TECHNICAL SUBCOMMITTEE (TSC) WORKING GROUP (WG) MEETING
ON DECEMBER 12, 2024, RE. RFC #23

FY 24 OP PLAN ENTRY: Gas Appliances - CO Sensors

DATE OF MEETING: 12/12/2024

LOCATION OF MEETING: Virtual

CPSC STAFF FILING MEETING LOG: Ronald A. Jordan

FILING DATE: 12/18/2024

CPSC ATTENDEE(S): Ronald Jordan, ESMC

NON-CPSC ATTENDEE(S): Contact babak.owlam@csagroup.org for the full attendee list.

Summary of Meeting:

The furnace working group (WG) met to discuss Request for Change (RFC) #23 to ANSI Z21.47- ed. 9, Standard for Gas-fired central furnaces. RFC #23 is a proposed performance and safety provision that would require a carbon monoxide (CO) detection device (i.e., sensor) to be mounted on the ambient side of a gas furnace.

The WG discussed the following action items:

Action Item 20: The WG reviewed UL 2034 & UL 2075 for their use of term “end-of-life” and discussed how the term “end-of-life” is used in UL 2034 and UL 2075, and how it could be used in the current development of a standard for CO detection device. It was noted that both UL standards allow self diagnostics of sensors. It was noted that heating utility would be diminished during the end-of-life mode of a CO detection device. Staff reminded the WG that unlike UL 2034, UL 2075 also included provisions for sensor output signals, which would be required to provide a feedback signal to a furnace control that would cause a furnace to shutdown in response to a target CO shutoff level detected by the CO detection device.

Action Item 15: CPSC staff reported that it had not yet assessed IDIs to determine whether residential or commercial furnaces were involved in hotel/motel CO incidents.

Action Item 1: The WG discussed and agreed that the furnace burner shall shut down when triggered by CO, but the furnace shall maintain circulation air flow until room CO drops below 30 ppm. The WG also discussed and agreed that the furnace burner shall also be disabled if a sensor is either not installed or disabled. The WG discussed whether a performance test for CO detection devices would be included in Section 5 (i.e., the Performance section) of ANSI Z21.47 or in an annex. If a performance test for a CO detection device is located



in an annex instead of Section 5, then a reference to the annex would be included in Section 5. The WG agreed that the proposed CO shutoff clause would be included in Section 4 of standard (i.e., the Construction section).

The WG discussed the draft rationale for the change (RFC #23). The WG did not believe that available sensing technology was feasible to meet CPSC's proposed rule due to limitations of practical/available sensors. Staff asked WG to specify the limitations. They stated the limitation included humidity, sensor orientation, temperature, cost, sensitivity, life span, reliability, supply chain limitations. These findings were based on a literature study conducted by a WG that operated between 2015-2019.

The WG will begin to address validation testing for CO detection devices at WG meetings scheduled for Thursdays from January 9, 2025 through February 6, 2025 (1/9/25; 1/16/25; 1/23/25; 1/30/25; and 2/6/2025).

The meeting adjourned at 12:30 pm est.