FINAL STATEMENT OF REASONS
FOR
PROPOSED BUILDING STANDARDS
OF THE
OFFICE OF STATEWIDE HEALTH PLANNING AND DEVELOPMENT
REGARDING THE CALIFORNIA MECHANICAL CODE
CALIFORNIA CODE OF REGULATIONS, TITLE 24, PART 4

The Administrative Procedure Act requires that every agency shall maintain a file of each rulemaking that shall be deemed to be the record for that rulemaking proceeding. The rulemaking file shall include a final statement of reasons. The Final Statement of Reasons shall be available to the public upon request when rulemaking action is being undertaken. The following are the reasons for proposing this particular rulemaking action:

UPDATES TO THE INITIAL STATEMENT OF REASONS:
The Office of Statewide Health Planning and Development (OSHPD) finds the following revisions are updates to the Initial Statement of Reasons:

Table 315 – An amendment to Table 315 will replace "Recovery room" with "Post-anesthesia care unit" (PACU) under the "Area and Room Designation" column of the table. This revision will make the terminology in Table 315 consistent with the terminology currently used in CMC, Table 4A. In the 2006 Annual Code Adoption Cycle, OSHPD revised Table 4A replacing "recovery room" with PACU in order to be consistent with the 2007 California Building Code; Table 315 terminology should be consistent, as well.

Table 4A – An amendment to Table 4A will correct a publishing error in the CMC. OSHPD added "Triage" to Table 4A under Column A –"Area Designation" in the 2006 Annual Code Adoption Cycle. Under Column F – "All Air Exhausted Directly to Outdoors", the word "yes" was indicated for the triage area, however, this word was inadvertently left out during printing of the 2007 CMC.

Section 407.5 – Variable Air Volume Systems (VAV)
OSHPD has WITHDRAWN the originally proposed amendments to Section 407.5.

Section 416.1 Alarms – Airborne Infection Isolation Rooms and Protective Environment Rooms
OSHPD has WITHDRAWN the originally proposed amendment to Section 416.1.

INITIAL STATEMENT OF REASONS:
The Initial Statement of Reasons includes the following:

The proposed action is to adopt the 2009 Uniform Mechanical Code for incorporation, by reference, into the 2010 California Mechanical Code and to carry forward existing California amendments related to hospitals, skilled nursing facilities, licensed clinics and correctional treatment centers and to make minor editorial and technical modifications for clarification and consistency within the code. The following amendments are also being proposed:

California Chapter 1 and Appendix Chapter 1
"California Chapter 1, General Code Provisions" is being retitled to "Chapter 1, California Administration, Division I". "Appendix Chapter 1, Administration", is being retitled as "Administration, Division II" and is being moved from the back of the code publication to the front and will follow Chapter 1, California Administration, Division I. These changes are meant to provide a more user-friendly format.

Section 203.0 -A- Definitions
"Air relief" - Editorial amendment.
"Authority Having Jurisdiction" – Editorial amendment.

Section 204.0 -B- Definitions
"Building Code"- Editorial amendment.
"Building Official"- Editorial amendment.

Section 209 -G- Definitions
"Galvanized Steel" - See purpose and rationale for Section 601.3.

Section 210.0 -H- Definitions
"Health Facilities [OSHPD 1, 2, 3 & 4] - Editorial amendment.

Section 217.0 -O- Definitions
"Occupancy Classification"- This amendment is being repealed. OSHPD is adopting model code language to provide consistency and coordination with the Occupancy Classifications in Title 24, Part 2, California Building Code.

Section 303.2 Room Large in Comparison to Size of Equipment
Section 304.2 of the 2007 CMC is being moved to Section 303.2 in the 2010 CMC. This modification is necessary to make the section number consistent with the 2009 UMC format.

Section 312.0 Water Supply
Editorial amendment.

Section 315.1 Requirements for Hospitals and Optional Services Provided in Correctional Treatment Centers
These amendments are consistent with the nationally recognized standard ANSI/ASHRAE/ASHE Standard 170-2008, Ventilation of Health Care Facilities.

Table 315.0 Heating, Cooling and Relative Humidity Requirements for Sensitive Areas or Rooms
The amendments to this table are consistent with the nationally recognized standard ANSI/ASHRAE/ASHE Standard 170-2008, Ventilation of Health Care Facilities. Footnote 4 is for clarity and coordination with Title 24, Part 2, California Building Code.

Section 316.0 and 316.5 Essential Mechanical Provisions
The purpose of this modification is to provide clarification and consistency with Title 24, Part 3, California Electrical Code.

Section 407.5.1 Variable Air Volume Systems
Amendment originally proposed has been withdrawn by OSHPD.

Section 410.1 Laboratory Ventilating Systems and Hoods
The amendments to this section are consistent with the nationally recognized standards of the 2006 AIA Guidelines for Design and Construction of Health Care Facilities.

Section 416.1 Alarms – Airborne Infection Isolation Rooms and Protective Environment Rooms.
Amendment originally proposed has been withdrawn by OSHPD.

Section 506.2 Construction
See purpose and rational for Section 601.3.

Section 601.3, 602.1, 602.3, 602.4, 602.5, 602.6, 603.0, 604.2, 604.5, 605.0 and Tables 6-1 through 6-10
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 "SMACNA/ANSI 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 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 SMACNA/ANSI 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).

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.

Section 1106.3.1 Refrigerant Service Ports

OSHPD in coordination with the Office of the State Fire Marshal, Department of Housing Community Development and other state agencies, is proposing to add this new amendment to 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.

Section 1131.1
This OSHPD amendment is being repealed because the requirement has been added to Section 1131.0 of the 2009 Uniform Mechanical Code.

Table 11-1 Refrigerant Groups, Properties and Allowable Quantities
Table 11-1, Footnote No. 13 is being repealed because OSHPD is adopting model code as appropriate requirements.

Table 11-2 Permissible Refrigerant Systems
The amendments to this table add Occupancy I- 2.1 to coordinate with occupancy groups and divisions in Title 24, Part 2, California Building Code and will also correct a printing error.

Chapter 17, Standards
UMC Standards 2-2, 6-2 and 6-5
SMACNA/ANSI 006–2006 referenced Standard
See purpose and rational for Section 601.3.

Appendix A – Uniform Mechanical Code Standard No. 2-2, Standard for Galvanized Sheet Metals; Uniform Mechanical Code Standard No. 6-2, Standard for Metal Ducts; and Uniform Mechanical Code Standard No. 6-5, Standard for Installation of Factory Made Air Ducts
OSHPD is proposing to not adopt these standards. See purpose and rationale for Section 601.3.

MANDATE ON LOCAL AGENCIES OR SCHOOL DISTRICTS

OSHPD has determined that the proposed regulatory action would not impose a mandate on local agencies or school districts

OBJECTIONS OR RECOMMENDATIONS MADE REGARDING THE PROPOSED REGULATION(S).

- ***Public comments received during the 45-Day Public Comment Period from August 28, 2009 to October 12, 2009.***

Section 407.5.1.3
Commenter: Shlomo Rosenfeld, *Shlomo I. Rosenfeld & Associates*
The commenter disapproved of the proposed changes to Section 407.5.1 based on Point #6 & #9 of the Nine-point Criteria.

OSHPD Response: OSHPD is withdrawing the proposed amendment to Section 407.5.1 for further study.

Section 416.1
Commenter: Shlomo Rosenfeld, *Shlomo I. Rosenfeld & Associates*
The commenter recommended further study of the proposed change to Section 461.1 based on Point #6 & #9 of the Nine-point Criteria for the following reasons:

1. The proposed change is unnecessarily ambiguous (Point # 6 of #9) and is in conflict with notes in Table 4-A.
2. The terms **'differential air pressure'** and **'differential pressure'** are not defined in the code Table 4-A. Table 4-A identifies '**AIR BALANCE RELATIONSHIP TO ADJACENT AREAS'**. This is the title of column B in Table 4-A which is also called '**pressure relationship'** in the title of Table 4-A.
3. The suggested term **'anteroom differential air pressure'** distinguishes between the existing terms and clarifies the specific intent of the proposed Sec 416.1 requirement only to rooms associated with anterooms. Note that there are several rooms listed in Table 4-A which their

title includes the words 'Negative pressure' such as Negative pressure treatment room which the proposed Section 416.1 does not apply to them since they do not have an anteroom.

The commenter also suggested revisions to notes 4, 5 and 6 of Table 4-A to resolve the conflicts and clarify that there are anteroom differential air pressure requirements, as well as, cfm pressure relationship requirements.

OSHPD Response: OSHPD agrees that this amendment should be further studied; therefore, OSHPD is withdrawing the amendment to Section 416.1 from the proposed rulemaking.

Table 315 & Table 4A

Commenter: Paul A. Coleman, Deputy Director, *Office of Statewide Health Planning and Development*
The commenter suggested amendments to Tables 315 and 4A and recommended approve as amended for these Tables based on Point #6 of the Nine-point Criteria. The following suggested amendments will provide clarification and consistency within Title 24 and correct a printing error:

Table 315 – The suggested amendment to Table 315 will replace "Recovery room" with "Post-anesthesia care unit" (PACU) under the "Area and Room Designation" column of the table. This revision will make the terminology in Table 315 consistent with the terminology currently used in CMC, Table 4A. In the 2006 Annual Code Adoption Cycle, OSHPD revised Table 4A replacing "recovery room" with PACU in order to be consistent with the 2007 California Building Code; Table 315 terminology should be consistent, as well.

Table 4A – An amendment to Table 4A will correct a publishing error in the CMC. OSHPD added "Triage" to Table 4A under Column A –"Area Designation" in the 2006 Annual Code Adoption Cycle. Under Column F – "All Air Exhausted Directly to Outdoors", the word "yes" was indicated for the triage area, however, this word was inadvertently left out during printing of the 2007 CMC.

OSHPD Response: OSHPD made the suggested amendments to Table 315 and Table 4A. These amendments were noticed in a 15-Day Public Comment Period from October 13, 2009 to October 27, 2009.

OBJECTIONS OR RECOMMENDATIONS MADE REGARDING THE PROPOSED REGULATION(S).

- ***Public comments received during the 15-Day Public Comment Period from October 13, 2009 to October 27, 2009.***

No comments were received during this comment period regarding OSHPD's proposed amendments to Tables 315 and 4A.

DETERMINATION OF ALTERNATIVES CONSIDERED AND EFFECT ON PRIVATE PERSONS

OSHPD has determined that no alternative considered would be more effective in carrying out the purpose for which the regulation is proposed or would be as effective and less burdensome to affected private persons than the adopted regulation.

REJECTED PROPOSED ALTERNATIVE THAT WOULD LESSEN THE ADVERSE ECONOMIC IMPACT ON SMALL BUSINESSES:

OSHPD has determined that the proposed regulations will not have an adverse economic impact on small businesses.