MEETING LOG
DIRECTORATE FOR ENGINEERING SCIENCES

SUBJECT: Vent Safety Shutoff System recommendations to the ANSI Z21.47 ANSI Z21/CGA Joint Central Furnace Subcommittee

PLACE: The Harley Hotel, Middleburg Heights, Ohio

MEETING DATE: November 5-6, 1996

LOG ENTRY SOURCE: Ronald A. Jordan

ENTRY DATE: November 7, 1996

COMMISSION ATTENDEES:

Ronald A. Jordan, ESEE Ronald A. Jordan

NON-COMMISSION ATTENDEES:

See attached member attendee list

MEETING SUMMARY:
Staff attended the ANSI Z21/CGA Joint Central Furnace Subcommittee to present a recommendation to the Subcommittee that the Vent Safety Shutoff System requirements of the standard be expanded to include provisions for disconnected vent conditions (this recommendation was listed as agenda Item 15 on the Subcommittee's final agenda). Staff stated that although current coverage protects against blocked vents, it does not guard against disconnected vents. Staff added that in light of the current failure modes (including vent separation) observed with high temperature plastic vent (HTPV) pipes, the need to protect against disconnected vents has become even more urgent.

Staff also verbally shared relevant incident scenario information involving vent pipe separation from seven (7) IDIs (all purged). Subcommittee members asked numerous questions about the IDIs. The information requested by Subcommittee members was not organized or reduced to the form they needed in the IDIs. Staff therefore requested the Subcommittee members to specify the type and format of information they need to help them analyze the IDIs and respond to staff's recommendation. Staff stated this would be helpful not only to industry in analyzing CPSC IDIs, but also for staff in presenting CPSC incident data to industry.

The Subcommittee chairman indicated that it would be helpful to manufacturers if they could review the IDIs for the type of data members requested. He also indicated that review of IDI's would be necessary in order to determine what is occurring in the field and how to properly address it, whether it were by adopting staff's recommendation or some other approach. The Subcommittee voted to send staff's recommendation to the group's Technical Working Group (TWG) for closer review. The Subcommittee chairman requested that staff provide data input to the TWG prior to its next meeting and participate in the next TWG meeting (scheduled

for May 1997, at International Approval Service Laboratories). The TWG chairperson agreed to provide staff the type and format of data manufacturers need to see for analysis of IDIs, prior to the May 1997 TWG meeting. Staff agreed to provide the TWG IDI data broken out in the format they specify. Staff also agreed to attend the next TWG meeting, contingent on CSPC management approval of the trip.

Other issues of concern to CPSC staff were as follows:

Item 4: Consider recommendation of the Joint Automatic Gas Controls Subcommittee on proposed revisions to marking requirements for negative pressure regulations.

The subcommittee sent out for industry review and comment a recommendation that combination control valves equipped with a negative pressure regulator be required to be marked with a warning that the control be replaced with a similar control equipped with a negative pressure regulator. This recommendation was designed to prevent hazards associated with improper replacement of a control equipped with a negative pressure regulator. Specifically, the recommendation calls for the same warning to be placed in the following areas: Furnace Installation Instructions; Furnace User's Information Manual; and as a marking on the control valve. Staff expressed strong support for this recommendation.

Further discussion revealed that another intention of this recommendation is that there would only be one model replacement control equipped with a negative pressure regulator for a given model central furnace. Staff and other attendees expressed the concern that such a provision would effectively limit furnace owners to only one replacement source for control valves. Staff argued further that reduced availability or higher pricing of the sole replacement control valve might encourage owners or service personnel to seek alternative, improper replacements. Such behavior (i.e. using an improper replacement control valve, could cause the same hazard the recommendation was designed to eliminate. The supporters of the recommendation countered that the intent of having only one replacement was to ensure that an improper replacement was not used. The proposal was adopted for industry wide review and comment.

Item 18: Recommendation to Exempt Mobile Home Furnaces from the Blocked Vent Shutoff Requirements (Section 4.4.6) of the Standard.

This issue involved a recommendation, made by mobile home furnace manufacturing representatives, that mobile home furnaces be exempted from the blocked vent shutoff requirements of Section 4.4.6 of the standard. The mobile home furnace manufacturing representatives based this recommendation on the following considerations:

1. Prior to combination of the former Standard for Direct-Vent Central Furnaces, ANSI Z21.64, with the Standard for Central

Furnaces (Except Direct Vent Central Furnaces), Z21.47, into one standard, the current Z21.47, mobile home furnaces, as well as recreational vehicle furnaces were already excepted from blocked vent shutoff requirements.

2. Mobile home furnaces are designed and operate differently from residential furnaces, which are the original and primary target of the blocked vent shutoff provisions of the standard.

Staff told the subcommittee that it is believes some incidents involving mobile home furnaces in which consumers have been exposed to carbon monoxide allegedly as a result of blocked vents have occurred. A subcommittee member responded that vent blockage would cause a direct vent mobile home furnace to shutoff, thus preventing it from spilling combustion products such as carbon monoxide into the living area. Also, that it is necessary for two failures to occur in direct vent mobile home furnaces, vent blockage and vent separation, before combustion products could possibly leak into the living area of a mobile home. Staff asked what would happen if a natural draft mobile home furnace vent were blocked. The subcommittee responded that some spillage might occur under these circumstances, however that most mobile home furnaces currently on the market are direct vent units. Staff indicated that it would look at the data to determine what the failure scenarios were involving mobile home furnaces and CO exposure. Staff also told the subcommittee it would share any incident information that suggested CO exposure occurred when mobile home furnaces became blocked or disconnected. After the discussion, the original exemption recommendation was revised to only include direct vent mobile home furnaces with concentric vent/intake pipes.

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Chronological File

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