CPSC MEETING LOG
DIRECTORATE FOR ENGINEERING SCIENCES

SUBJECT: Meeting Log for the Z21/CSA Joint Technical Subcommittee on Standards for Gas-Fired Central Furnaces

LOCATION: Cleveland Marriott Downtown at Key Center, Cleveland, Ohio

DATE: October 28, 2019

TIME: 8:30 am

LOG ENTRY SOURCE: Ronald A. Jordan

ENTRY DATE: November 15, 2019

COMMISSION ATTENDEES:
Ronald Jordan ESMC

NON-COMMISSION ATTENDEES:

VOTING MEMBERS		
Mike	Angus	Dormont Manufacturing Co.
Dmitry	Antonov	Intertek Testing Services NA Inc ETL SEMKO
Glenn	Bergum	Resideo Technologies
Paul	Cabot	American Gas Association Inc.
David	Delaquila	Aquila Consulting, LLC
Larry	Gill	IPEX Management Inc
Thomas	Gort	Ingersoll Rand Residential Solutions
Greg	Harbridge	Enercare Home and Commercial Services
Paul	Haydock	Carrier Corporation
Caroline	Henley	AHRI
Diane	Jakobs	Rheem Manufacturing Company
Ryan	Jensen	Emerson Climate Technologies
Will	Kowald	Lennox Industries Inc

Rich	Maricic	Beckett Gas Inc.
Patrick	McConnell	Dometic Corporation
Phillip	Stephens	Weil-McLain, A division of Marley-Wylain Co.
Carl	Suchovsky	Appliance Engineering, Inc.
Bruce	Swiecicki	National Propane Gas Association
Bob	Vlasic	Union Gas Limited
Matthew	Wilber	Crane Engineering
ALTERNATE MEMBERS		
John	Derksen	Enercare Home and Commercial Services
Craig	Grider	Intertek
Mairy	Sanz	Enbridge Gas Distribution
John	Simpson	Resideo Technologies
ASSOCIATE MEMBERS		
Adaire	Chown	CodeSmith
CSA STAFF AND GUESTS		
Dragica	Jeremic	CSA Group - PM
Amy	Thomas	CSA Group
Kevin	Alphs	Modine
Kevin	Choi	UL
Shannon	Corcoran	AHRI

This meeting began at 8:30 am. After opening remarks, introductions of all meeting attendees were made and the minutes from the October 2018 furnace Technical Subcommittee meeting were adopted and the draft agenda for the meeting was adopted. Of particular interest to CPSC staff was Agenda Item A.1.14.

A.1.14 This agenda item covered a review of outstanding Requests for Change (RFC) for ANSI Z21.47/CSA 2.3 (Ed. 9) Gas-fired central furnaces. The actions taken by the Technical Subcommittee on RFCs of interest to CPSC staff were as follows:

RFC #1: This agenda item was a request to standardize the combustible material temperature tolerance across all ANSI Z21 standards.

The rationale cited for this proposal was that the standardization of combustible material temperature tolerances should not be limited to the standards identified in this request but should also apply to all appliance standards that test for clearances to combustible materials.

The TSC voted to postpone the decision on this RFC until feedback from the Technical Committee is obtained, including verification that the change to 117 °F is safe.

RFC #2: This agenda item was a proposal that a statement be included at the beginning of the Performance section in gas appliance standards indicating that all testing be conducted at an altitude/elevation below 2000 feet. The rationale for the proposal was that North America codes define altitudes of 2000 feet or higher as High Altitude and require a derating or adjustment of the gas appliance per manufacturer instructions. Currently, without this stated requirement there is the risk of testing being done at elevations greater than 2000 feet on gas appliances which are then installed at elevations that range down to sea level. Although appliance performance can't be predicted when tested at high altitude, the concern is that there is less mass of oxygen per unit volume, combustible gas per unit volume, and reduced air density compared to installations at altitudes less than 2000 feet. If general testing occurs at a High Altitude, then testing of combustion are in question because of the potential for unstable burners, higher CO, flame impingement, etc. Also, due to the change in air density, safety devices of heating appliances controlling supply air temperatures can be affected when the same product is installed at a lower altitude.

The TSC voted on and approved adding the proposed statement to the beginning of the Performance sections of affected gas appliance standards.

RFC #3: This agenda item was a proposal to add the following subsections under Section 4.25(b) of ANSI Z21.47 between the current subsections (v) and (vi): (vi) Thermostat or other control settings shall be adjusted to maintain a return or mixed air temperature no less than 55°F (13°C). Extended run time at return or mixed air temperatures lower than the specified limit may result in premature corrosion of the furnace and potential perforation of heat exchangers.

The rationale cited for the proposal was that AHRI Research Project 8014 has shown that extended run time at return or mixed air temperatures lower than 55°F (13°C) result in rapid corrosion of the furnace and potential perforation of heat exchangers.

Staff raised the concern that these instructions along with the instructions given when furnaces are used for construction heaters conflicts with the arguments used by industry when reviewing CPSC incident reports. Namely, that these practices potentially lead to some premature failures.

The TSC voted to defer this item until the next scheduled TSC meeting.

RFC #4: Concurrent installation of CO alarms: Some utility reps raised concerns about placing the burden on appliance installers to ensure that a properly operating CO alarm. I stated that a CO alarm would be installed along with wiring, and smoke alarms by an electrician, not an appliance installed. I stated that although I support the use and installation of CO alarms, I don't think that concurrent installation of CO alarms, it does not substitute for improving the CO safety provisions in the gas furnace and boiler standards. The TSC voted on but did not approve the AHRI proposal. The utilities and few other manufacturers did not support the proposal.

The rationale cited for this proposal is that it provides additional instructions to be added to the safety standards for Gas-fired low pressure steam and hot water boilers, Gas-fired central furnaces and Vented gas-fired space heating appliances.

Carbon monoxide alarms are important and cost effective life saving devices. The proposed addition to the instructions for gas-fired appliances that may be installed indoors provides clear guidance to the installer and user that carbon monoxide alarms are to be installed and maintained according to the alarm's instructions.

The TSC voted to form a WG to develop a solution to address the objections raised.

RFC #5: Copper tubing or tubing with internal copper surfaces, when used for conveying gas, shall be internally tinned or equivalently treated to resist Sulphur corrosion. An appliance for use with propane gas only may employ untinned or equivalently treated copper tubing.

The rationale cited for this proposal is that the issue of Sulphur corrosion resulting in pin hole leaks in the copper tubing is a well-known issue for tubing conveying natural gas when the hydrogen sulfide content is too high (along with other factors), the same issue has historically not been seen in copper tubing used to convey LP gases.

This proposal would permit LP (propane) only products such as recreational vehicle furnaces to use copper tubing. It would not permit convertible RV appliances to use copper tubing since it could be anticipated that someday the appliance might be supplied with a fuel that is inappropriate for use with copper piping. This same exception for propane or butane only appliances is found in other Z21 products particularly those dealing with RV and camping equipment. It is also noted that the common method of piping a building that is supplied by propane gas is to use copper tubing for the propane gas supply system within the building.

The TSC voted on and approved the proposal.

The meeting adjourned at 4:30 pm.