

## OCCUPATIONAL SAFETY AND HEALTH STANDARDS BOARD

2520 Venture Oaks Way, Suite 350  
Sacramento, CA 95833  
(916) 274-5721  
FAX (916) 274-5743  
Website address [www.dir.ca.gov/oshsb](http://www.dir.ca.gov/oshsb)



### SUMMARY PUBLIC MEETING/PUBLIC HEARING/BUSINESS MEETING

October 16, 2008  
Oakland, California

#### I. PUBLIC MEETING

##### A. CALL TO ORDER AND INTRODUCTIONS

Chairman MacLeod called the Public Meeting of the Occupational Safety and Health Standards Board (Board) to order at 10:00 a.m., October 16, 2008, in the Auditorium of the Harris State Building, 1515 Clay Street, Oakland, California.

#### ATTENDANCE

##### Board Members Present

Chairman John MacLeod  
Jonathan Frisch, Ph.D.  
Bill Jackson  
Jack Kastorff  
Steve Rank  
Willie Washington

##### Board Members Absent

Josè Moreno

##### Board Staff

Marley Hart, Executive Officer  
David Beales, Legal Counsel  
Mike Manieri, Principal Safety Engineer  
Tom Mitchell, Senior Safety Engineer  
Bernie Osburn, Staff Services Analyst  
Leslie Matsuoka, Associate Government Programs Analyst

##### Division of Occupational Safety and Health

Steve Smith, Senior Safety Engineer

##### Others present

Kevin White, California Professional Firefighters

Marcia Dunham, PG&E  
Tina Kulinovich, Federal OSHA  
Larry Pena, Southern California Edison  
Greg McClellan, Ironworkers Trust

Rick Griggs, Cal Fire

Judi Freyman, ORC

Nathan Trauernicht, California Fire Chiefs Association

Bill Taylor, City of Anaheim

Kevin Bland

Loren Hormigoso, Federal OSHA

Dave Teter, California Department of Forestry and Fire Protection (Cal Fire)

Antonio E. Duran, Los Angeles County Fire Department

Wayne Wolfe, CalTrans

Christine Youngs, CPIL, University of San Diego  
J.M. Nave, AT&T

Deborah Gold, DOSH  
Dan Leacox, Greenberg Traurig  
Robert Bates, L.A. Fire Department

Jon Moser, Hayward Fire Department  
Patrick Bell, Division of Occupational Safety  
& Health (DOSH)  
Tom Westort, NASA/Fire Department  
Gene Bednarchik, L.A. Fire Department  
Mark A. Bennett, Hayward Fire Department

B. OPENING COMMENTS

Chair MacLeod indicated that this portion of the Board's meeting is open to any person who is interested in addressing the Board on any matter concerning occupational safety and health or to propose new or revised standards or the repeal of standards as permitted by Labor Code Section 142.2.

Dan Leacox of Greenberg Traurig spoke on behalf of the National Elevator Industry, Inc. (NEII). He stated that at the September 11, 2008, Cal-OSHA Advisory Committee meeting, NEII asked the Division to convene an advisory committee meeting to consider how the American Society of Mechanical Engineers' (ASME) performance-based safety code for elevators might be incorporated into California's Elevator Safety Orders. The performance based standard is A17.7 of ASME-2007. California's Group 4 elevator standard, Article 41, is a version of A17.1 of ASME-2004. A17.1 of ASME-2007 incorporates A17.7 by reference as an alternative method of compliance.

Mr. Leacox further stated that the performance-based code for elevators is a process to identify, assess, and possibly demonstrate and document the equivalent safety of new technology, which does not comply with Article 41. Compliance with the performance-based code would be an alternative to the temporary variance process. It would be like the variance process with certain substantial differences. Before submitting an application to the State, the manufacturer must submit the entire elevator system to an accredited elevator certification organization (AECO) for evaluation. An AECO is an independent, non-profit organization concerned with product safety evaluation. Accredited means they have been evaluated, approved, and designated by the American National Standards Institute (ANSI), ASME, or the Standards Council of Canada (SCC) to operate a certificate program. Four existing organizations have applied to ANSI for accreditation as AECOs. They are Underwriters Laboratories (UL), TUVSUV America, TUV Rhineland of North America, and Liftenstichuett Holding BP.

The AECO determines which components of the system are not compliant with Article 41, then conducts a risk assessment to evaluate the safety of those components. The assessment employs two types of performance standards. One type are called Local Essential Safety Parameters. They are the safety objectives. They are standards used to identify and eliminate or sufficiently mitigate the risk of harm to users, non-users, and elevator personnel. For example, a Global Essential Safety Requirement (GESR) concerning means of support says, "the means used to support the elevator equipment shall be capable of sustaining all loads and forces, including impact forces, imposed during normal and emergency operation.

The other type of performance standards are called safety parameters. They are quantitative values set at levels of safety consistent with those provided by codes and standards in current

use. They are used to determine whether the risks identified by GESRs have been eliminated or sufficiently mitigated. For example, one safety parameter related to the GESR for means of support says that the function of machinery and shippings under static load shall not exceed 1:1/666 of their rated load capacity. Thus, there is a quantitative parameter related to the safety objective in order to assess whether or not sufficient or equivalent safety has been obtained.

If the new technology meets the performance-based code standards, the AECO issues a Certificate of Conformance to the manufacturer. It is then up to the state whether the manufacturer has, in fact, demonstrated equivalent safety through compliance with the performance-based code process and standards.

The second substantial difference is that the performance-based code is a one-off process, wherein the state approves the new technology, not each application of the technology. This would be similar to the Division's approval of safeties, door interlocks, oil buffers to governors.

The third substantial difference is that compliance with the performance-based code would be compliance with the Board's Elevator Safety Orders. The Division could approve a component because it is compliant with the performance-based code, just as it approves all components compliant with Article 41. On the other hand, the Board could issue final approval as it does in the permanent variance process. The performance based code refers only to the authority having jurisdiction (AHJ). The AHJ must be specified in the ruling document.

The performance-based code provides for an additional layer of safety evaluation by the AECO to inform the state. That includes a detailed risk assessment, proof of equivalent safety, and complete documentation. Secondly, the performance-based code allows for one application covering any number of installations in California. Third, the performance-based code provides an objective and structured method for establishing product safety as well as a consistent means for demonstrating equivalent safety.

The number of permanent variances applied for each year is growing. The overwhelming majority of them are elevator variances. The number of docketed variances by year have been 72 in 2004, 103 in 2005, 236 in 2006, 274 in 2007, and 2008's are well ahead of last year's pace. Board staff did a marvelous job of streamlining the variance process. It is a great example of enforcing the law with minimum bureaucracy. However, the variance process must still be followed for each application of the technology, and the reason it can be so streamlined is that subsequent decisions are so repetitive.

The rulemaking process in California makes it very difficult to update Elevator Safety Orders fast enough to keep pace with the technology. The Group 4 orders just adopted incorporate ASME-2004 standards. ASME already has 2005 and 2007 standards. Group 4 did not reduce the number of elevator variances because it did not address the alternative suspension. New technologies will continue to roll out of prescriptive elevator standards. Possible future elevator technologies include:

- Self-propelled elevators: Current codes assume traction or hydraulic drives; no provision is made for self-propelled elevators.

- Electromagnetic buffers: ASME 2.22.1.1 says that buffers of spring, oil, or equivalent type shall be installed under the cars and counterweights of passenger or freight elevators.
- Electronic door locks: ASME 2.12.2.4.1 says that interlock contacts shall be positively opened by the locking member or by a member connected to and mechanically operated by the locking member and the contact shall be maintained in the open position by the action of gravity or by a restraining compression spring or by both or by means of the opening member. The standard is very prescriptive of a mechanical device, not allowing something electronic.

Similarly, the following future technologies would also vary from current code:

- Multiple elevators in the same hoistway
- Multiple deck elevators
- Counterbalanced elevators operating in pairs
- Non-traditional guidance systems and safeties
- Green elevators with special materials
- Elevating devices for use in emergencies

The performance-based code is a new approach designed to accommodate these advancing technologies without compromising the level of safety. It is important to keep in mind that the current code is a set of quantitative safety parameters as well as a set of mitigations to the hazards of familiar technology. For example, the 40:1 minimum ratio of shiv diameter to rope diameter is a mitigation of steel rope design and material fatigue. Behind that is a performance-based standard of how long the rope should last. In many respects, performance-based codes are the foundation of current codes. A documented performance-based code allows for new structures built on the same foundation of safety. The performance-based code has already been adopted in a number of jurisdictions (as of July 2008, Alabama, Arkansas, Iowa, Illinois, Nevada, North Carolina, Oklahoma, Utah, Ontario, and Newfoundland). NEII believes that the Standards Board and the Division will find the performance-based code a welcome alternative for the approval of some technologies.

Chair MacLeod asked whether there was a connection between the organizations performing the review and those submitting the technology for review. Mr. Leacox responded in the negative. He stated that, for instance, Underwriters Laboratory actually serves several masters, one of whom is the client who brings the work. However, their work and their evaluations are valuable when they are accepted and acknowledged as authoritative by jurisdictions such as the State of California. Thus, they are well incentivized to do a thorough job.

Chair MacLeod commented that there are not many experts in the field who are not associated with the industry who review the new technology. He stated that he would have a concern regarding the concept of independent review, in which they are reviewed by government. Mr. Leacox responded that the proposed system would not replace the government review; it is simply an additional layer of review. The applicant would be coming to the state with a level of review that has never been done and a level of data that has never been presented before. It is not meant to replace the state's review; it is meant to supplement the state's review.

Chair MacLeod stated that the industry wanted an annual review of the standards, and that was enacted by law. The position of associate engineers who would do the work involved in the review always seem to be taken away when the annual budget crisis comes along. The positions were taken away, but the responsibilities remain. Mr. Leacox responded that there is a recognition that a statute requiring annual review if not updated is not one that is going to keep up with the technology. The process described in his presentation was intended as a potential solution to that difficulty, primarily because it provides a way to bring new technology to the state that does not also create an ongoing load of variances. When the prescriptive portion of the standard does catch up, variances for the current generation of machines would not have to be processed.

Chair MacLeod asked whether another level review would relieve the Board of signing off on variances. Mr. Leacox responded that it is really about coming to the state with a level of review and documentation and assessment that has never been presented before. It would seem to be a great advantage to the state. One of the things to be explored about the process is exactly how it begins and ends, and where and how the final approval would be issued. It is not meant to abrogate anyone's authority.

Dr. Frisch expressed concern that the reviewing authorities cited by Mr. Leacox appeared to be oriented primarily toward consumer protection and consumer safety. The Board's charter is to promulgate regulations regarding occupational safety and health. He is concerned that the agencies mentioned by Mr. Leacox do not appear to be agencies that are familiar with, or have a level of expertise with, occupational safety and health, particularly in California. California has a long history of being more protective than the federal standards. The states mentioned by Mr. Leacox as having adopted his proposed method do not seem to have the same reputation as California. Dr. Frisch stated his intention to look very hard at whether Mr. Leacox's proposal is truly as protective as existing California standards and whether it will be an enhancement of the Board's obligation to protect the safety of employees and the public. Mr. Leacox responded that Dr. Frisch's concerns could be addressed, in part, by the kind of products served by the reviewing agencies and their resources. It is not hard to imagine that they typically review a lot of products that go to employers.

Dr. Frisch used concern about suspension ropes as an example, and he stated that he has concerns about some of the ropes that have been proposed recently in California through the variance process. He would not want to lose control over that decision, as the Board would have ultimate responsibility for considering that, and it sounded, from Mr. Leacox's proposal that the Board would be ceding a portion of its authority to agree to changes such as the type of suspension ropes. Mr. Leacox responded that that was not the intention at all.

#### C. ADJOURNMENT

Chair MacLeod adjourned the meeting at 10:25 a.m.

## II. PUBLIC HEARING

### A. PUBLIC HEARING ITEM

Chair MacLeod called the Public Hearing of the Board to order at 10:25 a.m., October 16, 2008, in the Auditorium of the Harris State Building, 1515 Clay Street, Oakland, California.

Chair MacLeod opened the Public Hearing and introduced the first item noticed for public hearing.

1. TITLE 8:        **CONSTRUCTION SAFETY ORDERS**  
Division 1, Chapter 4, Subchapter 4, Article 11  
Sections 1598 and 1599  
**Use of High Visibility Apparel**

Mr. Manieri summarized the history and purpose of the proposal and indicated that the package is now ready for public comment and the Board's consideration.

David Teter, Battalion Chief and Safety Officer for Cal Fire, expressed concern regarding potential conflicts in safety for firefighters statewide. The State of California has roughly 65,000 professional and volunteer firefighters statewide, and there are roughly 1,000 fire service agencies statewide. They are not normally referred to as highway workers nor are they commonly referred to as flaggers. They most commonly are comfortable operating under the General Industry Safety Orders, not the Construction Safety Orders.

The California Code of Regulations requires employers within the State of California that have more than ten employees to develop, implement, and maintain an effective Injury and Illness Prevention Plan. Components of that plan include both hazard assessments and the abatement of those hazards. It is the firefighters' impression that the required use of 23 CFR 634 to have any and all workers including fire service and emergency service personnel on the right-of-way on federally regulated highways to wear high visibility apparel. The concern with that is that high visibility apparel at this point in time is not constructed of any type of fire resistant material.

When a firefighter is involved in fire suppression or potential fire suppression actions through NFPA standards, fire service agencies equip and mandate their employees to wear appropriate personal protective equipment rated for the potential hazard that they face. Cal Fire's interpretation of the proposal is that employees in those federally-aided rights of way would be required to wear a now non-flammable rated garment over their personal protective equipment. As such, there is a significant issue with a competing hazard.

Effectively, they see high visibility apparel being shrink wrapped when it is exposed to heat or direct flame impingement, which firefighters often are. Firefighters on roadways can be engaged in any number of potential environments that could be deemed immediately detrimental to their lives and health. Those could be inclusive of vehicular fires, large commercial vehicle fires, extrication of victims from traffic accidents, hazardous materials incidents, as well as large vegetation fires. Two of the most recent large fires in California were immediately adjacent to

two large freeways, the 210 and the 118. There were hundreds of firefighters standing shoulder to shoulder on those freeways attempting to hold that fire in check.

The firefighters' interpretation of the proposal is that those firefighters would have to wear a non-fire resistant material directly on their person. It is also of concern that, although the question has been posed to the Department of Transportation and the Federal Highway Administration, there has not been any demonstrated proof that the use of this garment will reduce injuries or fatalities on incidents involving rights of way of federal highways, nor is there in the firefighters' interpretation any intention to conduct any research or study after the implementation of the revised regulation to determine its effectiveness.

Despite the claim in the Initial Statement of Reasons that there is no cost impact to state agencies, Cal Fire views the proposal as an unfunded mandate. Cal Fire is estimating nearly \$250,000 of unfunded liability in purchasing and providing high visibility apparel to firefighters, and annual maintenance cost of \$75,000 to \$100,000, given the current industry standard service life of these high visibility apparel of six months to one year.

The University of Michigan Traffic Research Institute performed a study concluding that there was no appreciable difference in recognizing pedestrians on roadways by operators of vehicles when those pedestrians were wearing high visibility apparel vests or NFPA 1971 approved personal protective equipment. If a firefighter's personal protective equipment meets NFPA 1971, currently there is no highway personal protective equipment that is compliant to that standard, and that is additional cause for concern.

Dr. Frisch asked how the firefighters are covered under the Construction Safety Orders. Mr. Teter responded that the firefighters do not believe that they are covered by the Construction Safety Orders; however, it would not be the first time that Cal Fire as a department has been investigated regarding regulations outside the General Industry Safety Orders.

Dr. Frisch stated that the proposal was taking a very limited perspective on construction workers. He asked Mr. Manieri to address how the proposal might or might not apply to firefighters or other emergency personnel. He stated that he could not understand how the proposal would apply to those personnel, and unless there is a concern that the Division has cited firefighters or other emergency personnel in the past, it would appear that Cal Fire's interpretation of the proposal is incorrect. Mr. Manieri agreed with Dr. Frisch.

Dr. Frisch asked whether his understanding was correct that currently, construction high visibility apparel has no fire-resistant clothing. Mr. Teter responded that that was correct.

Mr. Teter stated that it was Cal Fire's interpretation of the federal regulation is that 23 CFR 634 and 635 would apply to all workers, not just highway workers. In 2006, during a public comment period, the Federal Highway Administration, granted exemption from wearing high visibility apparel to law enforcement agencies under certain conditions. These conditions included traffic stops, felony traffic stops, or any covert operation. During that public comment period the fire service nationwide failed to recognize the impact of this revised federal regulation that is now set to go into effect. When the impact was recognized, the Federal Highway Administration reopened the public comment period and received nearly 15,000 requests for

exemptions from fire service agencies nationwide. Speaking with representatives from the Federal Highway Administration revealed that it was their intent to review each and every one of those requests. As such, they do not expect to make a ruling on any exemption for fire service until mid-2009. That does nothing to solve what the firefighters interpret as a requirement of the proposed standard for all workers except law enforcement to wear high visibility apparel on rights of way of federal aid highways starting November 24.

Dr. Frisch stated that the proposal appears to focus solely on construction employees.

Mark Dolan is the PPE specialist for Belkin Curtis & Sons. They are distributors of personal protective equipment for firefighters throughout 14 Western states and for the Department of Defense. He stated that there is a fire resistant material that can be used in a vest, but it falls far short of anything that the firefighters wear for protective clothing. It is acrylic, and it cannot withstand the temperatures that the fire service encounters in fighting fires.

Dr. Frisch expressed concern that there are some workers subject to the proposal who might use the high visibility apparel for other purposes, and he cited electrical workers in particular. He asked whether the available material that meets the industry standard would be applicable in those circumstances. He expressed concern that if there is no FR equivalent to meet those standards, a situation may be created where it would be impossible to comply with the standard.

Mr. Dolan stated that although he did not know much about the electrical industry, he is aware that electrical workers wear jumpsuits that are very similar to those used in the automotive industry and are used for burn protection. He stated that whichever vest they use will “shrink wrap” around their clothing when exposed to high temperatures, so there will be conflicting issues.

Nathan Trauernicht, representing the California Fire Chiefs Association, stated that according to his research, there are FR rated vests currently available that would probably meet the need of sustained exposure to high temperatures that is of specific concern to the fire service. He expressed his agreement with Mr. Teter’s comments, and requested that the language be modified to exempt fire service personnel during active firefighting efforts and/or those incidents creating a highly flammable atmosphere on a federal aid right of way and in its place allow NFPA compliant turnout gear to meet those standards during fire operations. This exemption provides for enhanced firefighter visibility when operating outside of the exemption while reducing the risk to firefighters while they are actively suppressing fires.

Dr. Frisch asked how active firefighting operations would fall under the Construction Safety Orders. Mr. Trauernicht responded that there have been past instances in which agencies have been held to standards outside of the General Industry Safety Orders, and there is a significant enough risk to request exemptions.

Mr. Kastorff commented that he found it an incredible stretch to assume that firefighters are regulated by the Construction Safety Orders.

Rick Griggs of Cal Fire stated that 23 CFR 634.2 and 634.3 defines a worker as people on foot whose duties place them within a right of way of a federal aid highway, such as construction,

maintenance, survey crews, utility crews, responders to incidents within the highway right of way, law enforcement personnel when directing traffic, investigating crashes, and handling road closures of obstructed highways. The firefighters are concerned that although they are not specifically identified in the proposal, there is potential for them to be cited for violations. Most fire departments already have a traffic incident management policy that addresses hazard mitigations.

Kevin White, health and safety director for California Professional Firefighters, stated that the proposal is an issue for their members because the proposal states that “where a hazard exists to employees because of traffic or haulage conditions of worksites encroaching upon public highways.” Unless there is something else within Title 8 that defines employees in this context as being only construction workers, firefighters are employees in those situations, which would make the proposal applicable unless clarified. He recommended the addition of subsection (e), which would state, “firefighters engaged in emergency operations where they are directly exposed to flame, fire, and/or hazardous materials shall wear appropriate personal protective equipment as specified in the standards of the National Fire Protection Association and when they are engaged in all other operations, safety apparel as described in this section shall be worn by fire and emergency medical services personnel.” That puts the exemption in the standard and removes any doubt about the intent of the proposal.

Chair MacLeod asked whether any of the fire personnel had ever experienced a situation in California in which the Division had applied the Construction Safety Orders to their operations. Mr. White responded that he was not aware of any such incidents.

Captain Antonio Duran, safety officer for the Los Angeles County Fire Department, stated that one of the reasons that the proposal had come to his attention was that he has had personal experience with being cited using the Construction Safety Orders for an accident that occurred during firefighting operations. During a training exercise, an employee suffered a fall in which he was injured, and the Division issued a citation for violation of fall standards specified in the Construction Safety Orders. He expressed agreement with the modification suggested by Mr. White.

Chair MacLeod asked whether the General Industry Safety Orders included fall protection standards for firefighters. Captain Duran responded affirmatively, and he stated that subjecting the training exercise to the Construction Safety Orders presented a greater hazard to firefighters because dynamics of the two operations are different. He stated that measures were taken during the training procedures to mark off the area once the training exercise was finished and placed safety markers to ensure that no one would retrace those steps in that area. He stated that applying the Construction Safety Orders to that training exercise was not reasonable for the type of work.

Chair MacLeod asked whether that citation was appealed. Captain Duran responded affirmatively, and he stated that it was dismissed.

Mr. Kastorff asked whether it was the Division’s position that firefighting is covered under the Construction Safety Orders. Captain Duran responded that in most cases, firefighters would

never be covered under the Construction Safety Orders, but the inspector in the stated incident was concerned about fall protection.

Dr. Frisch expressed concern about the portion of the Construction Safety Orders that might apply to employees who are not performing construction work. He stated that there appeared to be a history in which the Division may have used the Construction Safety Orders from time to time in working with marginal violations. He expressed interest in the Division's point of view of whether they have seen any implications in the proposed standard that would apply to firefighters. He asked whether the high visibility apparel as defined in the proposal could potentially pose a substantial hazard to those workers under certain circumstances. He stated that he would like it to be clear whether the firefighters who had spoken at the public hearing had misunderstood the proposal or whether they would end up fighting citations that do not make sense.

Mr. McCune stated that there are some overlaps between the Construction Safety Orders and the General Industry Safety Orders. The comment regarding fall protection in the General Industry Safety Orders refers to certain sections of the Construction Safety Orders. As far as protective clothing for firefighters, that is covered under Article 10 of the General Industry Safety Orders; protection of utility workers performing high voltage electrical work is covered under the High Voltage Electrical Safety Orders. If they are performing construction work on the highway, such as setting poles or building lines, the Construction Safety Orders for worker protection would apply.

Bill Turner, Safety Manager for the City of Anaheim, expressed agreement with the position of the firefighters. He expressed his opinion that it is reasonable to conclude, based on his reading of the proposal, that law enforcement and firefighters may be covered. He stated that the federal standard specifically addresses first responders, so it would be reasonable to conclude that the proposed standard would raise concern among those employees. He asked that police and firefighters be excluded from the proposal.

Mr. Washington asked the Division which safety orders would apply to flaggers who are performing other duties, such as monitoring or directing traffic during an event. Mr. McCune responded that that is a gap in the General Industry Safety Orders, in that there is no specific reference to the Construction Safety Orders or flaggers involved in other activities such as parking vehicles or directing traffic in the roadway; they often do wear a high visibility garment, but it is not clearly specified to have a reference to the Construction Safety Orders for that type of activity. For firefighters, he stated that the Division would fully support an exception to be put in the standard in order to avoid confusion in that area.

Dr. Frisch asked Mr. Manieri whether the proposed standard would reference the MUCTD or whether it would specifically spell out the requirement for high visibility apparel. Mr. Manieri responded that the proposed standard would reference the MUCTD.

Dr. Frisch stated for the record that he has not read the ANSI standard, and before being asked to vote on the proposal, he would expect that he would want to see the entire standard. He expressed discomfort with the thought of voting to adopt the standard without having read and understood the ANSI standard.

Mr. Jackson expressed concern about adopting by reference an ANSI standard that goes far beyond the existing requirements. The ANSI standard has requirements about the reflectivity on hard hats, for example, which has never been covered anywhere before. He expressed concern that a large number of regulated communities would find that if they have improper reflectors or no reflectors on their hard hats during hours of darkness, they are bound to another standard. It does away with what has been perfectly acceptable behavior to have traffic or construction workers working outside in inclement conditions to be in orange or yellow rainwear. The proposal strikes out that language, and he expressed the opinion that there would be a significant expense in replacing all of the rubber raingear worn by construction workers and traffic workers.

Mr. Jackson also expressed concern that the standard incorporated by reference is more than 30 pages long, and the proposed standard does not specify what equipment to wear in what circumstances as it is listed in the standard incorporated by reference. He stated that there has to be an informed evaluation using the criteria of the ANSI standard. He stated that most employers with exposures in the workplace would not know that they are covered by the ANSI standard, as it is a copyrighted document. Neither the Division, Board staff, nor anyone else should be making and distributing copies of it. He expressed concern that the Board runs the risk of not telling the regulated community what the expectations are; he stated that the proposal tells the regulated community to purchase the standard, the cost of which could be prohibitive, and find the requirements there.

Mr. Jackson stated that although the Board has adopted standards which incorporate ANSI standards by reference in the past, the regulation has always made reference to the specific portion of the ANSI standard that applies to the regulation.

Mr. Kastorff stated that the proposal strikes out the requirements for orange, strong yellow-green, or fluorescent versions of warning garments such as vests and that, in his experience, he sees a majority of construction workers wearing orange tee-shirts. He asked whether that would be eliminated by the standard. Mr. Manieri responded that the referenced ANSI standard does not specifically prohibit those colors from being used, but it addresses reflectivity, contrasts, backgrounds, striking patterns or configurations, material resistance, wash-and-wear resistance, etc.

Mr. Manieri also stated, in response to Mr. Jackson's concerns, that approximately 95% of the referenced standard is directed to the manufacturers to provide assessment criteria to determine when the different types of garments are appropriate, which have been placed in tables in appendices A and B to the standard, which are not part of the standard and thus not copyrighted. He expressed his opinion that the manufacturers would provide copies of those appendices with the scenarios for assessment and use to the end users when they purchase the garments.

Mr. Rank expressed concern that if a situation arose in which it was necessary to call in emergency responders to a jobsite, he would not want them to worry about donning an orange vest over their rain gear or their protective clothing before they get off the truck. Instead, his concern would be that the first responders would be able to do their jobs and get his employees off the job site before injuries or further injuries could occur.

Chair MacLeod stated that most of the firefighters' concerns related to the federal standard, rather than the proposal. He asked Mr. Manieri whether there would be a problem with the proposal as it relates to the federal standard. Mr. Manieri responded that the federal government is highly likely to adopt the ANSI standard in a proposed rule. To the best of his knowledge, that rule would not take effect until 2009 or perhaps 2010.

In the end, the federal OSHA standards and the MUTCD will likely incorporate by reference the same standard incorporated in the proposal. The DOT standard, 23 CFR 634, which deals with high visibility attire, is about to be placed into the federal MUTCD very soon, and CalTrans is in the process of placing the ANSI standard in their standard as well. He stated that the proposal poses to adopt the same ANSI standard that federal OSHA ultimately will adopt.

While he respects the firefighters' concerns, he stated that Article 10 of the General Industry Safety Orders deals specifically with firefighters, protective garments, PPE, respiratory protection, etc., and they have not been updated for quite a long time. Those safety orders contain references to NFPA references that are badly out of date, and it has been Mr. Manieri's understanding that Board staff's attempts to modernize or update those standards have been held back because of mandate issues, as referenced in the verbal comments made today. He asked that staff be permitted to work with the commenters to address the scope of Article 10.1 to address the issues of high visibility attire. The firefighters' concerns seem to be outside the scope of the current proposal, and those concerns would be better served through considering an expansion of Article 10.1, and he submitted that request to the Board for consideration.

Chair MacLeod introduced the next item noticed for public hearing.

2. TITLE 8:        **GENERAL INDUSTRY SAFETY ORDERS**  
Division 1, Chapter 4, Subchapter 7, Article 7  
Section 3328  
**Machinery and Equipment—Definition of "Equipment"**

Mr. Manieri summarized the history and purpose of the proposal and indicated that the package is now ready for public comment and the Board's consideration.

Kevin Bland, representing the CFCA, RCA, and CalPASC, expressed agreement with Mr. Manieri's briefing to the extent that the more clarity provided in the definition, the regulated community would be better able to comply with the regulations. He expressed concern, however, that the definition in the proposal does not really add clarity and actually adds confusion from the use of the word "implement" as used in the proposal to help define "equipment." He stated that the use of the word "implement" actually broadens the intended scope of the proposal. He suggested either narrowing the definition or using the Appeals Board's Decision after Review (DAR) as the guide.

Chair MacLeod asked Mr. Bland if he had an alternate definition. Mr. Bland responded that he would try to come up with an acceptable alternative by the end of the meeting.

Mr. McCune stated that there are occasions when a rulemaking package has unintended consequences, and the proposed subsection (i) would redefine all of Section 3328 and any place

in the standard where the word “equipment” is used. There may be substantial problems with that redefinition. He stated that this standard has been in existence since 1974, and the recent DAR affirmed the application of the word “equipment” to the work in progress. He expressed the Division’s willingness to work with the Board staff to try to improve the standard and to determine if there is a necessity to change the standard.

Mr. Washington asked whether the substitution of the word “tools” would help to clarify the standard. He also asked whether the DAR had addressed the type of wood or the associated clamp used in the accident that prompted the citation. Mr. McCune responded that he was uncertain. He stated that the use of the word “implement” does substantially change the related sections. In the case of the DAR, it was a temporary support used to support a structure while work was being performed, and that was determined to be supporting equipment. There is another standard in steel erection that covers that situation, and it probably would have been better to cite that steel erection or structural support requirement in Section 1709.

Mr. Rank expressed support for the Division’s interest in working with the Board staff to improve or clarify the standard.

B. ADJOURNMENT

Chair MacLeod adjourned the Public Hearing at 11:25 a.m.

**III. BUSINESS MEETING**

Chair MacLeod called the Business Meeting of the Board to order at 11:25 a.m., October 16, 2008, in the Auditorium of the Harris State Building, 1515 Clay Street, Oakland, California.

A. **PROPOSED SAFETY ORDERS FOR ADOPTION**

1. TITLE 8:     **HIGH VOLTAGE ELECTRICAL SAFETY ORDERS**  
Division 1, Chapter 4, Subchapter 5, Article 36  
Section 2940.6 and Appendix C  
**Updating National Consensus Standards for Insulating  
Protective Equipment**  
(Heard at the September 18, 2008, Public Hearing)

Mr. Manieri summarized the history and purpose of the proposal and indicated that the safety order was ready for the Board’s adoption.

MOTION

A motion was made by Dr. Frisch and seconded by Mr. Jackson that the Board adopt the safety order.

A roll call was taken, and all members present voted “aye.” The motion passed.

2. TITLE 8:      **GENERAL INDUSTRY SAFETY ORDERS**  
Division 1, Chapter 4, Subchapter 7, Article 98  
Section 4999  
**Properly Rigged (Handling Loads)**  
(Heard at the July 17, 2008, Public Hearing)

Mr. Manieri summarized the history and purpose of the proposal and indicated that the safety order was ready for the Board's adoption.

### MOTION

A motion was made by Mr. Jackson and seconded by Mr. Kastorff that the Board adopt the safety order.

Mr. Rank stated that the crane accidents that are reported in the national media are the big ones. The less visible accidents involve people who are not trained working with rigging equipment, i.e., wire rope slings, when they lose fingers or even limbs. In the construction industry, employees hoist and rig loads hundreds or thousands of times on each project, making this a fundamental activity of the construction industry. The proposal would require "everyone" to be a qualified rigger or qualified person.

He stated that changing the proposed language of subsection (a) to read, "loads shall be rigged by a qualified person or a trainee under the direct supervision of a qualified rigger" would make the proposal more clear and yet not more stringent. He stated that it is very important that an employee supervising a trainee work directly with that trainee to assist in rendering chokers and inspecting and selecting the right chokers prior to the hoisting operation.

Mr. Rank also suggested that the language should be changed to read, "all loads shall be rigged by a qualified person" when hoisting materials over the building. He stated that the same language appears in Section 1710 of the Construction Safety Orders. He stated that employees in the industry understand what that means, and new employees can be trained to that standard, as it is clear, and there is no doubt on the part of the employer or the trainer. He expressed disagreement with comments stating that the proposal would have a negative impact on the industry; instead, the proposal would clarify the responsibility to have a qualified rigger hoisting loads.

Mr. Washington expressed concern that the proposal may be unclear as to whether a "rigger" or a "connector" is a qualified person, when in fact both are correct. He was concerned that if the proposal were not clear on this distinction, the Division might mistakenly issue citations regarding the lack of a "qualified person." He asked that the proposal be modified to indicate that both a "rigger" and a "connector" are qualified persons.

Chair MacLeod asked whether the changes requested by Mr. Rank and Mr. Washington were nonsubstantive and could be implemented without notice to stakeholders. Mr. Beales suggested that Mr. Rank make a substitute motion to direct Board staff to consider modifying

the proposal in light of Board member comments.

Mr. Rank made a substitute motion that the Board staff reconsider the proposal in light of comments made by the Board members, and the motion was seconded by Mr. Washington.

Mr. Kastorff asked whether it would be possible to further define "direct supervision" to specify "direct visual supervision," and Mr. Rank agreed.

Mr. Washington reiterated his concern regarding the definition of "qualified person."

Mr. Beales indicated that Mr. Rank's comments had included a second request to clarify that all loads are to be rigged by a qualified person.

Dr. Frisch asked whether the substitute motion would mean that the proposal would not be adopted and that staff would then modify the language, issue a 15-day Notice, and bring the proposal back to the Board for adoption at a later date. Mr. Beales responded affirmatively.

A roll call was taken, and all members present voted "aye." The substitute motion passed.

Mr. Jackson asked that staff fully engage all of the commenters for the proposal (both written and oral) to ensure that they have an opportunity to review any modifications to the proposal.

## B. PROPOSED VARIANCE DECISIONS FOR ADOPTION

Mr. Beales stated that all but one of the proposed variance decisions are standard elevator variances. The exception is 08-V-121, California Department of Forestry and Fire Protection's variance application regarding eye protection. He stated that one change had been made to the decision regarding the location of the variance for 08-V-185, and a revised proposed decision had been provided to the Board members just prior to the meeting. He requested that the Board adopt the items on the consent calendar, noting that the proposed decision in 08-V-185 has been modified as stated.

### MOTION

A motion was made by Dr. Frisch and seconded by Mr. Jackson to adopt the consent calendar as modified.

Dr. Frisch expressed concerns, regarding variance file no. 08-V-121, about possible problems that might arise regarding the variance, and after some discussion, the matter was concluded when Mr. Beales stated that Board staff would request that the Applicant provide the Board staff, as well as the Division, with injury information that the Division is supposed to receive per one of the proposed variance conditions.

A roll call was taken, and all members present voted "aye." The motion passed.

## C. OTHER

1. Temporary/Experimental Variance Process Update  
Steve Smith, Senior Safety Engineer  
Division of Occupational Safety and Health

Mr. Smith stated that process for temporary variances is outlined in the Labor Code. The policy and procedure allow an individual employer to apply for a temporary variance to any one of the district offices or to the Division's headquarters. Those variances are limited to the situations in which a new section has come into existence, and the employer needs extra time to comply with the standard, and the temporary variances are limited in duration. There are also provisions in the standard that when the employer applies for such a temporary variance that they must also notify the affected employees of their request for that variance. The employees have rights to ask for a hearing on the issue, and both parties, employer and employee, can appeal the decision of the Division on either granting or denying the variance. That appeal would be brought before the Standards Board for hearing.

The other type of variance granted by the Division is an experimental variance, which has similar requirements to a temporary variance as far as submitting an application to the Division. There are similar restrictions on the length of time, not to exceed 12 months; there is an opportunity to renew for 12 months. Employers are also required to notify the employees, and the employees are allowed to participate in the process. One of the differences is that the experimental variance is not restricted to new standards, but a process where an employer with the Division's approval is looking for new ways to provide employee protection. There is also the caveat that the Department of Industrial Relations director must also approve any experimental variance application. Both the employer and the employee have the right to appeal the decision to grant or deny an experimental variance, and that appeal would also be brought before the Standards Board.

Mr. Smith cited examples of types of variances that may affect future Standards Board activities. Most of those have been either been in the industrial hygiene arena or in the elevator area. There were four experimental elevator variances issued in the last two years that eventually evolved into permanent variance applications. The first was for Otis Generation 2 type elevators; an experimental variance was issued to the manufacturer, and an estimated 400 locations were involved in that experimental variance. All of those 400-plus locations have now evolved into permanent variance applications. The next two were for ThyssenKrupp Isis I and Isis II type elevators; both of those were issued to an estimated total of under 100 locations for those two types of elevators. Those locations are now being converted into permanent variance applications. The fourth experimental variance application was FujiTech Talon elevators. That variance included five locations in the state, and those are also being converted to permanent variance applications.

About four years ago, an experimental variance from the spray-booth requirement not to recirculate exhaust ventilation (Section 5153) was issued. It has since expired, and it has been converted to a permanent variance application that is still ongoing. A couple of applications for experimental variances dealing with lab hoods (Section 5154.1) were

recently received. Those variances involve some of the newer requirements for low-flow hoods, specifically the rulemaking adopted by the Board a couple of years ago allowing a 60-foot lower flow requirement for hoods that are not occupied. One of the criteria for that allowance of a lower flow is that the applicants perform a one-time test of the fluid using a quantitative test using a gas called sulfur hexafluoride to test the hood to ensure that it is flowing correctly. This particular gas is of concern to a couple of lab hood employers that this is a “global warming gas” that has a high potential to cause global warming effects, and the employers would like to use a different type of gas to test their lab hoods. Unfortunately, the consensus standard only specifies the one gas, so the idea is to set up an experiment that would demonstrate the equivalency that another type of gas could be used to test the flow of the lab hoods. These applications were just recently received, so they are in the preliminary stages right now. The variance has not been granted, it is simply under consideration.

The Division is anticipating discussions with a potential applicant regarding lab hoods and expanding the 60-foot low-flow requirement to not just non-occupied hoods but occupied hoods. There are some low-flow hoods that are being used outside of California, and they extend the requirement to a 100-foot low-flow. The applicant would like to set up an experiment to demonstrate that these low-flow hoods do provide equivalent protection. The potential applicant has had some preliminary discussions with Division staff, but at this point, they have yet to file officially for an experimental variance. That type of variance would be intended to eventually show some kind of support for amending the standard. If the experimental design and the experiment were approved by the Division, and the results were favorable, that could result in the Division proposing a modification of the standard.

Chair MacLeod expressed concern arising from the fact that often, these temporary or experimental variances end up before the Board, and it is not always clear how the Board is expected to deal with them. He cited some of the problematic experimental variances that had been issued in the past, such as some of the elevator variances. He stated that he had originally requested this briefing primarily because of the elevator variances. He stated that at one time, there were 75 elevators operating under an experimental variance, and in his mind, that went beyond the scope of an experiment. One manufacturer had 75 elevators and another had over 400 scattered all over the state and in operation. By the time those experimental variances were converted to regular variances and came before the Board, they had already been in operation for some time, and it was a “done deal.” He stated that he was looking for a way to avoid such a problem in the future. He asked whether there is a form or an application that employers complete to apply for temporary or experimental variances.

Mr. Smith responded that there is not a form, but there is a list of criteria of what the application should include, which is spelled out in the Labor Code and the Division’s policy and procedure manual. These criteria include what they are asking for, how much time they need, etc. In a situation such as the Otis Gen 2, where there were over 400 elevators included, the Division agreed with that but then the variance for FujiTech was limited to fewer than five. The Division saw that there was a need on the experimental side, in which the Division is working with the manufacturers to pinpoint the safety

parameters, the best method of installation, and what the conditions should be when it gets to the permanent variance stage. The idea is that the experimental variance will provide the results that will allow the Division, the applicant, and the Board staff to identify the best conditions that the applicant should put in their application for a permanent variance. That is why future experimental variances will be limited to just a couple of locations statewide to gather that data.

Chair MacLeod asked whether that was until such time as the technology, the processes, or the procedures could be proven. Mr. Smith responded that the results of some of the experimental variances have shown the appropriate types of conditions that should be included in permanent variances. The Division has already seen these conditions and is familiar with them.

Chair MacLeod suggested that the Division could notify the Board when they receive an application for a temporary or experimental variance and keep the Board informed as to how the particular application is proceeding through the Division's approval process so the Board could keep abreast of what they might be seeing in the form of applications for permanent variances.

Dr. Frisch suggested that a list of applications for temporary or experimental variances be included in their monthly Board packets. Such a list could include the name of the applicant, the location or locations where the variance is granted, the date it was issued, the section or sections of the regulations being tested, the reason for the application, and the status of the application in terms of the Division's process. Having such a list periodically could give the Board a better sense of what variance or rulemaking activity it might be seeing in the future.

Chair MacLeod expressed agreement with Dr. Frisch, asked Mr. Smith whether that would be a problem for the Division. Mr. Smith responded that he would bring the request back to Mr. Welsh for consideration. He stated that there are not a lot of applications for temporary or experimental variances, so it should not be an unreasonable burden for the Division staff to undertake.

Chair MacLeod stated that perhaps there should be something between the temporary or experimental variance and the permanent variance process in case the temporary or experimental variance does not provide sufficient information to make a determination. Mr. Smith stated that the experiments should provide sufficient information, but it is well known that experiments are not always successful.

Chair MacLeod suggested that that data should be included and the variances should not be made permanent if that is the case. Mr. Smith agreed, but the Division could not preclude applicants from exercising their rights to apply for a permanent variance just as they cannot be prohibited from applying for an experimental variance.

Chair MacLeod agreed with Mr. Smith that anyone can apply for a permanent variance, but if they were unsuccessful in the experimental variance, that is an indicator that a permanent variance may not be successful either. Mr. Smith agreed.

Dr. Frisch stated that he was unable to find any information in the Division's policy and procedures regarding the process or procedure of revoking an experimental variance. He asked Mr. Smith whether there was a process to revoke an experimental variance if the experiment is not working. Mr. Smith responded that those are usually set forth in the conditions upon which an experimental variance is granted. The Division usually requires periodic reports from the applicant regarding the progress of the experiment. He indicated that there is a time limit on the experimental variance as opposed to a permanent variance.

Dr. Frisch stated that if someone gets sick or injured by the result of the experiment, he would expect that the Division would consider revoking the variance. Mr. Smith agreed.

Chair MacLeod asked whether the Division had ever denied an application for an experimental variance based on an unsuccessful experiment. Mr. Smith responded that the policy and procedure manual does not address closing steps when an experiment is completed; it simply lists what conditions are allowed. He stated that the goal of any experiment is to achieve results favorable or unfavorable to the premise, and having that data would indicate whether to explore a change to the standard or a simpler permanent variance.

Chair MacLeod suggested that it may be time to review the process itself. He stated that the policy and procedure manual was dated 1987 with an update in 1994; perhaps it is time to review it again.

## 2. Legislative Update

Mr. Beales stated that there is one update to the written information in the Board packets. The written update indicated that AB 1183 had not passed the legislature; however, more recent information indicates that the bill had in fact passed the legislature, but it had been amended to delete the portions that had been of concern to the Board staff.

## 3. Executive Officer's Report

Ms. Hart stated that Governor signed a new budget shortly after the September Board meeting. The Standards Board lost the position of Staff Services Manager I, as expected. Although the budget was signed, the Executive Order is still in place, which prohibits the hiring of the retired annuitant and the student assistant. Board staff is in the process of applying for exceptions to that Executive Order in order to fill the retired annuitant and that associate safety engineer positions. John Duncan, Director of the Department of Industrial Relations, had allowed all applications for exceptions to be approved, which means that the Board staff can begin active recruitment for the associate safety engineer and rehire Richard Parenti as a retired annuitant. There is a caveat that the Department is not allowing retired annuitants to be used on a permanent basis; therefore, Mr. Parenti is coming back for 120 days while the associate safety engineer position is being filled. Ms. Hart stated that she was unsure whether Mr. Parenti would be able to stay on if recruitment for the open position was unsuccessful.

Unfortunately, there are additional General Fund reductions for this fiscal year. The Department of Industrial Relations has been reduced by \$800,000 beyond savings already realized. The Board has not been informed of what our share of the savings will be or if we will have a share. If it happens that it is not a large amount, oftentimes DOSH will absorb the costs for us. This reduction must be kept in mind when filling the vacancy and making any expenditures.

The Board continues to receive an unprecedented number of variance applications, of which a large percentage are elevator variances. From 2003 to 2007, the number of docketed variances increased by 600%; thus, the workload has increased. Staff is continuing to review and streamline its internal process while still providing an acceptable level of service.

Ms. Hart then summarized the Calendar of Activities.

4. Future Agenda Items

F. ADJOURNMENT

Chair MacLeod adjourned the Business Meeting at 12:25 p.m.