INITIAL STATEMENT OF REASONS
FOR
PROPOSED BUILDING STANDARDS
OF THE
CALIFORNIA BUILDING STANDARDS COMMISSION (CBSC)

REGARDING ADOPTION OF THE 2009 UNIFORM MECHANICAL CODE (UMC), CALIFORNIA CODE OF REGULATIONS (CCR), TITLE 24, PART 4

The Administrative Procedure Act (APA) requires that an Initial Statement of Reasons be available to the public upon request when rulemaking action is being undertaken. The following information required by the APA pertains to this particular rulemaking action:

STATEMENT OF SPECIFIC PURPOSE AND RATIONALE:

This proposed action by the CBSC adopts the most current edition of the UMC of the International Association of Plumbing and Mechanical Officials, (IAPMO). The adoption of the 2009 UMC will make applicable the most recent edition for use by individuals, businesses and state agencies as mandated by the Health & Safety Code (H&SC), Section 18928.

CHAPTER 1 – *DIVISION I*
CALIFORNIA GENERAL CODE PROVISIONS
Specific Purpose:
The BSC proposes to combine the model code Chapter 1, Administration with the state administration Chapter 1 to create a new Chapter 1 with two divisions. *Division I* would be for State regulated occupancies and Division II would be for the model code administrative provisions. This action is being proposed as a result of the California Building Standards Commissions Code Coordinating Council and stakeholder input regarding relocating the model code administration chapter from the *Appendix Chapter 1*, as currently shown in the 2007 California Mechanical Code, back to the front of the code book. Renumbering the state administration provisions will help to distinguish the separation between the state administration, *Division I* and the model code Division II, within Chapter 1 Administration.

SECTIONS 1.1 through 1.2
The BSC is proposing to maintain the existing California regulations contained in Sections *1.1* through *1.2* with modifications.

Rationale:
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 occupancies regulated by the Building Standards Commission and published as the 2010 California Mechanical Code Administrative Chapter 1, *Division I* & II.

SECTIONS 1.2.2, 1.2.3, 1.2.3.1 and 1.2.3.2

Specific Purpose:

The BSC is proposing to add new sections *1.2.2, 1.2.3, 1.2.3.1*, and *1.2.3.2 for Alternate Materials and Methods of Construction Equivalency, Alternate Materials, Design and Methods of Construction and Equipment, Research Reports and Tests.* These sections are being added to clarify the intent of these provisions to not prevent the use of systems, methods or devices of equivalency.

Rationale:

Due to the separation of state administrative provisions and the model code administrative provisions for local jurisdiction adoption, the BSC is proposing to clarify that the alternate materials and methods of construction equivalency are applicable to Division I for occupancies that are regulated by state agencies.

SECTION *1106.3.1*

Specific Purpose:

The California Building Standards Commission has determined that new language addressing the access to refrigerants in air conditioners is needed to help protect against unauthorized access to refrigerants.

The BSC in coordination with the Office of the State Fire Marshal, the Department of Housing Community Development, the Office of Statewide Health and Planning and other state agencies, is proposing to add this new amendment the California Mechanical Code. The existing model code does not address the issue of accessibility to potentially dangerous chemical Chlorofluorocarbons (CFCs/Freon) by untrained and unlicensed individuals.

Because Freon is easily accessible, "huffing", which refers to the inhalation of Freon and other chemicals, has been on the rise over the past few years not only among pre-teens and teenagers but among adults as well.

The National Institute on Drug Abuse reports that one in five American teens have used Inhalants to get high. According to Stephen J. Pasierb, President and CEO of The Partnership for Drug-Free America, 22% of 6th and 8th graders admitted abusing inhalants and only 3% of parents think their child has ever abused inhalants. An analysis of 144 Texas death certificates by the Texas Commission on Alcohol and Drug Abuse involving misuse of inhalants found that the most frequently mentioned inhalant (35%) was Freon (51 deaths). Of the Freon deaths, 42 percent were students or youth with a mean age of 16.4 years. 55% of deaths linked to inhalant abuse are caused by “Sudden Sniffing Death Syndrome.” SSDS can occur on the first use or any use.

This amendment will have a positive impact on the safety and health of our citizens, especially our youth. It will reduce the number of deaths associated with Inhalant abuse and the number of injuries associated with Freon accidents and leaks.

Rationale:

The proposed amendment is needed to decrease the accessibility of refrigerants in air conditioners in an important component in preventing inhalant abuse. The number of deaths due to “huffing” has drastically increased and by eliminating the source of refrigerant will protect the health and safety of the public. This has an immense positive impact on the health and safety of the public. It will reduce the number of deaths associated with inhalant abuse and the number of injuries associated with Freon accidents and leaks.

Chapter 2 – Definitions

Specific Purpose and Rationale:

See purpose and rationale for Section 601.3

Chapter 4 – Section *403.8, 403.8.1, 403.8.2, 403.8.2.1, & 403.8.2.2*

Specific Purpose:

The BSC is proposing the new California regulations for enclosed parking garage exhaust ventilation. These proposed regulations are necessary due to the adoption of UMC paired with the IBC rather than the IMC (2009 IMC Section 404) paired with the IBC. The prior 2001 California Building Code regulated parking garage ventilation (Section 1202.2.7) and the 2001 California Mechanical Code relied on the building code to handle this issues.

Section 403.8 is proposed to make specific provisions for enclosed parking garages exhaust ventilation from the base model code provisions for exhaust ventilation. This new section maintains the base model code provisions referencing Table 4-4 and makeup air provisions with no change in regulatory effect. Additionally this new Section specifies that enclosed parking garage exhaust ventilation shall also comply with this section and the subsequent subsections for the following reasons:

Section 403.8.1 is necessary to resolve an omission in the California Mechanical Code and ASHRAE, the referenced standard on ventilation and exhaust, to set a spacing standard for exhaust inlets. This proposal sets a minimum for inlets whereas without there is no guidance or other standard to reference. The BSC is also proposing an exception to the prescriptive provisions of 403.8.1 for performance based engineered designs.

Sections 403.8.2 through 403.8.2.2 are necessary to resolve an omission in the California Mechanical Code and ASHRAE, the referenced standard on ventilation and exhaust, to allow intermittent ventilation of parking garages as has been local practice for over 20 years. The code change also requires that sensors be listed and sets the activation concentration based 2003 ASHRAE Application Handbook.

Rationale:

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 2009 Uniform Mechanical Code and published as the 2010 California Mechanical Code pursuant to Health and Safety Code Section 13108, 13113, 13114, 13131.5, 13143, 17921, and 18949.2.

Chapter 5 – Section 506.2
Specific Purpose and Rationale:
See purpose and rationale for Section 601.3

Chapter 6 – Section 601.3
Specific Purpose:
The 2009 UMC refers to an outdated SMACNA duct construction standard (1995 version), and includes tables, and an Appendix extracted from this now outdated standard. SMACNA updated this standard in 2006, and it is now ANSI approved, entitled "SMACNAIANSI 006-2006 HVAC Duct Construction Standards - Metal and Flexible." However, the updated standard was published after the deadline for submitting code proposals for the 2009 UMC, resulting in its omission. IAPMO is of in the process of updating this reference, but will not complete this process prior to the adoption of the 2010 California Mechanical Code.

The outdated reference, out of date tables and Appendix create conflict between code enforcement agencies, contractors and design engineering firms. HVAC contractors and design firms are currently using the 2006 version of SMACNA in their system duct design. Moreover, the 1995 version *is no longer published or available.*

In addition, the 2009 UMC, Chapter 17, Standards Table 17-1 only lists the updated 2006 SMACNA standard and does not list the outdated 1995 version referenced in the text of the code. This creates both confusion and a potential for conflict. The data within the SMACNA standard has been tested and promulgated through a consensus based process and should only be used in whole. Continued use of outdated partial extracts in the UMC will create confusion and inconsistency.

Finally, the SMACNAIANSI 006-2006 HVAC Duct Construction Standards - Metal and Flexible are already referenced in the other major industry HVAC documents, including:

- ASHRAE Standard 62.1

- ASHRAE Fundamentals Handbook
- National Fire Protection Association 90A, 90B, 96
- US Army Corp of Engineers
- International Mechanical Code
- International Energy Conservation Code

By adopting the 2006 SMACNA HVAC Duct Construction Standards into the 2010 California Mechanical Code, the State will ensure consistency with these other industry documents. In addition, much of the Federal stimulus money for energy efficiency requires the use of the most updated energy efficiency standards. The use of the outdated 1995 SMACNA HVAC Duct Construction Standards could potentially conflict with some of these requirements.

The proposal does the following:

- Moves the definition for the scope of this section that was contained in Appendix A (A6.201) to the body of the code in Section 601.0
- Amends Section 602.1 to replace the references to the outdated extracts of the 1995 SMACNA HVAC Duct Construction Standards with a reference to the 2006 SMACNA HVAC Duct Construction Standards.
- Updates the Standards listed in Chapter 17. 2009 UMC incorrectly identifies the 2006 SMACNA HVAC Duct Construction Standards as a "2005" standard.
- Eliminates Tables 6.1 through 6.10, which contain outdated extracts from the 1995 SMACNA HVAC Duct Construction Standards.
- Eliminates Appendix A, which contains simplified and outdated extracts from the 1995 SMACNA HVAC Duct Construction Standards. (Except for Section 6.201 - Scope, which will be moved to the body of the code in Section 601.0).

Rationale:
By simply referencing the 2006 SMACNA HVAC Duct Construction Standards and not replacing the deleted tables and Appendix A, the Code will be simplified and will eliminate confusion and conflict. The new standards are more complex and involved than the 1995 standards. As a result, including selected or simplified extracts within the code may lead to inaccuracies and misapplication of the standard.

Chapter 17 – STANDARDS

UMC Standards 2-2, 6-2 and 6-5
SMACNA/ANSI 006–2006 referenced Standard

Specific Purpose and Rationale:
See purpose and rationale for Section 601.3

TECHNICAL, THEORETICAL, AND EMPIRICAL STUDY, REPORT, OR SIMILAR DOCUMENTS:

There were no formal studies or reports used as the bases for the proposed adoption of the Uniform Mechanical Code. The Health & Safety Code, Section 18928, mandates this proposed action.

CONSIDERATION OF REASONALBLE ALTERNATIVES

There are no reasonable alternatives identified by the agency. The Health & Safety Code, Section 18928, mandates this proposed action.

REASONABLE ALTERNATIVES THE AGENCY HAS IDENTIFIED THAT WOULD LESSEN ANY ADVERSE IMPACT ON SMALL BUSINESS.

No alternatives were identified to lessen the adverse impact on small businesses. The Health & Safety Code, Section 18928, mandates this proposed action.

FACTS, EVIDENCE, DOCUMENTS, TESTIMONY, OR OTHER EVIDENCE OF NO SIGNIFICANT ADVERSE IMPACT ON BUSINESS.

No facts, evidence, documents, testimony, or other evidence of any significant adverse economic impact on business have been identified. The Health & Safety Code, Section 18928, mandates this proposed action.

DUPLICATION OR CONFLICTS WITH FEDERAL REGULATIONS

There are no federal regulations related to this proposed action. The Health & Safety Code, Section 18928, mandates this proposed action.