

**MEETING LOG
DIRECTORATE FOR ENGINEERING SCIENCES**

SUBJECT: Meeting of the ANSI Z21/83 Ad Hoc Working Group for Carbon Monoxide/Combustion Sensors

PLACE: Gas Technology Institute (GTI) Headquarters, Des Plaines, Illinois

MEETING DATE: February 19, 2004

TIME: 9:30 am

LOG ENTRY SOURCE: Ronald A. Jordan

ENTRY DATE: February 26, 2004

COMMISSION ATTENDEES:

Ronald A. Jordan, ESEE

RAJ

NON-COMMISSION ATTENDEES:

Frank Stanonik, Gas Appliance Manufacturers Association
Bob Deremer, Canadian Standards Association-International
Hall Virgil, Carrier Corporation
Marl Miller, CityTech US
Diane Jakobs, Rheem Manufacturing
Vince Mori, BRK Brands Inc., Representing NEMA
Ed Godziszewski, Figaro USA Inc.
Robert Wozniak, Underwriters Laboratories
Ted Williams, American Gas Association
Ray Wojcieson, Lennox Industries
Neil Leslie, Gas Technology Institute
Robert Hemphill, Gas Technology Institute
Dave Kalensky, Gas Technology Institute

MEETING SUMMARY:

The CO/Combustion Sensor Ad Hoc Working Group was established by the Z21/83 Committee in April 2002. The purpose of the work group is to investigate the availability and applicability of CO/combustion sensors and (possibly) create a standard/benchmark for the sensors.

The meeting included the following agenda items:

1. ROLL CALL
2. REVIEW OF REVISED TEST MATRIX
3. DETERMINATION OF RECOMMENDATION FOR EXPOSURE LEVELS
4. DETERMINATION OF RECOMMENDATION TO Z21/83 COMMITTEE AND CSA TECHNICAL COMMITTEE
5. OTHER BUSINESS
6. ADJOURNMENT

The work group discussed the revised test matrix. Additional revisions were proposed

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for the test matrix. GTI Personnel presented findings of a preliminary literature search on available CO/Combustion sensor technologies. A literature search is one of the components of the work plan. GTI is a potential candidate to obtain an eventual contract to perform the sensor evaluation work. GTI personnel expressed doubts about finding low-cost technology with a life expectancy equal to that of appliances (e.g. approx. 20 years).

Some of the sensor manufacturers in attendance expressed concern that their products would be tested to some of the high temperatures conditions cited in the chamber test sections of the test matrix. Staff explained that the chamber test sections were designed to consider all possible applications within the scope of vented heating appliances. Staff explained that this includes appliances that operate at flue gas temperatures that range from 100°F to 500°F, and therefore tests at these temperatures must be conducted to allow for sensor application in a variety of appliance operating environments. Staff also stated that the test matrix thinking was that sensors would only be subjected to chamber tests that were within the scope of a given sensor's operating parameters.

Work group members expressed that longevity and reliability tests need to be mapped out. Currently, the test matrix only references endurance and reliability tests from CSA 6.19.

During previous meetings and conference calls, the work group charged the GTI rep with developing exposure levels for NO_x, SO_x, and HCl_x. However, the GTI rep did not provide any exposure levels at this meeting. The work group opted to only monitor levels of NO_x and SO_x levels that occur naturally during In-Situ appliance testing, rather than spiking combustion air or fuel with NO_x and SO_x. The work group will consider maintaining a provision in the test matrix to spike combustion air or fuel with HCl_x. The concentration of HCl_x for spiking will be determined at a later date from input from GTI. One of the appliance manufacturer's stated that he did not believe the work plan and test matrix were ready to be submitted to the Z21/83 Committee for approval. The working group chairman responded that we need to finalize the work plan and test matrix since the April 2004 Z21/83 Committee meeting will mark 2 years since the work group was first established. Staff concurred and stated his opinion that the basic work plan and test matrix already outlined should be more than adequate for the Z21/83 Committee to approve and send out for letter balloting. Also that the eventual contractor should have the capability and facilities to perform the work outlined in the work plan and test matrix and that matters such as HCl_x spiking gas concentrations could be finalized upon GTI's input. GTI staff provided a tour of the GTI laboratory facilities to the working group.

cc:

Office of the Secretary
Colin Church
ESEE Chronological File