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MINUTES OF THE THIRD ADVISORY COMMITTEE MEETING FOR  
GENERAL INDUSTRY SAFETY ORDERS  
SECTIONS 3402.2, 3410, 3410.1, 3411  
FIREFIGHTERS' PERSONAL PROTECTIVE EQUIPMENT-LABOR CODE 147.4 (c)  
April 4, 2023  
In-Person - Sacramento, CA

## 1. Call to Order.

The meeting was called to order by the Chair, Maryrose Chan, Senior Safety Engineer, Occupational Safety and Health Standards Board (OSHSB), at 10:00 am on Tuesday, April 4, 2023, in Sacramento, CA.

## 2. Opening remarks.

The Committee Chair welcomed the attendees. Members of the advisory committee meeting introduced themselves. The Committee Chair stated that this meeting is the third of a series of meetings to review the updates of the National Fire Protection Association (NFPA) standards.

For the benefit of new attendees, the Chair reviewed the following:

### Role of the Advisory Committee Process

The Committee Chair explained the Board's policy regarding the use of advisory committees, explaining that the Board has found advisory committees to be an effective way to develop a proposal because of the expertise of the attendees.

### Office of Administrative Law (OAL) and Federal OSHA Standards of Review

The Committee Chair explained that the regulatory text developed must meet the following criteria:

- Authority
- Necessity
- Clarity
- Enforceable
- Consistency
- Non-Duplication
- Preference for Performance Based Standard
- Explore Alternatives
- At least as Effective as the Federal OSHA Standards

The Chair announced that the next meeting will be in-person only. Videoconference is no longer available.

### 3. Review and Discussion of Post-AC Draft Proposal from June and November 2022.

#### **§3402.3. Selection, Inspection, and Maintenance of Protective Ensembles for Structural Fire Fighting and Proximity Fire Fighting.**

##### **Changes to Subsection (a)**

The Chair revised the subsection based on the comments from the prior meeting to:

(a) ~~Structural and proximity fire fighting protective ensembles shall be selected, inspected, and maintained in accordance with the~~ The employer shall establish and implement the procedures and requirements in National Fire Protection Association (NFPA) 1851, Standard on Selection, Care, and Maintenance of Protective Ensembles for Structural Fire Fighting and Proximity Fire Fighting, 2014-2020 Edition, which is hereby incorporated by reference without the Annex, except for A 5.1.5.

##### **Discussion**

**Alameda County Fire Department** asked if the edition year of the document can be omitted, so that it doesn't need to be updated again.

The **Chair** replied that the California Administrative Procedure Act (APA) requires that the year be specified.

**Cal Fire** asked about the definitions of the terms.

The **Chair** replied stating that when a document gets incorporated by reference, the definitions found in chapter 3 of NFPA 1851 are also included.

##### **Outcome**

The proposed amendments were acceptable to the committee.

##### **Existing Subsection (b) regarding helmets**

The Chair explained the reason why the retirement of helmets was different from the rest of the ensemble. Initially, the prior advisory committee meetings wanted to require only NFPA approved helmets, however the committee realized that this was not feasible. Retirement of non-approved helmets abruptly would lead to firefighters being unprotected, because there were too many non-NFPA approved helmets in circulation.

The committee's solution was to retire non-approved helmets including those not meeting NFPA 1971, 2007 edition within 10 years from the date of manufacture. As the helmets were being retired, they would be replaced with NFPA 1971 approved helmets as required by

helmets purchased in accordance with section 3402.2.

The effect is overtime, the non-NFPA helmets will be replaced by NFPA approved helmets, but there will still be in-service helmets that are non-approved maintained in circulation as long as they are within 10 years from the date of manufacture.

**Cal Fire** commented that subsection (b) should remain because if a department bought non-approved helmets, then they would not be able to be used even if they are within 10 years from the date of the manufacture.

The **Chair** replied that Cal Fire is correct, but the language of allowing any non-approved NFPA approved helmets is too broad. To be facetious, a bike helmet may be used. Of course, no one will do that. The Chair is hoping that when we discuss the draft text, we can discuss the types of helmets that are acceptable, including non-approved.

**Cal Fire** wanted to discuss the merits of non-approved NFPA helmets that meet the NFPA standards but are not approved because the components are bought separately.

#### **Action Item**

Further discussions are needed.

#### **Existing Subsection (c) regarding effective dates**

##### **Discussion:**

The **Chair** asked if the departments need a phase in date to comply with the latest edition of NFPA 1851, which is currently the 2020 edition. The projected earliest date the proposal may be in effect is 2025.

**San Diego Fire department** replied “yes” due to budgetary reasons, to request additional funding.

The **Chair** asked if a one year phase in would be sufficient.

**San Diego Fire Department** replied at a minimum.

**Alameda Fire Department** suggested a 3 year phase in for turnouts

The Chair replied that a 3 year phase-in for retirement would not be necessary, because by 2026 all turnouts should be within 10 years from the date of manufacture. The reason for existing subsection (c)(2) is to allow for time so that the departments can be in a 10 year cycle for retiring their structural turnouts. Adding an additional 3 years would undo that.

**Alameda Fire Department** stated that the problem is the governor rescinded the mandate for

funding as stated in the Executive Director's Report regarding budgets. The document can be reviewed by the committee.

The **Chair** stated that the mandate issue under advisement. For subsection (c)(1), it makes sense to extend the effective date. For verified organizations or departments that want to be verified, they may need the extra time to complete the verification requirements in the 2020 edition. For verified Independent Service Provider (ISP)s, they are already complying with the 2020 edition.

#### **Action Item**

The effective date of NFPA 2020 edition will be extended for one year. The Chair will develop proposed text to be discussed at the next meeting.

#### **Proposed Subsection (c)**

After considering the comments of Cal Fire from the prior meeting, the Chair amended subsection (c)(2):

#### **(c) Training**

**(2) The program shall be administered by a suitably trained program administrator. Employees designated by the employer to perform the activities listed in NFPA 1851, Standard on Selection, Care, and Maintenance of Protective Ensembles for Structural Fire Fighting and Proximity Fire Fighting, 2020 edition, chapter 4 Program Table 4.2.4 shall be trained according to their duties.**

#### **Discussion:**

The Chair incorporated the comments of Cal Fire with the addition of training requirements for program administrator. Cal Fire's suggested text did not include training requirements for the administrator. The language stating that the program administrator must be suitably trained came from section 5144(c).

**Los Angeles County Fire Department** does not oppose the proposed text.

The **Chair** asked how long training records should be kept. The IIPP requires training records to be kept for 1 year unless otherwise specified.

**LA County Fire Department** stated they would defer to the ISP to let them know when refresher training is needed.

**Verified ISP** responded that they keep records for at least one year.

**Alameda Fire Department** commented that they are in the process of training their staff and refresher training should be required if there are significant changes to the PPE specifications or

significant changes in the edition.

The **Chair** asked if there is consensus if the training record should be kept at least one year.

**Alameda Fire Department** thinks training records should be kept longer, because how do you know that the person has been trained previously.

**San Diego Fire Department** stated that the training records should be kept until there is a new updated change. Records of the initial training should be kept. If there is a change, then those and employees are trained, then those records should be kept. If you throw away the records after one year, then how do you know who was trained.

The **Chair** stated that NFPA revision is on a five-year cycle. Would maintaining records for 5 years be suitable?

**NFPA 1877 Chair** stated the NFPA 1851 outlines the organization or person responsible for the program to be retrained every revision cycle, which is every 5 years. It makes sense to follow that, unless you have a new person overseeing the program.

#### *NFPA 1851, 2020 edition*

*4.2.4.5.4. Organizations shall obtain and complete within one year of the edition issuance the training required in 4.2.4.5.2 each time a new edition of NFPA 1851 is issued or there is a change in personnel overseeing or performing the required aspects of an organization's program.*

**Sacramento Metro Fire** recommended that the records reference the edition the employee was trained on instead of keeping it a certain number of years, it may be best to reference the edition. For example, what if someone joined in the middle of a revision cycle, then a record of the edition would be of value.

**Cal Fire** suggested text stating that the employer shall be able to provide documentation to show that their employees are trained to the current regulation.

#### **Action Item**

The Chair will draft language taking into account the comments.

#### **Proposed subsection (e)(1) regarding adding the term employer**

The Chair stated that in the last meeting, there was a comment to use the term "employer". The Chair sought the counsel of OSHSB's attorney and the suggestion was to use the term "organization or employer". In NFPA 1851, 2020, 3.3.64, the term organization is defined as the entity that provides the direct management and supervision for the emergency services personnel.

**Alameda County Fire Department** asked for the definition of employer.

The **Chair** stated that there is a definition for employer and case law behind the term that she will provide at a later time. Title 8 rules are based on the employer and employee relationships.

Division 5. Safety and Employment  
Part 1. Occupational Safety and Health  
Chapter 1. Jurisdiction and Duties

**Labor Code Section 6340**

“Employer” shall have the same meaning as in Section 3300.

**Labor Code Section 6304.1**

- (a) “Employee” means every person who is required or directed by any employer to engage in any employment or to go to work or be at any time in any place of employment.
- (b) “Employee” also includes volunteer firefighters covered by Division 4 (commencing with Section 3200) pursuant to Section 3361.
- (c) Subdivision (b) shall become operative on January 1, 2004.
- (d) This act does not affect claims that arose pursuant to Division 5 of this code between January 1, 2002, and the effective date of this act.

**Labor Code Section 6400**

- (a) Every employer shall furnish employment and a place of employment that is safe and healthful for the employees therein.
- (b) On multiemployer worksites, both construction and nonconstruction, citations may be issued only to the following categories of employers when the division has evidence that an employee was exposed to a hazard in violation of any requirement enforceable by the division:
  - (1) The employer whose employees were exposed to the hazard (the exposing employer).
  - (2) The employer who actually created the hazard (the creating employer).
  - (3) The employer who was responsible, by contract or through actual practice, for safety and health conditions on the worksite, which is the employer who had the authority for ensuring that the hazardous condition is corrected (the controlling employer).
  - (4) The employer who had the responsibility for actually correcting the hazard (the correcting employer). The employers listed in paragraphs (2) to (4), inclusive, of this subdivision may be cited regardless of whether their own employees were exposed to the hazard.
- (c) It is the intent of the Legislature, in adding subdivision (b) to this section, to codify existing regulations with respect to the responsibility of employers at multiemployer worksites. Subdivision (b) of this section is declaratory of existing law and shall not be construed or interpreted as creating a new law or as modifying or changing an existing law.

Division 4. Workers’ Compensation and Insurance

## Part 1. Scope and Operation

### Chapter 2. Employers, Employees, and Dependents

#### Labor Code Section 3300

As used in this division, “employer” means:

- (a) The State and every State agency.
- (b) Each county, city, district, and all public and quasi public corporations and public agencies therein.
- (c) Every person including any public service corporation, which has any natural person in service.
- (d) The legal representative of any deceased employer.

**Cal Fire** doesn’t object to “organization or employer”, but stated that under the definition of organization, the incident command system should not be used as way to determine who is responsible for who. In a large Under this definition, you could have jurisdiction A supervising jurisdiction B on a large incident.

The **Chair** stated that California has a multi-employer standard. It is commonly used in construction. There is the creating, exposing correct, and controlling employer. In addition, there are dual employer worksites. When multiple entities work together, finding out which employer is responsible for creating the hazard, for correcting the hazard, and has direct supervision over that employee becomes a process. All those entities are citable, and the contracts have to be reviewed.

#### §336.10. Determination of Citable Employer.

On multi-employer worksites, both construction and non-construction, citations may be issued only to the following categories of employers when the Division has evidence that an employee was exposed to a hazard in violation of any requirement enforceable by the Division:

- (a) The employer whose employees were exposed to the hazard (the exposing employer);
- (b) The employer who actually created the hazard (the creating employer);
- (c) The employer who was responsible, by contract or through actual practice, for safety and health conditions on the worksite; i.e., the employer who had the authority for ensuring that the hazardous condition is corrected (the controlling employer); or
- (d) The employer who had the responsibility for actually correcting the hazard (the correcting employer).

Explanation on dual employers

<https://www.dir.ca.gov/DOSHPol/P&PC-1D.pdf>

**Cal Fire** acknowledged the Chair’s explanation. However, under the context of protective

clothing and PPE. If a firefighter from another department shows up at an incident Cal Fire is managing or vice versa, Cal Fire has no control as to what they are wearing.

The **Chair** stated that when she reviewed contracts for mutual aid, there was a requirement that the PPE must meet Title 8.

**Proposed subsection (g) regarding soiling**

The **Chair** showed that proposed subsection (g) regarding inspection guidelines pertaining to soiling was deleted due to the lack of consensus.

**§3403. Head, Eye and Face Protection. Protective Ensembles for Structural Fire Fighting and Proximity Fire Fighting.**

Section 3403 is for in-service equipment. All elements except for helmets are required to meet the NFPA 1971, 2013 edition. The Chair is soliciting feedback as to what would be acceptable head protection.

**Phenix Technologies** stated the type of helmets they have provided are the same type of helmets that would come with an NFPA approval. The difference is if it is not purchased with goggles and earflaps, Phenix cannot sell it with the NFPA sticker. The level of protection is not different, except that that the helmet will not include goggles and earflaps. The helmet by itself without the other components will not be a complete set as required by NFPA 1971.

**Bullard Safety** stated that when their helmets leave the factory, they meet NFPA 1971, meaning they have ear and neck protection and a form of eye protection. They will not ship helmets without those components in order to adhere to NFPA 1971.

**Alameda County Fire Department** stated that purchasing NFPA certified helmets prevents the purchase of low temperature grade helmets.

**Cal Fire** disagrees because the certification only ensures that when it leaves the factory, it is sold with the other components. Any fire department can substitute the other components to something else.

The **Chair** asked, what kind of paperwork comes with the helmet if you bought the helmet by itself without the other components? Is there any documentation that the helmet itself is manufactured in accordance with the requirements of NFPA 1971?

**Bullard** replied that for their products, once the helmets are assembled, their products are labeled per NFPA standard. They also follow the ANSI protocols with regards to head protection. They do not send their helmets out without NFPA certification. Manufacturers do not require that the configuration in which the helmet was sold remain that way.

The **Chair** asked Cal Fire what kind of documentation do they receive from the manufacturer when they purchase helmets by itself without the other components.

**Cal Fire** suggested affix a sticker to say that it is OSHA approved. In the case of helmets purchased from Phenix Technologies, the model number tells you that the helmet by itself meets NFPA, but without the components.

**Sacramento Metropolitan Fire Department** questions the wisdom for making helmets an exception. All the other elements of the protective ensemble are required to meet the NFPA standard. Sacramento Metropolitan Fire Department is in favor of having consistent requirements.

**Phenix Technologies** asked if this is the question of only in-service helmets.

The **Chair** replied that currently there is a purchase quality standard that states purchases of new helmets must meet the NFPA 1971 standard. Non-NFPA helmets were permitted to be in-service if they are within 10 years from the date of manufacture. The idea was overtime as they get retired, they will be replaced by NFPA approved helmets.

If section 3402.3(b) remains unchanged, then by 2033 nearly all helmets should have been replaced by NFPA 1971 helmets.

The **Chair** is asking if the committee member wants to accelerate that?

**Cal Fire** is requesting for the new version to not require NFPA approved helmets. He stated that the requirement is costing Cal Fire money simply because they need to purchase helmets with earflaps and goggles, which may not be the goggles that they want to wear in their organization. Cal Fire may not need the earflap because it is not component they need. They are spending a lot of money and it is up to Cal Fire to assure their employees are safe. Cal Fire was not aware of anything prior to these regulations where anyone in California is walking around as a firefighter with an unsafe helmet and we had no NFPA requirements within the State. Cal Fire doesn't think that the committee is fixing a problem that exist. Cal Fire stated that the committee is moving down the path of administrative controls and he doesn't believe that the money that is being spent is ensuring employee safety.

Cal Fire already assured employee safety and the onus is on the organization. For some organizations, for their size and ease of their use, it may make sense for them to buy an NFPA approved helmet, take it out of the box and there you go, but this may not be the case for others. Cal Fire urged the committee to think of ways to ensure employee safety but do it in a way that does not require NFPA helmets.

There are three things in the NFPA standards that are antiquated. We don't have that control in California to make those determinations. There is a ton of information about Per-and

Polyfluoroalkyl Substance (PFAS) that are maintaining themselves in our turnouts. One of the reasons why Cal Fire is not in favor of NFPA approved helmet is because it is not safe for the employee to wear goggles on a set of helmets that are exposed to all those contaminants in a structure fire and then ask that employee to put those pair of goggles on their eyes or on their face. There is another way to ensure the employee has proper eye protection without having to wear it on their helmet exposed to the contaminants of a structure fire.

**LA County Fire** stated that they have several different goggles that they use depending on type of operations. They are all for structural firefighting. We allow firefighters to use their breathing apparatus mask with P100 filter to ensure they don't get particulates or other products of combustion in their eyes. LA County fire said that what Cal Fire is saying is that we have a goggle on an ensemble somewhere. When we take that goggle out and put it on our eyes, then we are directly exposing our members to those particulates because they did not have proper cleaning while they were fighting fire. The breathing apparatus with a P100 filter or CBRN filter will protect the employee far better than a goggle.

The **Chair** requested LA County Fire and Cal Fire to prepare language that the committee can discuss at the next meeting.

**Alameda County Fire Department** asked Cal Fire, what goggles do they use?

**Cal Fire** does not want firefighters to wear goggles on the outside of their helmet that is being scratched up, exposed to all contaminants in the structure fire. In all reality, they are not wearing it in the structure fire, they are wearing them on a vehicle accident, when there is a better form of eye protection that is appropriate for the task they are performing. The regulations make it almost impossible to not wear a SCBA during the entire overhaul process. The need to wear goggles in a structure fire has been greatly reduced.

**Alameda County** replied that the standard allows you to remove those goggles after it is issued to the end user as long as they have some other eye protection to be deployed when they need it.

**Bullard Safety** stated they sell helmets with removable goggles so that when they are performing other duties on a structure fire, they do not expose eye protection to other contaminants. Approximately 80% of the helmets they sell have removable goggles, so that they can be stored somewhere else.

#### **Action Item**

Cal Fire and LA County Fire Department will propose alternative text to subsection (b).

#### **4. Review of Research Studies**

The **Chair** shared the following studies with the advisory committee:

### **Wildland Firefighting Personal Protective Clothing Cleaning Practices in the United States**

Meredith McQuerry, Florida State University, 644 West Call Street, 236 Shaw Building,  
Tallahassee, FL 32306, USA

Elizabeth Easter, University of Kentucky, 306 Erikson Hall, Lexington, KY 40506, USA

Received: 19 August 2021/Accepted: 31 December 2021/Published online: 9 February 2022  
Fire Technology, 58, 1667–1688, 2022

The purpose of the study was to investigate the current cleaning practices of wildland firefighting gear and to determine the laundering resources wildland firefighters have access to while deployed in the field.

The study was the first of its kind to collect such end-user feedback on wildland firefighter personal protective clothing (PPC) cleaning. Participants were asked to answer a questionnaire. Data was collected from over 600 active-duty, career, and volunteer wildland firefighters throughout the United States. Forty seven percent of the respondents were firefighters serving California.

### **Urinary 1-hydroxypyrene and Skin Contamination in Firefighters Deployed to the Fort McMurray Fire**

Nicola Cherry, Yayne-abeba Aklilu, Jeremy Beach, Philip Britz-McKibbin, Rebecca Elbourne,  
Jean-Michel Galarneau, Biban Gill, David Kinniburgh and Xu Zhang.

Annals of Work Exposures and Health, 2019, Vol. 63, No. 4, 448–458, 16 January 2019  
doi: 10.1093/annweh/wxz006

#### **Abstract**

Background: In May 2016, firefighters from the province of Alberta, Canada deployed to a fire that engulfed the urban area of Fort McMurray. During the first days of the fire, firefighters experienced heavy smoke exposures during greatly extended work shifts. Urinary samples were collected post-deployment from three fire services for estimation of 1-hydroxypyrene (1-HP) concentration, reflecting exposure to polycyclic aromatic hydrocarbons (PAHs), to determine the effects of respiratory protective equipment (RPE) and skin hygiene in reducing internal dose.

Results: 1-HP was detected in 71.0% of 62 samples by LC-MS/MS and 98.4% by GC-MS, with good mutual agreement between the methods. In 171 post-fire samples, 1-HP corrected for creatinine was related to current cigarette smoking and recent barbeque. Among those with samples collected within 48 h, urinary 1-HP was correlated with estimated exposure ( $r = 0.53$ ,  $P < 0.001$ ). In those with only one rotation before urine sample collection, no effect was seen of RPE use but 1-HP was significantly lower ( $P = 0.003$ ) in those with those with a high score on the SEMI scale, indicating better access to factors mitigating skin absorption.

## **Exposure and Absorption of PAHs in Wildland Firefighters: A Field Study with Pilot Interventions**

Nicola Cherry, Jean-Michel Galarneau, David Kinniburgh, Bernadette Quemerais, Sylvia Tiu and Xu Zhang

Division of Preventive Medicine, University of Alberta, 8303-112 Street, Edmonton, Alberta T6G 2T4, Canada;

Alberta Centre for Toxicology, University of Calgary, 3330 Hospital Drive, Calgary, Alberta T2N 4N15, Canada

Submitted 21 January 2020; revised 29 May 2020; editorial decision 2 June 2020; revised version accepted 4 June 2020.

### **Abstract**

**Objectives:** There is limited knowledge of exposure to polycyclic aromatic hydrocarbons (PAHs) in wildland firefighters, or of the effectiveness of interventions to reduce this. This study of wildland firefighters assessed whether PAHs were present and considered respiratory protection and enhanced skin hygiene as possible interventions.

**Conclusions:** This study provided evidence of PAHs in the air and on the skin of many, but not all, fire crew. Absorbed PAHs, reflected in 1-HP in urine, increased over the shift. Results from the pilot interventions suggest that enhanced skin hygiene would reduce absorption post fire where PAHs had been accumulated on the skin, and that masks could be effective in reducing PAH inhalation exposure. Interventions to reduce PAH absorption are supported by the pilot work reported here and warrant further evaluation across a full fire season.

## **5. Discussion of Board Staff Proposal (Discussion Draft)**

The **Chair** stated that when section 3410 was first drafted, NFPA 1877 was not published yet. Section 3410 was created through the advisory committee process. Now, NFPA released the very first edition of NFPA 1877. NFPA 1877 is the corresponding NFPA standard to 1851 for wildland fighting.

The **Chair** asked the committee if NFPA 1877 should be adopted in place of the existing section 3410?

**LA County Fire Department** representative belonging to Type 1 Engine Company stated that their engine responds to wildland fires. On firsthand account, a firefighter typically goes through 3 to 4 sets of personal protective clothing every year. Tracking a gear belonging a firefighter over a 3 year period that would be 9 to 12 sets of gear. If you try to track down by lot number, which makes no difference to anyone, because it's just a generalized number, or if you track it by serial number, it would have some traceability, or date of manufacture, so it means something to the database. If I am trying to track it and I compound that by 3,000, then he is looking at tracking 30,000 garments over a 3 year period. He is not sure if it is feasible. If the garment is damaged, shouldn't it be discarded and be considered a consumable instead of

the tracking.

**Alameda County Fire Department** does not disagree with LA County Fire's comment. Structural gloves and hoods are difficult to track and consumable, the same with wildland helmets, shrouds, gloves, because they are not required to have serial numbers to begin with. Alameda County tracks coats, shirts, and pants, but serial numbers are not required on wildland boots.

**LA County Fire Department** stated that in NFPA 1877, there is a section on tracking. It only talks about having a lot number, serial number, and the date of manufacture. It doesn't talk about being assigned to be a person. In reading the text, of course we are going to track that, we bought it that way. It doesn't talk about being assigned to a person or group. It is unclear when it exits the inventory unless there is a condemn report that the PPC is no longer in use. I just don't know how we are going to track 30,000 garments in 3 years.

[NFPA 1877, 2022 edition](#)

[4.3.1. The organization shall compile and maintain records on their wildland firefighting PPE.](#)

[4.3.2 At least the following records shall be kept for each PPE](#)

[\(1\) Manufacturer and model name or design](#)

[\(2\) Manufacturer's identification, number, or lot number or serial number](#)

[\(3\) Month and year of manufacturer](#)

**Sacramento Metropolitan Fire Department** suggested to continue the discussion where we are with the NFPA requirements. Members are not opposed to washing and inspecting. The big issue is tracking. Sacramento Metropolitan recommends identifying the major issues in 1877 and the committee could rectify those with wording. Attempting to build an entire standard will take more time and work than what we can do.

**Alameda County Fire Department** suggested adopting NFPA 1877 with some modifications.

The **Chair** asked if the committee read the NFPA 1877 standard?

The **Chair** asked members to state the sections of the NFPA they think need to be modified in the next meeting. The committee should ponder service life, training, and recordkeeping.

The Chair asked what is the ratio of the number of showers to the number of firefighters, so that the firefighter can properly decontaminate.

**Cal Fire** stated they have different types of trailers that they bring. Some have 20 head, or 30 head of Type I or Type III shower units. It depends on the complexity and the size of the incident. Cal Fire will have the appropriate number of showers to meet the need or demand for the shifts. It depends on the length of the shift. Firefighters may have the opportunity to stay in hotels.

**Alameda County Fire Department** stated that there is a laundry requirement to get their firefighter PPE washed. If the state adopts NFPA 1877 and then the entity washing the clothing must be a verified ISP.

**Cal Fire** stated that NFPA 1877 requires organizations to provide the means for the PPE to be washed per manufacturer's instructions. There is no requirement that the laundry be done by a verified ISP. In their contract, they require that the machine must be dedicated to washing PPE.

The **Chair** stated that if we adopt NFPA 1877, PPE cannot be washed at home. The slides that were reviewed earlier show that washing PPE at home happens.

**LA County** stated they stay at spike camp, not necessarily a base camp. If firefighters are going to be required to go to base camp, then more resources would be needed. It wouldn't make sense to drive just to get laundry.

The **Chair** stated that not being able to have the facilities to launder is a reality. The Chair doesn't know if an extra set is provided.

**LA County** stated that in camp, there is an area called "Supply", which is funded by the Feds or State. If firefighters needed new pants because they were burned, they will not be getting the same type of pants. It's going to be different from their uniform.

**Alameda County Fire Department** stated that this is part of the complexity of tracking wildland gear.

An unidentifiable commenter stated that the proposal should state that these are best practices, because these firefighters are in the field for days at the time. They are just happy to get some sleep, let alone get some gear washed.

**Cal Fire** suggested adjustments on laundering requirements when the new requirements become effective. Load carrying equipment and shelter are listed with the other elements of the PPE. There is no expiration date on the fire shelters. Those two items need to be removed for not having a lifespan.

The **Chair** replied section 3410 (f)(1) as applying to garments.

**Cal Fire** asked for clarification as to what is included as protective ensemble.

**Cal Fire** asked if web gear and shelter are excluded from garments.

The **Chair** replied yes.

A question was asked if a California firefighter fighting fires in another state is still under the requirements of Title 8.

### **Action Item**

The Chair will look into the question and reply at a later time.

**Cal Fire** stated that on the flip side of the question an exception was written to exempt fire fighters from other states from the California rules regarding PPE.

#### §3401. Application

(a) These Orders establish minimum requirements for personal protective clothing and equipment for fire fighters when exposed to the hazards of fire fighting activity, and take precedence over any other Safety Order with which they are inconsistent.

Sections 3402.1, 3402.3, 3403, 3404, 3405, 3406, 3407, 3408, and 3409, inclusive, apply to structural and proximity fire fighting as defined in Section 3402. Sections 3402.2, 3410, and 3410.1 apply to wildland fire fighting.

Exception to section 3401(a): The requirements of these orders are not applicable to fire fighters from other states of the United States or another country rendering temporary fire suppression assistance during a wildfire event.

Section 3410.1 is for in-service protective ensembles.

The **Chair** stated that given the fact that the 10 year retirement hasn't been decided yet, then an edition cannot be specified.

**Alameda County** asked the hypothetical question, what if the protective clothing was manufactured in 1999 and is nowhere near the specifications of the current 1977 edition, will those be required to be retired.

The **Chair** replied that based on existing rules, because they are over 10 years old, then they would have to be retired. For the next edition, that needs to be determined.

### **Section 3411. Private Fire Brigades**

The **Chair** stated that private fire brigades are required to follow Article 10.1, depending on the work that they are doing.

The difference between the federal standards and California standards is that the federal standards only cover private fire brigades.

**Bullard Safety** asked if helmets are still required to meet the same impact expectation as NFPA 1971. It was not clear if that would be included in the standard. If a company purchases a non-

NFPA helmet, those helmets would be getting the same test results, or will they be receiving documentation that they meet all the requirements of the NFPA 1971 standard. ANSI and Fed-OSHA have their own standard, but traditionally NFPA steps it up a little bit for additional protection. Not all fire departments use earflap or goggles per se, but they still have the helmet with a higher standard for impact test. Bullard asked for confirmation that we are not asking for that to be removed.

**Cal Fire** responded No.

The **Chair** stated that the way Chair understood the comment from Cal Fire and LA County is that the individual elements should still meet the NFPA standard, but not be bundled together.

**Bullard Safety** asked if they are asking for the option to sell them separately, but still meet the NFPA 1971 standards and proper documentation be provided, whether they purchase them separately or as a unit.

**LA County Fire Department** stated that this may be a difficult thing, because the NFPA standard is very black and white.

## **6. Discussion of Economic and Fiscal Impacts (Cost)**

The discussion on cost will need to be scheduled.

### **Action Item**

The **Chair** will send the draft cost sheet to members to ask for comments.

## **7. Scheduling of Next Meeting**

The meeting will be scheduled in November. Cal Fire reserved the room for us on November 13 and 14.

The members would like to discuss traceability, life span of the protective ensembles, laundry, number of sets needed, list of elements included in NFPA 1877, exclude load carrying equipment in the scope of NFPA 1877.

## **8. Closing Remarks**

The **Chair** asked for volunteers to help develop the proposal and agenda. Los Angeles County, Cal Fire and Alameda County volunteered.

The meeting was adjourned at 2:18 PM.

*\*Text in blue was added for clarity and context.*