INITIAL STATEMENT OF REASONS

FOR

PROPOSED BUILDING STANDARDS

OF THE

OFFICE OF THE STATE FIRE MARSHAL

REGARDING THE 2007 CALIFORNIA MECHANICAL CODE

CALIFORNIA CODE OF REGULATIONS TITLE 24, PART 4.

The Administrative Procedure Act requires that an Initial Statement of Reasons be available to the public upon request when rulemaking action is being undertaken. The following are the reasons for proposing this particular rulemaking action:

STATEMENT OF SPECIFIC PURPOSE AND RATIONALE

(Government Code Section 11346.2 requires a statement of specific purpose of each adoption, amendment or repeal and the rationale of the determination by the agency that EACH adoption, amendment or repeal is reasonably necessary to carry out the purpose for which it is proposed.

- When repealing adopted California original standards, summarize the effect of the standards and explain why the standard is no longer necessary
- When amending a standard, explain the standard proposed to be modified, explain the effect of the proposed modification, explain the inadequacy of the standards being modified, and explain why the proposed amendment is necessary)

The specific purpose of this rulemaking effort by the Office of the State Fire Marshal (OSFM) is to act accordance with Health and Safety Code section 18929.1, which requires all proposed regulations to specifically comply with this section in regards to the annual code adoption cycle.

The actions described above are reasonably necessary to carry out the purpose for which it is proposed. The rationale for these actions is to establish minimum requirements for the prevention of fire and for the protection of life and property against fire and panic in occupancies addressed in the 2006 Uniform Mechanical Code and published as the 2007 California Mechanical Code.

The general purpose of this proposed action is principally intended to update the California Mechanical Code (California Code of Regulations, Title 24, Part 4) based upon updated information or recent actions of the OSFM, State Law or Federal law. This proposed action:

- Repeal amendments to the 2006 Uniform Mechanical Code and/or California Building Standards not addressed by the model code that are no longer necessary nor justified pursuant with Health and Safety Code 18930(a)(7).
- Adopt and implement additional necessary amendments to the 2006 Uniform Mechanical Code that address inadequacies of the 2006 Uniform Mechanical Code as they pertain to California laws.
- Bring forward previously existing California amendments, which represent no change in their effect from the 2001 California Mechanical Code. Some of the existing California amendments will be amended as follows:
  - Renumbering in order to fit into the newly adopted text of the 2006 Uniform Mechanical Code.
  - Adding or changing the references to the application authority of SFM.
  - Language changes for clarification of existing law.
  - Not adopting into the text of the 2006 Uniform Mechanical Code .
- Codify non-substantive editorial and formatting amendments to the 2007 California Mechanical Code.

The specific purpose and rationale of each adoption, amendment, or repeal is as follows

602.1
The Express Terms for the current State Fire Marshal (SFM) amendment to Section 1017.4 stated that it was "to further clarify the restrictions on the use of a corridor as an air plenum as required by the California Mechanical Code." However, the current requirements of the California Mechanical Code were based on the 1-hour fire-resistive requirements for corridors under the previous editions of the California Building Code (CBC) which were based on the Uniform Building Code. Those codes did not have the current provisions in Table 1017.1 of the 2006 International Building Code (IBC)/2007 CBC that allow for the elimination of the 1-hour fire-resistive corridor in certain occupancies when the building is protected with an automatic sprinkler system. So it was always presumed that when the occupant load threshold was exceeded to trigger the 1-hour fire-resistive rating requirement for corridors, the corridors would always be provided with a 1-hour fire-resistive rating. That is not the case any more since Table 1017.1 of the 2007 CBC allows for the 1-hour corridor to be omitted in many occupancies.

We believe the current provisions in the adopted model building code (the 2006 IBC) for Section 1017.4 are appropriate for the prohibition of using corridors as an air plenum except for the exceptions indicated. This is a very important life safety feature which, in essence, prohibits corridors from pulling air out of an occupied space which may be on fire and, thus, introducing smoke directly into the corridor which serves as the means of egress for the occupants attempting to escape the building during the fire emergency. Therefore, we believe it is appropriate to delete the current amendment to this section and retain the requirement in the adopted model building code.

Of course, if this code amendment is approved, then it would also require an amendment to the California Mechanical Code so that it correlates with the California Building Code, rather than vice versa.

The actions described above are reasonably necessary to carry out the purpose for which it is proposed. The rationale for these actions is to establish minimum requirements for the prevention of fire and for the protection of life and property against fire and panic in occupancies that are addressed in the 2006 International Building Code and published as the 2007 California Building Code pursuant to Health and Safety Code Section 18949.2, 13108, 13113, 13114, 13131.5, 13143 and 17921.

609.0
The So-Cal FPO Fire Protection Equipment and Devices Committee originally developed and submitted this text to the CSFM office for consideration of adding it into the CMC three or four years ago. Unfortunately, the proposed amendment got lost in the shuffle and was never reviewed for possible inclusion in the CMC. The committee feels that air sampling tube duct detectors have several inherent problems that warrant either the elimination of this Code requirement or an additional exception as mitigation in lieu of the detectors.

NFPA 72 recognizes several methods for smoke detection to control air-handling units. Where complete area smoke detection is not required by other sections of the Codes or building functions, the most common method to detect smoke in air-handling units is the use of in-duct air sampling tube detectors. There are several problems that have been observed with the use of these detectors for controlling air-handling units. These detectors require correct placement in the ducts or units in order to provide the Listed velocity of air flow required to draw smoke into the housing and smoke detector chamber along with proper maintenance after installation.

To determine if the units will operate properly, there are two tests that must be performed. The first half of the testing process is to test the smoke detector at the housing to verify that the detector will activate and also shut-down the appropriate air-handling unit or system. The second half of the testing process is to perform an air flow test to verify that the Listed velocity of air will enter the unit to activate the detector. This is the critical test that is typically not performed in the field at the time of acceptance testing. Through direct observation, even detectors installed in the air-handling unit at the factory have been found to require adjustment after installation in order to function properly.

Further, for the majority of buildings and occupancies these detectors are often non-supervised stand alone units located in areas where servicing and maintenance is difficult. In buildings or occupancies where there isn't a structured maintenance program these detectors do not receive the adequate cleaning and servicing to maintain proper operation. Without proper maintenance, the air-sampling tubes become clogged and limit the ability of the detector to operate properly.

The majority of buildings currently built are being provided with automatic fire sprinkler systems throughout. Under the mandates of Title 19, fire sprinkler systems must be serviced and maintained regularly throughout the life of the building. The principles and performance of sprinkler heads are very comparable to ROR heat detectors and can serve well to shut down stand alone air handling units.

The need to control air-handling units in most occupancies and buildings is no longer warranted. The Codes require detection and other active and/or passive fire protection features that make the general use of smoke detection for air-handling systems unnecessary. This Code requirement as a general application in all occupancies has become an unnecessary cost to the building owner during construction in addition to the costs of maintenance for the life of the building. Smoke detection in air-handling units should be limited to occupancies and/or specific buildings where there is a specific code requirement, (high-rise structures per IBC 907.2.12.1 as an example) and it will also be assured that the devices will be supervised by a control panel where there will be continued service and maintenance of the equipment.

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TECHNICAL, THEORETICAL, AND EMPIRICAL STUDY, REPORT, OR SIMILAR DOCUMENTS:
(Government Code Section 11346.2(b)(2) requires an identification of each technical, theoretical, and empirical study, report, or similar document, if any, upon which the agency relies in proposing the regulation(s).)

None

CONSIDERATION OF REASONALBLE ALTERNATIVES
(Government Code Section 11346.2(b)(3)(A) requires a description of reasonable alternatives to the regulation and the agency's reason for rejecting those alternatives. In the case of a regulation that would mandate the use of specific technologies or equipment or prescribe specific action or procedures, the imposition of performance standards shall be considered as an alternate)

None. There were no alternatives available to SFM. SFM is required by statute to adopt model codes by reference.

REASONABLE ALTERNATIVES THE AGENCY HAS IDENTIFIED THAT WOULD LESSEN ANY ADVERSE IMPACT ON SMALL BUSINESS.
(Government Code Section 11346.2(b)(3)(B) requires a description of any reasonable alternatives that have been identified or that have otherwise been identified and brought to the attention of the agency that would lessen any adverse impact on small business. Include facts, evidence, documents, testimony, or other evidence upon which the agency relies to support an initial determination that the action will not have a significant adverse impact on business.)

SFM has determined that this regulatory action would have no significant adverse economic impact on California business enterprises and individuals, including the ability of California businesses to compete with businesses in other states.

FACTS, EVIDENCE, DOCUMENTS, TESTIMONY, OR OTHER EVIDENCE OF NO SIGNIFICANT ADVERSE IMPACT ON BUSINESS.
(Government Code Section 11346.2(B)(4) requires the facts, evidence, documents, testimony, or other evidence on which the agency relies in to support an initial determination that the action will not have a significant adverse economic impact on business)

None.

DUPLICATION OR CONFLICTS WITH FEDERAL REGULATIONS
(Government Code Section 113465.2(b)(5) requires a department, board, or commission within the Environmental Protection Agency, the Resources Agency, or the Office of the State Fire Marshal to describe its efforts, in connection with a proposed rulemaking action, to avoid unnecessary duplication or conflicts with federal regulations contained in the Code of Federal Regulations addressing the same issues. These agencies may adopt regulations different from these federal regulations upon a finding of one or more of the following justifications: (A) The differing state regulations are authorized by law and/or (B) The cost of differing state regulations is justified by the benefit to human health, public safety, public welfare, or the environment. It is not the intent of this paragraph to require the agency to artificially construct alternatives or to justify why it has not identified alternatives)

These regulations neither duplicate nor conflict with federal regulations.