

Occupational Safety and Health Standards Board

Public Meeting, Public Hearing and
Business Meeting

December 17, 2020

Via teleconference / videoconference

Board Meeting Packet

DEPARTMENT OF INDUSTRIAL RELATIONS
Occupational Safety and Health Standards Board
2520 Venture Oaks Way, Suite 350
Sacramento, CA 95833
Tel: (916) 274-5721 Fax: (916) 274-5743
www.dir.ca.gov/oshsb



MISSION STATEMENT

The mission of the Occupational Safety and Health Standards Board is to promote, adopt, and maintain reasonable and enforceable standards that will ensure a safe and healthful workplace for California workers.

December 17, 2020 at 10:00 a.m.
TELECONFERENCE AGENDA

PUBLIC MEETING AND BUSINESS MEETING
OF THE OCCUPATIONAL SAFETY AND HEALTH STANDARDS BOARD

PLEASE NOTE: In accordance with [Executive Order N-29-20](#), and [Executive Order N-33-20](#), the **PHYSICAL** meeting location has been cancelled for December.

Attend the meeting via Video-conference:

1. Go to www.webex.com
2. Select "Join"
3. Enter the meeting information: **268 984 996**
4. Enter your name and email address then click "Join Meeting"
5. Video-conference will be opened to the public at 9:50 a.m.

Attend the meeting via Teleconference:

1. Dial (844) 992-4726
2. When prompted, enter **268-984-996**
3. When prompted for an Attendee ID, press #
4. Teleconference will be opened to the public at 9:50 a.m.

Live video stream and audio stream (English and Spanish):

1. Go to <https://videobookcase.com/california/oshsb/>
2. Video stream and audio stream will launch as the meeting starts at 10:00 a.m.

Public Comment Queue:

Stakeholders who wish to comment on agenda items may submit a request to be added to the public comment queue. Please provide the following information*: 1) name; 2) affiliation; 3) comment topic; and 4) phone number (if not attending via Webex).

**Information requested is voluntary and not required to address the Board.*

In advance of the meeting: Email the requested information to OSHSB@dir.ca.gov.

During the meeting: Email the requested information to OSHSB@dir.ca.gov, request to speak via Webex "Chat" function, or dial 916-274-5721 to be placed in the queue.

NOTE: In accordance with [Executive Order N-29-20](#), Board Members will participate via Video-conference and/or Teleconference.

I. CALL TO ORDER AND INTRODUCTIONS

II. PUBLIC MEETING (Open for Public Comment)

This portion of the Public Meeting is open to any interested person to propose new or revised standards to the Board or to make any comment concerning occupational safety and health (Labor Code Section 142.2). *The Board is not permitted to take action on items that are not on the noticed agenda, but may refer items to staff for future consideration.*

This portion of the meeting is also open to any person who wishes to address the Board on any item on today's Business Meeting Agenda (Government Code Section 11125.7).

Any individual or group planning to make a presentation during the Public Meeting is requested to contact Sarah Money, Executive Assistant, or Christina Shupe, Executive Officer, at (916) 274-5721 in advance of the meeting so that any logistical concerns can be addressed.

A. PUBLIC COMMENT

B. ADJOURNMENT OF THE PUBLIC MEETING

III. BUSINESS MEETING – All matters on this Business Meeting agenda are subject to such discussion and action as the Board determines to be appropriate.

The purpose of the Business Meeting is for the Board to conduct its monthly business.

A. PROPOSED SAFETY ORDER FOR ADOPTION

1. TITLE 8: **GENERAL INDUSTRY SAFETY ORDERS**
New Section 5141.1
[Protection from Wildfire Smoke](#)

B. PROPOSED PETITION DECISION FOR ADOPTION

1. Scott Swaaley, CEO
[Petition File No. 580](#)

Petitioner requests to amend Title 8, Section 2530.43 to clarify the existing anti-restart standard as well as add current Federal OSHA language to Title 8, Section 4001 to better align with Federal OSHA requirement (1910.213(b)(3)).

C. PROPOSED VARIANCE DECISIONS FOR ADOPTION

1. [Consent Calendar](#)

D. REPORTS

1. Division Update
2. Executive Officer's Report

E. NEW BUSINESS

1. Future Agenda Items

Although any Board Member may identify a topic of interest, the Board may not substantially discuss or take action on any matter raised during the meeting that is not included on this agenda, except to decide to place the matter on the agenda of a future meeting. (Government Code Sections 11125 & 11125.7(a).)

F. CLOSED SESSION

1. Western States Petroleum Association (WSPA) v. California Occupational Safety and Health Standards Board (OSHSB), et al. United States District Court (Eastern District of California) Case No. 2:19-CV-01270; and
2. WSPA v. OSHSB, et al., County of Sacramento, CA Superior Court Case No. 34-2019-00260210.
3. Personnel

G. RETURN TO OPEN SESSION

1. Report from Closed Session

H. ADJOURNMENT OF THE BUSINESS MEETING

Next Meeting: January 21, 2021
Teleconference and Video-conference
(In accordance with Executive Orders [N-29-20](#) and [N-33-20](#))
10:00 a.m.

CLOSED SESSION

1. If necessary, consideration of personnel matters. (Government Code section 11126(a)(1)).
2. If necessary, consideration of pending litigation pursuant to Government Code section 11126(e)(1).

PUBLIC COMMENT

In addition to public comment during Public Hearings, the Occupational Safety and Health Standards Board (Board) affords an opportunity to members of the public to address the Board on items of interest that are either on the Business Meeting agenda, or within the Board's jurisdiction but are not on the noticed agenda, during the Public Meeting. The Board is not permitted to take action on items that are not on the noticed agenda, but may refer items to staff for future consideration. The Board reserves the right to limit the time for speakers.

DISABILITY ACCOMMODATION NOTICE

Disability accommodation is available upon request. Any person with a disability requiring an accommodation, auxiliary aid or service, or a modification of policies or procedures to ensure effective communication and access to the public hearings/meetings of the Occupational Safety and Health Standards Board should contact the Disability Accommodation Coordinator at (916) 274-5721 or the state-wide Disability Accommodation Coordinator at 1-866-326-1616 (toll free). The state-wide Coordinator can also be reached through the California Relay Service, by dialing 711 or 1-800-735-2929 (TTY) or 1-800-855-3000 (TTY-Spanish).

Accommodations can include modifications of policies or procedures or provision of auxiliary aids or services. Accommodations include, but are not limited to, an Assistive Listening System (ALS), a Computer-Aided Transcription System or Communication Access Realtime Translation (CART), a sign-language interpreter, documents in Braille, large print or on computer disk, and audio cassette recording. Accommodation requests should be made as soon as possible. Requests for an ALS or CART should be made no later than five (5) days before the meeting.

TRANSLATION

Requests for translation services should be made no later than five (5) days before the meeting.

NOTE: Written comments may be emailed directly to oshsb@dir.ca.gov no later than 5:00 p.m. on the Tuesday prior to a scheduled Board Meeting.

Under Government Code section 11123, subdivision (a), all meetings of a state body are open and public, and all persons are permitted to attend any meeting of a state body, except as otherwise provided in that article. The Board Chair may adopt reasonable time limits for public comments in order to ensure that the purpose of public discussion is carried out. (Gov. Code, §11125.7, subd. (b).)

Pursuant to Executive Orders N-29-20 and N-35-20, certain provisions of the Bagley-Keene Open Meeting Act are suspended due to a State of Emergency in response to the COVID-19 pandemic. Consistent with the Executive Orders, this meeting of the Occupational Safety and Health

Standards Board will be conducted remotely via video/teleconference only. None of the locations from which the Board Members will participate will be open to the public. Members of the public who wish to participate in the meeting may do so via livestream on our website at <https://videobookcase.com/california/oshsb/>. The video recording and transcript of this meeting will be posted on our website as soon as practicable.

For questions regarding this meeting, please call (916) 274-5721.

DEPARTMENT OF INDUSTRIAL RELATIONS
Occupational Safety and Health Standards Board
2520 Venture Oaks Way, Suite 350
Sacramento, CA 95833
Tel: (916) 274-5721 Fax: (916) 274-5743
www.dir.ca.gov/oshsb



NOTICE OF PUBLIC MEETING AND BUSINESS MEETING
OF THE OCCUPATIONAL SAFETY AND HEALTH STANDARDS BOARD

Pursuant to Government Code Section 11346.4 and the provisions of Labor Code Sections 142.1, 142.2, 142.3, 142.4, and 144.6, the Occupational Safety and Health Standards Board of the State of California has set the time and place for a Public Meeting and Business Meeting:

PLEASE NOTE: In accordance with Executive Order N-29-20, and Executive Order N-33-20, the PHYSICAL meeting location has been cancelled for December.

PUBLIC MEETING: On **December 17, 2020**, at 10:00 a.m. via the following:

- Video-conference at www.webex.com (meeting ID 268 984 996)
- Teleconference at (844) 992-4726 (Access code 268 984 996)
- Live video stream and audio stream (English and Spanish) at <https://videobookcase.com/california/oshsb/>

At the Public Meeting, the Board will make time available to receive comments or proposals from interested persons on any item concerning occupational safety and health.

BUSINESS MEETING: On **December 17, 2020**, at 10:00 a.m. via the following:

- Video-conference at www.webex.com (meeting ID 268 984 996)
- Teleconference at (844) 992-4726 (Access code 268 984 996)
- Live video stream and audio stream (English and Spanish) at <https://videobookcase.com/california/oshsb/>

At the Business Meeting, the Board will conduct its monthly business.

DISABILITY ACCOMMODATION NOTICE: Disability accommodation is available upon request. Any person with a disability requiring an accommodation, auxiliary aid or service, or a modification of policies or procedures to ensure effective communication and access to the public hearings/meetings of the Occupational Safety and Health Standards Board should contact the Disability Accommodation Coordinator at (916) 274-5721 or the state-wide Disability Accommodation Coordinator at 1-866-326-1616 (toll free). The state-wide Coordinator can also be reached through the California Relay Service, by dialing 711 or 1-800-735-2929 (TTY) or 1-800-855-3000 (TTY-Spanish).

Accommodations can include modifications of policies or procedures or provision of auxiliary aids or services. Accommodations include, but are not limited to, an Assistive Listening System (ALS), a Computer-Aided Transcription System or Communication Access Realtime Translation (CART), a sign-language interpreter, documents in Braille, large print or on computer disk, and audio cassette recording. Accommodation requests should be made as soon as possible. Requests for an ALS or CART should be made no later than five (5) days before the hearing.

OCCUPATIONAL SAFETY AND HEALTH
STANDARDS BOARD

A handwritten signature in black ink, appearing to read "Dave Thomas".

DAVE THOMAS, Chairman

Occupational Safety and Health Standards Board

Business Meeting

Occupational Safety and Health Standards Board

Business Meeting Standards for Adoption

TITLE 8

GENERAL INDUSTRY SAFETY ORDERS

NEW SECTION 5141.1

PROTECTION FROM WILDFIRE SMOKE

MOVED, That the following resolution be adopted:

WHEREAS, On April 3, 2020, the Occupational Safety and Health Standards Board, pursuant to Government Code Section 11346.4, fixed the time and place for a Public Hearing to consider the revisions to Title 8, General Industry Safety Orders, New Section 5141.1, Protection from Wildfire Smoke.

WHEREAS, Such Public Hearing was held via teleconference and videoconference in Sacramento, California, on May 21, 2020, and there are now before the Occupational Safety and Health Standards Board the proposed revisions to Title 8, General Industry Safety Orders, New Section 5141.1, Protection from Wildfire Smoke; therefore, be it

RESOLVED By the Occupational Safety and Health Standards Board in regular meeting held via teleconference and videoconference in Sacramento, California, on December 17, 2020, that the proposed revisions to Title 8, General Industry Safety Orders, New Section 5141.1, Protection from Wildfire Smoke, be adopted.

RESOLVED That the Occupational Safety and Health Standards Board shall file with the Office of Administrative Law a sufficient number of copies of said filing documents and a copy of the rulemaking file for use by the Office of Administrative Law.

OCCUPATIONAL SAFETY AND HEALTH
STANDARDS BOARD

DAVE THOMAS, CHAIRMAN

Certified As A Regulation
Of the Occupational Safety
And Health Standards Board

BY: _____
Christina Shupe, Executive Officer

DATED: December 17, 2020

**STANDARDS PRESENTATION
TO
CALIFORNIA OCCUPATIONAL SAFETY AND HEALTH STANDARDS BOARD**

TITLE 8, DIVISION 1, CHAPTER 4

Subchapter 7. General Industry Safety Orders
Group 16. Control of Hazardous Substances
Article 107. Dusts, Fumes, Mists, Vapors and Gases

Add new Section 5141.1 to read:

§5141.1. Protection from Wildfire Smoke.

(a) Scope.

(1) This section applies to workplaces where:

- (A) The current Air Quality Index (current AQI) for PM_{2.5} is 151 or greater, regardless of the AQI for other pollutants; and
- (B) The employer should reasonably anticipate that employees may be exposed to wildfire smoke.

(2) The following workplaces and operations are exempt from this section:

- (A) Enclosed buildings or structures in which the air is filtered by a mechanical ventilation system and the employer ensures that windows, doors, bays, and other openings are kept closed, except when it is necessary to open doors to enter or exit.
- (B) Enclosed vehicles in which the air is filtered by a cabin air filter and the employer ensures that windows, doors, and other openings are kept closed, except when it is necessary to open doors to enter or exit the vehicle.
- (C) The employer demonstrates that the concentration of PM_{2.5} in the air does not exceed a concentration that corresponds to a current AQI of 151 or greater by measuring PM_{2.5} levels at the worksite in accordance with Appendix A.
- (D) Employees exposed to a current AQI for PM_{2.5} of 151 or greater for a total of one hour or less during a shift.
- (E) Firefighters engaged in wildland firefighting.

(3) For workplaces covered by this section, an employer that complies with this section will be considered compliant with sections 5141 and 5155 for the limited purpose of exposures to a current AQI for PM_{2.5} of 151 or greater from wildfire smoke.

**STANDARDS PRESENTATION
TO
CALIFORNIA OCCUPATIONAL SAFETY AND HEALTH STANDARDS BOARD**

TITLE 8, DIVISION 1, CHAPTER 4

(b) Definitions.

Current Air Quality Index (Current AQI). The method used by the U.S. Environmental Protection Agency (U.S. EPA) to report air quality on a real-time basis. Current AQI is also referred to as the “NowCast,” and represents data collected over time periods of varying length in order to reflect present conditions as accurately as possible.

The current AQI is divided into six categories as shown in the table below, adapted from Table 2 of Title 40 Code of Federal Regulations, Part 58, Appendix G.

<u>Air Quality Index (AQI) Categories for PM2.5</u>	<u>Levels of Health Concern</u>
<u>0 to 50</u>	<u>Good</u>
<u>51 to 100</u>	<u>Moderate</u>
<u>101 to 150</u>	<u>Unhealthy for Sensitive Groups</u>
<u>151 to 200</u>	<u>Unhealthy</u>
<u>201 to 300</u>	<u>Very Unhealthy</u>
<u>301 to 500</u>	<u>Hazardous</u>

NIOSH. The National Institute for Occupational Safety and Health of the U.S. Centers for Disease Control and Prevention. NIOSH tests and approves respirators for use in the workplace.

PM2.5. Solid particles and liquid droplets suspended in air, known as particulate matter, with an aerodynamic diameter of 2.5 micrometers or smaller.

Wildfire Smoke. Emissions from fires in “wildlands,” as defined in Title 8, section 3402, or in adjacent developed areas.

(c) Identification of harmful exposures. The employer shall determine employee exposure to PM2.5 for worksites covered by this section at the start of each shift and periodically thereafter, as needed to protect the health of employees, by any of the following methods:

(1) Check AQI forecasts and the current AQI for PM2.5 from any of the following websites: U.S. EPA AirNow, the Interagency Wildland Fire Air Quality Response Program, the U.S Forest Service, the California Air Resources Board, the local air pollution control district, or the local air quality management district; or

(2) Obtain AQI forecasts and the current AQI for PM2.5 directly from the U.S. EPA, the Interagency Wildland Fire Air Quality Response Program, the U.S. Forest Service, the California Air Resources Board, the local air pollution control district, or the local air quality management district by telephone, email, text, or other effective method; or

**STANDARDS PRESENTATION
TO
CALIFORNIA OCCUPATIONAL SAFETY AND HEALTH STANDARDS BOARD**

TITLE 8, DIVISION 1, CHAPTER 4

(3) Measure PM2.5 levels at the worksite and convert the PM2.5 levels to the corresponding AQI in accordance with Appendix A.

EXCEPTION: Subsection (c) does not apply if:

1. The employer assumes the current AQI for PM2.5 is greater than 500 and complies with subsection (f) using that assumption; or
2. In an emergency subject to subsection (f)(4), the employer assumes the current AQI for PM2.5 is 151 or greater and complies with subsection (f)(3)(A) using that assumption.

(d) Communication. As required by section 3203, the employer shall establish and implement a system for communicating wildfire smoke hazards in a language and manner readily understandable by employees, including provisions designed to encourage employees to inform the employer of wildfire smoke hazards at the worksite without fear of reprisal. The system shall include effective procedures for:

(1) Informing employees of:

- (A) The current AQI for PM2.5 as identified in subsection (c); and
- (B) Protective measures available to employees to reduce their wildfire smoke exposures.

(2) Encouraging employees to inform the employer if any of the following occurs:

- (A) Worsening air quality.
- (B) Adverse symptoms that may be the result of wildfire smoke exposure such as asthma attacks, difficulty breathing, and chest pain.

(e) Training and instruction. As required by section 3203, the employer shall provide employees with effective training and instruction in a language and manner readily understandable by employees. At a minimum, this shall contain the information in Appendix B.

(f) Control of harmful exposures to employees.

(1) Engineering Controls. The employer shall reduce employee exposure to PM2.5 to less than a current AQI of 151 by engineering controls whenever feasible, for instance by providing enclosed buildings, structures, or vehicles where the air is filtered. If engineering controls are not sufficient to reduce exposure to PM2.5 to less than a current AQI of 151, then the employer shall reduce employee exposures to the extent feasible.

**STANDARDS PRESENTATION
TO
CALIFORNIA OCCUPATIONAL SAFETY AND HEALTH STANDARDS BOARD**

TITLE 8, DIVISION 1, CHAPTER 4

(2) Administrative Controls. Whenever engineering controls are not feasible or do not reduce employee exposures to PM_{2.5} to less than a current AQI of 151, the employer shall implement administrative controls, if practicable, such as relocating work to a location where the current AQI for PM_{2.5} is lower, changing work schedules, reducing work intensity, or providing additional rest periods.

(3) Control by Respiratory Protective Equipment.

(A) Where the current AQI for PM_{2.5} is equal to or greater than 151, but does not exceed 500, the employer shall provide a sufficient number of respirators to all employees for voluntary use in accordance with section 5144 and encourage employees to use respirators. Respirators shall be NIOSH-approved devices that effectively protect the wearers from inhalation of PM_{2.5}, such as N95 filtering facepiece respirators. Respirators shall be cleaned or replaced as appropriate, stored, and maintained, so that they do not present a health hazard to users. Employers shall use Appendix B to this section in lieu of Appendix D to section 5144 for training regarding voluntary use of respirators.

NOTE: For those employees whose only use of respirators involves the voluntary use of filtering facepieces, such as N95 respirators, fit testing and medical evaluations are not required by section 5144.

(B) Where the current AQI for PM_{2.5} exceeds 500, respirator use is required. Respirators shall be used in accordance with section 5144. The employer shall provide respirators with an assigned protection factor, as listed in section 5144, such that the PM_{2.5} levels inside the respirator correspond to an AQI less than 151.

(4) Emergencies. The following applies to emergency operations, including rescue and evacuation. The following also applies to utilities, communications, and medical operations that are directly aiding emergency operations or firefighting operations.

(A) The employer shall comply with subsection (f)(3)(A) for all AQI levels equal to or greater than 151.

(B) Subsections (f)(1), (f)(2), and (f)(3)(B) do not apply.

NOTE: Authority cited: Section 142.3, Labor Code. Reference: Sections 142.3 and 144.6, Labor Code.

STANDARDS PRESENTATION
TO
CALIFORNIA OCCUPATIONAL SAFETY AND HEALTH STANDARDS BOARD

TITLE 8, DIVISION 1, CHAPTER 4

Add new Appendix A to new Section 5141.1 to read:

Appendix A to Section 5141.1. Protection from Wildfire Smoke
Measuring PM_{2.5} Levels at the Worksite
(Mandatory if an Employer Monitors with a Direct Reading Instrument)

- (a) An employer may use a direct-reading particulate monitor to determine PM_{2.5} levels for section 5141.1, if the employer can demonstrate that it has complied with this appendix and selected a monitor that:
- (1) Does not underestimate employee exposures to wildfire smoke; or
 - (2) May underestimate wildfire smoke exposures, but the employer has obtained information on the possible error of the monitor from the manufacturer and has accounted for the error of the monitor when determining exposures to PM_{2.5} to ensure that employee exposure levels are not underestimated.
- (b) The monitor shall be designed and manufactured to measure the concentration of airborne particle sizes ranging from an aerodynamic diameter of 0.3 micrometers or less up to and including 2.5 micrometers ($\leq 0.3\mu\text{m}$ to $2.5\mu\text{m}$).
- (c) The employer shall ensure that the monitor and all necessary monitor accessories are calibrated, maintained, and used, in accordance with the manufacturer's instructions for accurately measuring particles with an aerodynamic diameter of 0.3 micrometers or less up to and including 2.5 micrometers ($\leq 0.3\mu\text{m}$ to $2.5\mu\text{m}$). The employer may use an air monitor that measures particles less than 0.3 micrometers to greater than 2.5 micrometers ($< 0.3\mu\text{m}$ to $> 2.5\mu\text{m}$) if the employer treats the result as the PM_{2.5} level.
- (d) The employer shall use the following table to convert the PM_{2.5} concentration to the AQI for PM_{2.5}.

<u>PM_{2.5} in Micrograms per Cubic Meter ($\mu\text{g}/\text{m}^3$)</u>	<u>Air Quality Index (AQI) Categories for PM_{2.5}</u>
<u>0 to 12.0</u>	<u>0 to 50</u>
<u>12.1 to 35.4</u>	<u>51 to 100</u>
<u>35.5 to 55.4</u>	<u>101 to 150</u>
<u>55.5 to 150.4</u>	<u>151 to 200</u>
<u>150.5 to 250.4</u>	<u>201 to 300</u>
<u>250.5 to 500.4</u>	<u>301 to 500</u>

**STANDARDS PRESENTATION
TO
CALIFORNIA OCCUPATIONAL SAFETY AND HEALTH STANDARDS BOARD**

TITLE 8, DIVISION 1, CHAPTER 4

- (e) The person supervising, directing, or evaluating workplace monitoring for PM2.5 shall have the training or experience necessary to apply this section and to ensure the correct use of the monitor and the interpretation of the results, so that exposures are not underestimated.

NOTE: Authority cited: Section 142.3, Labor Code. Reference: Sections 142.3 and 144.6, Labor Code.

STANDARDS PRESENTATION
TO
CALIFORNIA OCCUPATIONAL SAFETY AND HEALTH STANDARDS BOARD

TITLE 8, DIVISION 1, CHAPTER 4

Add new Appendix B to new Section 5141.1 to read:

**Appendix B to Section 5141.1. Protection from Wildfire Smoke
Information to Be Provided to Employees (Mandatory)**

(a) The health effects of wildfire smoke.

Although there are many hazardous chemicals in wildfire smoke, the main harmful pollutant for people who are not very close to the fire is “particulate matter,” the tiny particles suspended in the air.

Particulate matter can irritate the lungs and cause persistent coughing, phlegm, wheezing, or difficulty breathing. Particulate matter can also cause more serious problems, such as reduced lung function, bronchitis, worsening of asthma, heart failure, and early death.

People over 65 and people who already have heart and lung problems are the most likely to suffer from serious health effects.

The smallest—and usually the most harmful—particulate matter is called PM2.5 because it has a diameter of 2.5 micrometers or smaller.

(b) The right to obtain medical treatment without fear of reprisal.

Employers shall allow employees who show signs of injury or illness due to wildfire smoke exposure to seek medical treatment, and may not punish affected employees for seeking such treatment. Employers shall also have effective provisions made in advance for prompt medical treatment of employees in the event of serious injury or illness caused by wildfire smoke exposure.

(c) How employees can obtain the current Air Quality Index (AQI) for PM2.5.

Various government agencies monitor the air at locations throughout California and report the current AQI for those places. The AQI is a measurement of how polluted the air is. An AQI over 100 is unhealthy for sensitive people and an AQI over 150 is unhealthy for everyone.

Although there are AQIs for several pollutants, Title 8, section 5141.1 only uses the AQI for PM2.5.

The easiest way to find the current and forecasted AQI for PM2.5 is to go to [AirNow.gov](https://www.airnow.gov) and enter the zip code, town, or city where you will be working. The current AQI is also available at [fire.AirNow.gov](https://www.fire.airnow.gov), an interactive map which also provides information about some fires and smoke plumes. You can also visit the website of your local air district. Employees who do not have access to the

**STANDARDS PRESENTATION
TO
CALIFORNIA OCCUPATIONAL SAFETY AND HEALTH STANDARDS BOARD**

TITLE 8, DIVISION 1, CHAPTER 4

internet can contact their employer for the current AQI. The EPA website enviroflash.info can transmit daily and forecasted AQIs by text or email for particular cities or zip codes.

(d) The requirements of Title 8, section 5141.1.

If employees may be exposed to wildfire smoke, then the employer is required to find out the current AQI applicable to the worksite. If the current AQI for PM2.5 is 151 or more, the employer is required to:

- (1) Check the current AQI at the start of each shift and periodically thereafter.
- (2) Provide training to employees.
- (3) Lower employee exposures.
- (4) Provide respirators and encourage their use.

(e) The employer's two-way communications system.

Employers shall alert employees when the air quality is harmful and what protective measures are available to employees.

Employers shall encourage employees to inform their employers if they notice the air quality is getting worse, or if they are suffering from any symptoms due to the air quality, without fear of reprisal.

The employer's communication system is:

(f) The employer's methods to protect employees from wildfire smoke.

Employers shall take action to protect employees from PM2.5 when the current AQI for PM2.5 is 151 or greater. Examples of protective methods include:

- (1) Locating work in enclosed structures or vehicles where the air is filtered.
- (2) Changing procedures such as moving workers to a place with a lower current AQI for PM2.5.
- (3) Reducing work time in areas with unfiltered air.
- (4) Increasing rest time and frequency, and providing a rest area with filtered air.
- (5) Reducing the physical intensity of the work to help lower the breathing and heart rates.

**STANDARDS PRESENTATION
TO
CALIFORNIA OCCUPATIONAL SAFETY AND HEALTH STANDARDS BOARD**

TITLE 8, DIVISION 1, CHAPTER 4

The employer's control system at this worksite is:

(g) The importance, limitations, and benefits of using a respirator when exposed to wildfire smoke.

Respirators can be an effective way to protect employee health by reducing exposure to wildfire smoke, when they are properly selected and worn. Respirator use can be beneficial even when the AQI for PM2.5 is less than 151, to provide additional protection.

When the current AQI for PM2.5 is 151 or greater, employers shall provide their workers with proper respirators for voluntary use. If the current AQI is greater than 500, respirator use is required, except in emergencies.

A respirator should be used properly and kept clean.

The following precautions shall be taken:

(1) Employers shall select respirators certified for protection against the specific air contaminants at the workplace. Respirators must be certified by NIOSH, the National Institute for Occupational Safety and Health of the U.S. Center for Disease Control and Prevention. A label or statement of certification should appear on the respirator or respirator packaging. It will list what the respirator is designed for (particulates, for example).

Surgical masks or items worn over the nose and mouth such as scarves, T-shirts, and bandannas will not provide protection against wildfire smoke. An N95 filtering facepiece respirator, shown in the image below, is the minimum level of protection for wildfire smoke.

(2) Read and understand the manufacturer's instructions on the respirator's use, care, and replacement, along with any warnings regarding the respirator's limitations. If the respirator is reusable, read and understand the instructions for cleaning and maintenance. The manufacturer's instructions must be followed except for medical evaluations, fit testing, and shaving of facial hair, which are recommended but not required for voluntary use of filtering facepiece respirators.

(3) Do not wear respirators in areas where the air contains contaminants for which the respirator is not designed. A respirator designed to filter particles will not protect employees against gases or vapors, and it will not supply oxygen.

(4) Employees should keep track of their respirator so that they do not mistakenly use someone else's respirator.

STANDARDS PRESENTATION
TO
CALIFORNIA OCCUPATIONAL SAFETY AND HEALTH STANDARDS BOARD

TITLE 8, DIVISION 1, CHAPTER 4

(5) Employees who have a heart or lung problem should ask their health care provider before using a respirator.

(h) How to properly put on and use the respirators provided by the employer.

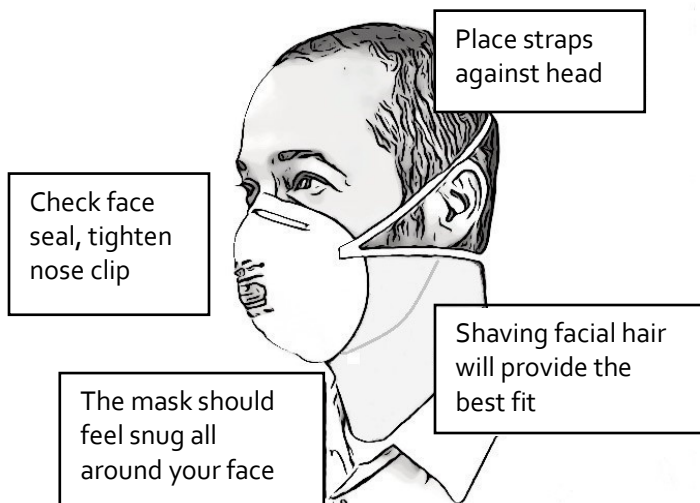
To get the most protection from a respirator, there must be a tight seal around the face. A respirator will provide much less protection if facial hair interferes with the seal. Loose-fitting powered air purifying respirators may be worn by people with facial hair since they do not have seals that are affected by facial hair.

The proper way to put on a respirator depends on the type and model of the respirator.

For those who use an N95 or other filtering facepiece respirator mask that is made of filter material:

(1) Place the mask over the nose and under the chin, with one strap placed below the ears and one strap above.

(2) Pinch the metal part (if there is one) of the respirator over the top of the nose so it fits securely.



Drawing Showing Proper Fitting of a Filtering Facepiece Respirator (shaving is not required for voluntary respirator use)

**STANDARDS PRESENTATION
TO
CALIFORNIA OCCUPATIONAL SAFETY AND HEALTH STANDARDS BOARD**

TITLE 8, DIVISION 1, CHAPTER 4

For a respirator that relies on a tight seal to the face, check how well it seals to the face by following the manufacturer's instructions for user seal checks. Adjust the respirator if air leaks between the seal and the face. The more air leaks under the seal, the less protection the user receives.

Respirator filters should be replaced if they get damaged, deformed, dirty, or difficult to breathe through. Filtering facepiece respirators are disposable respirators that cannot be cleaned or disinfected. A best practice is to replace filtering facepiece respirators at the beginning of each shift.

If you have symptoms such as difficulty breathing, dizziness, or nausea, get medical help immediately.

NOTE: Authority cited: Section 142.3, Labor Code. Reference: Sections 142.3 and 144.6, Labor Code.

DEPARTMENT OF INDUSTRIAL RELATIONS
Occupational Safety and Health Standards Board
2520 Venture Oaks Way, Suite 350
Sacramento, CA 95833
Tel: (916) 274-5721 Fax: (916) 274-5743
Website address www.dir.ca.gov/oshsb



FINAL STATEMENT OF REASONS

CALIFORNIA CODE OF REGULATIONS

TITLE 8: New Section 5141.1
of the General Industry Safety Orders

Protection from Wildfire Smoke

MODIFICATIONS AND RESPONSE TO COMMENTS RESULTING FROM THE 45-DAY PUBLIC COMMENT PERIOD

The proposed section 5141.1 was modified as follows, as the result of public comments and/or evaluation by Board or Division staff.

Subsections (c)(1) and (2) were amended to better identify the government agencies from which air quality information can be acquired.

Appendix B subsection (c) was amended to better identify and describe websites from which air quality information can be acquired.

Appendix B, subsections (g)(2) and (h) were amended to ensure that the Appendix was clear that only reusable respirators should be cleaned and maintained for reuse; disposable respirators should be thrown away and replaced according to manufacturers' recommendations.

Modifications to the Economic Impact Analysis/Assessment

As described in more detail below, the estimated per-employee cost has been increased from \$17.19, as stated in the Initial Statement of Reasons (ISOR), to \$41.09 in the first year and \$28.78 in subsequent years. Thus, using the same calculations regarding the number of employees per business as described in the ISOR, a small business is expected to incur a cost of \$360.77 in the first year and \$252.78 in each subsequent year. A typical business is expected to incur a cost of \$456.92 in the first year and \$320.14 in every year thereafter.

The number of employers that could possibly be covered by the proposal, even for a single day or fraction of a day, has been increased slightly from 329,797 to 330,720. This is the result of replacing the two categories "Electric Power Generation, Transmission and Distribution" and "Natural Gas Transmission," (a total of 1,289 businesses) with the overall category of "Utilities" (1,312 businesses). The estimated number of employers that might be affected by wildfire smoke in a given year would therefore be 1/3 of that number, 110,240, as explained in the ISOR.

After the ISOR was drafted, three events occurred which were not predicted at the time the original economic impact analysis was conducted: 1) the economic effects of the COVID-19 pandemic reduced the number of employees in the industries affected by the proposed regulation; 2) the extraordinary lightning storms in 2020 changed the Division’s assessment of wildfire smoke risks; and 3) N95 cost and availability were affected by the pandemic.

To address the first of these issues, the Division used projections from the California Department of Finance (DOF) to revise the number of employees per industry to reflect the expected numbers in 2021.¹ Where DOF had provided an estimated number of employees in a given NAICS category, that number was used.

However, in its original estimates, the Division used a few industry categories that were narrower than the broad categories used by DOF. Whenever sufficiently specific DOF projections were not available, the Division used 2019 annual data from EDD.² These numbers were then either increased or decreased for 2021, depending on DOF projections. For instance, in the retail sector, DOF reported about 1,661,759 employees in 2019 and projected about 1,223,119 in 2021. The Division applied the projected change in employment ($1,223,119 / 1,661,759 \approx 0.736023$) to NAICS codes within the broader retail category. Although it is true that individual sub-categories within each industry will suffer different economic consequences from the pandemic, this method provides a reasonable means of estimating, overall, the number of employees who may be covered by the proposed regulation in 2021.

Title	Total employees, 2019 annual (when used)	Source of 2021 data	Projected employees 2021	% of employees possibly covered by regulation [unchanged from Table A]	# of employees possibly covered by regulation
Mining and Logging	n/a	Used DOF projection for industry	20,267	100%	20,267

¹ State of California Department of Finance, “California Economic Forecast MR 2020-21” (tab: ANNUAL), prepared April 2020, available at http://www.dof.ca.gov/Forecasting/Economics/Eco_Forecasts_Us_Ca/

² This was updated to use annual 2019 data, the best available at the time of this writing, rather than just Q3. The following document relied upon for this rulemaking was added in the second 15-Day Notice: State of California Employment Development Department, “Industry Employment & Labor Force – by Annual Average,” dated March 27, 2020, available at [https://www.labormarketinfo.edd.ca.gov/file/indhist/cal\\$Shaw.xls](https://www.labormarketinfo.edd.ca.gov/file/indhist/cal$Shaw.xls) (Historical Annual Average Data, Not Seasonally Adjusted, California 1990-2019).

Total Farm	n/a	Used DOF projection for industry	416,554	90%	374,899
Construction	n/a	Used DOF projection for industry	634,973	85%	539,727
Manufacturing	n/a	Used DOF projection for industry	1,138,760	10%	113,876
Lumber & Other Const Materials Merch Wholesalers	24,300	Adjusted as Service Providing	21,161	25%	5,290
Automobile Dealers	131,700	Adjusted as Retail Trade	96,936	50%	48,468
Other Motor Vehicle Dealers	12,800	Adjusted as Retail Trade	9,421	50%	4,711
Auto Parts, Accessories & Tire Stores	53,000	Adjusted as Retail Trade	39,010	50%	19,505
Building Material & Garden Equip Stores	120,900	Adjusted as Retail Trade	88,987	50%	44,494
Gasoline Stations	63,300	Adjusted as Retail Trade	46,591	50%	23,296
Utilities	56,400	Adjusted as Trade, Transportation Warehousing & Utilities	45,120	75%	33,840
Air Transportation	58,600	Adjusted as & Warehousing	60,013	10%	6,001
Truck Transportation	134,400	Adjusted as Transportation & Warehousing	137,640	5%	6,882
Support Activities for Transportation	113,100	Adjusted as Transportation & Warehousing	115,827	50%	57,914
Couriers & Messengers	101,300	Adjusted as Transportation & Warehousing	103,742	50%	51,871

Warehousing & Storage	160,500	Adjusted as Transportation & Warehousing	164,370	85%	139,715
Motion Picture & Video Industries	155,300	Adjusted as Information Industry	152,169	10%	15,217
Radio & Television Broadcasting	29,600	Adjusted as Information Industry	29,003	10%	2,900
Wired Telecommunications Carriers	46,300	Adjusted as Information Industry	45,366	50%	22,683
Activities Related to Real Estate	112,400	Adjusted as Financial Activities	100,559	5%	5,028
Auto Equipment Rental & Leasing	25,600	Adjusted as Financial Activities	22,903	50%	11,452
Architectural, Engineering & Related Services	186,000	Adjusted as Professional and Business Services	154,046	5%	7,702
Facilities Support Services	13,500	Adjusted as Professional and Business Services	11,181	10%	1,118
Employment Services	475,600	Adjusted as Professional and Business Services	393,893	20%	78,779
Investigation & Security Services	151,400	Professional and Business Services	125,390	50%	62,695
Services to Buildings & Dwellings	245,900	Adjusted as Professional and Business Services	203,655	20%	40,731
Waste Management & Remediation Services	53,200	Adjusted as Professional and Business Services	44,060	50%	22,030

Other Ambulatory Health Care Services	30,200	Adjusted as Ambulatory Services	32,483	25%	8,121
Spectator Sports	16,400	Adjusted as Leisure and Hospitality	10,278	75%	7,708
Amusement Parks & Arcades	50,200	Adjusted as Leisure and Hospitality	31,460	50%	15,730
Other Amusement & Recreation Industries	159,500	Adjusted as Leisure and Hospitality	101,141	50%	50,571
Automotive Repair & Maintenance	119,700	Adjusted as Other Services	75,903	75%	56,927
Commercial & Industrial Machinery	18,800	Adjusted as Other Services	11,921	10%	1,192
TOTAL					1,901,340

Please note that the % of employees covered by the regulation, as reflected in the chart above, is unchanged since the ISOR.³

Using 2018 geographic and air quality data from the California Air Resources Board, the Division originally calculated that about 1/3 of the California population may be exposed to unhealthy levels of PM2.5 from wildfire smoke for ten days over the course of a year, under a worst-case scenario. One third of the number of private sector employees estimated above is **633,780**.

The 2018 data provided a worst-case scenario not because it was the worst possible scenario in any given year, but because it was unlikely to occur as an *annual average* estimate of smoke exposure. For instance, 2019 had far less wildfire smoke than the estimates used here.

As of this writing, the California Air Resources Board data from 2020 is both limited and preliminary. Furthermore, there is no way to predict the remainder of 2020. It appears, however, that 2020 will be a significantly worse year for wildfire smoke than 2018. It is possible that the highly unusual “dry lightning” of 2020 will remain an extremely rare occurrence, making 2018 a better benchmark than the present year. Nonetheless, in light of the 2020 season, the Division has decided to adjust its prior worst-case estimate upwards.

³ Table created by Division of Occupational Safety and Health containing NAICS codes selected, percentages applied, and results of calculations: “Determination of businesses and employees possibly covered by regulation, based on seasonally adjusted monthly average by industry, Q3 2019.” Form 399 Attachment for Certificate of Compliance of title 8 section 5141.1.

The Division cannot yet determine the proportion of the state population affected by wildfire smoke in the current year, or the number of days of such smoke. However, it is clear that there is a risk of extended smoky periods in which multiple fire complexes are burning at the same time, making containment difficult. To account for this risk, the Division has doubled its estimated number of N95s per employee per year from 10 to 20. Again, this does not mean that it is impossible for any *single* year to exceed this estimate—including 2020.

The COVID-19 crisis strained the supply of respirators in California, particularly N95s. This proposed regulation will not take effect until the winter, after the 2020 wildfire season has concluded. Thus, the economic effects of this rulemaking—including the provision of N95s for voluntary use—will largely occur in connection with the 2021 wildfire season. The supply of N95s is expected to meet demand by that time.

In September 2020, the Division researched vendors selling to the private market and found ten which had more than 100,000 N95s on hand. Two of the ten vendors had millions of N95s, with one having 18 million in U.S. warehouses as of August 2020. The Division learned that the manufacturer producing the greatest number of N95 was producing 75 million N95s per day, even though it did not produce any N95s prior to March 2020.

However, employers were still reporting disruptions to the supply chain in September 2020, so the Division has estimated that N95 prices will remain elevated in 2021.

The Division itself was recently able to acquire respirators for its own employees at a cost of \$0.95 each; this price has been used as an estimate for public employers in 2021. When the State of California ceases prioritizing certain industries/entities, as is likely to occur before 2021, private employers should also be able to acquire respirators at a similar cost. Nonetheless, given current uncertainties and supply-chain problems, the Division has estimated that private employers in non-prioritized industries may face average prices 50% above those paid by prioritized entities and has therefore estimated the average per-unit cost at \$1.425 for private employers during 2021.

In subsequent years, the price of N95s should return to normal, probably lower due to massively increased supply. However, because public comment indicated that employers felt \$0.75 per unit was too low, the Division has increased its estimated per-unit price to the highest charged by the five similarly-priced vendors described in the ISOR, \$0.81 per unit for all employers.

The estimated cost of training and use of respirators has also been increased by using a more recent statewide average wage and by increasing the estimated average number of minutes required from 20 to 25.⁴ This time estimate is intended as an average; it was increased in response to public comments suggesting that some large employers required 30 minutes to conduct training.

⁴ Statewide average wage of \$30.22 in California for Q1 2020 according to the Employment Development Department, the most recent data available as of this writing, available at <https://www.labormarketinfo.edd.ca.gov/data/oes-employment-and-wages.html#OES>.

First year, private sect of proposal , worst-case annual scenario				
Safety and Health Requirement in 5141.1	Exposed employees	Cost per employee	Annual # per employee	Cost/year
N-95 Respirator	633,780	\$1.425	20	\$18,062,730
Training and use of respirators	633,780	\$12.59		\$7,979,290
Total first year cost				\$26,042,020

Subsequent years, privatennual cost of proposal , worst-case scenario				
Safety and Health Requirement in 5141.1	Total exposed employees	Cost per employee	Annual # per employee	Cost/year
N-95 Respirator	633,780	\$0.81	20	\$10,267,236
Training and use of respirators	633,780	\$12.59		\$7,979,290
Total annual cost, 2022 and later				\$18,246,526

Modifications to the Evidence Supporting Finding of No Significant Statewide Adverse Economic Impact Directly Affecting Businesses

This section of the ISOR is correct, except that it referred to an annual cost for a typical and representative business of \$191.19. This estimate has been increased to \$320.14 annually, with a slightly higher cost of \$456.92 in 2021.

ADDITIONAL DOCUMENTS RELIED UPON FOR THE ECONOMIC IMPACT ANALYSIS/ASSESSMENT

- State of California Department of Finance, “California Economic Forecast MR 2020-21” (tab: ANNUAL), prepared April 2020, available at http://www.dof.ca.gov/Forecasting/Economics/Eco_Forecasts_Us_Ca/

This document is available for review BY APPOINTMENT Monday through Friday, from 8:00 a.m. to 4:30 p.m., at the Standards Board’s office at 2520 Venture Oaks Way, Suite 350, Sacramento, California 95833. Appointments can be scheduled via email at oshsb@dir.ca.gov or by calling (916) 274-5721.

ADDITIONAL DOCUMENTS INCORPORATED BY REFERENCE

None.

**SUMMARY AND RESPONSE TO WRITTEN AND ORAL COMMENTS
RESULTING FROM THE 45-DAY COMMENT PERIOD:**

I. Written Comments

1. Amber Rose, Area Director, on behalf of Occupational Safety and Health Administration (OSHA), U.S. Department of Labor, by written comments dated April 13, 2020.

Comment 1.1

Per the advisory opinion request made April 10, 2020, OSHA completed their review of the proposed standard; Title 8, General Industry Safety Orders, Section 5141.1, Protection from Wildfire Smoke. The proposed occupational safety and health standards does appear to be commensurate with the federal standard.

Response: The Board acknowledges OSHA's assessment that the proposed standard does appear to be commensurate with the federal standard and thanks OSHA for their comment and for participating in the rulemaking process.

2. Elizabeth Treanor, Director, on behalf of Phylmar Regulatory Roundtable – OSH Forum, by written comments dated May 12, 2020.

Comment 2.1

The commenter stated that there are times, such as the current COVID-19 pandemic, when employers are unable to procure proper respiratory protective equipment and yet must continue operations, including restoring utility and communications systems; providing essential services; or operating medical device and pharmaceutical research and manufacturing sites.

Response: The Board recognizes that COVID-19 has strained the supply of respirators in California, particularly N95s, and understands the difficulties this has imposed on both employers and employees. The Board also realizes that some entities and individuals donated respirators to health services workers early in the pandemic, and the Board commends them for their efforts.

Please note, however, that this proposed regulation—unlike the current emergency section 5141.1—will not take effect until 2021, after the 2020 wildfire season has concluded. Thus, the economic effects of *this* rulemaking—including the provision of N95s—will largely occur in connection with the 2021 wildfire season, which typically begins in the late summer or early fall. The Board expects that the supply of N95s will increase to meet or exceed demand before that time. The National Institute of Occupational Safety and Health (NIOSH) certified an additional type of such masks in June, after which Governor Newsom announced that 150 million N95s

would be shipped to the state.⁵ Since then, the State has been distributing N95s in various industries. The Division has also learned from manufacturers that they have dramatically increased production, including two vendors with multiple millions warehoused in the United States and eight others with supplies over 100,000, but respirators are being prioritized for particular industries. The Board notes that the State has proceeded with reopening and therefore expects that this prioritization will be lifted by early 2021, at which point N95s should be available to all purchasers. Of course, the Board cannot predict the course of the pandemic and acknowledges the current uncertainty. The Board has assumed that the average cost of N95s will be higher in 2021 than in subsequent years. Please see the Modifications to the Economic Impact Analysis/Assessment shown within this Final Statement of Reasons.

Comment 2.2

The commenter stated that wildfire smoke itself results from an emergency, and emergencies require greater flexibility and relief from regulatory burdens that can slow or hinder recovery efforts. The commenter requested a regulatory approach similar to 8 CCR 5141(c), which provides relief from the usual hierarchy of controls during emergencies, to better allow the use of respiratory protection, rather than minor changes to the emergency regulation.

Response: The current proposal already provides relief from the usual hierarchy of controls during emergency operations, including rescue and evacuation as well as utilities, communications, and medical operations that are directly aiding emergency operations or firefighting operations. Subsection (f)(4) addresses the commenter’s concerns by only requiring voluntary respiratory protection during emergencies, not engineering or administrative controls. The Board therefore declines to make further modifications.

Comment 2.3

The commenter stated that AQI is not an appropriate basis for an occupational health regulation, because it is not an eight-hour time-weighted average, unlike Permissible Exposure Limits (PELs), and is intended to educate the public rather than establish occupational exposure limits. Exposure limits for PM_{2.5} should be derived from health hazard exposure assessments, similar to how occupational exposure limits are determined for other regulated chemicals. The commenter requested that occupational exposure limits for PM_{2.5} be established as full shift, time-weighted averages, ceiling limits, and/or short-term exposure limits based on health hazard assessments for particulate exposures during wildfire events, where the dose is both a function of concentration and duration.

Response: The Board is not persuaded by the comment. The current Air Quality Index (AQI) is the best approach available, is widely accessible and understandable, and provides an easy method for employers to estimate employee exposures without performing complex evaluations or calculations. The AQI is intended to inform all individuals—including workers—about unhealthy air conditions. Indeed, the “Wildfire Smoke – Guide for Public Health Officials”

⁵ “Governor Newsom Announces Federal Health and Safety Certification of Life-Saving N95 Masks,” June 8, 2020, available at: <https://www.gov.ca.gov/2020/06/08/governor-newsom-announces-federal-health-and-safety-certification-of-life-saving-n95-masks/>

published by the U.S. Environmental Protection Agency (U.S. EPA) identifies workers exposed to outdoor air as an “at risk” group who should take special action when AQI levels of PM_{2.5} are above an AQI of 151. In addition, Health hazard exposure (HHE) assessments are difficult to perform in situations like wildfires because of rapidly changing conditions which can quickly invalidate previous assessments.

Comment 2.4

The commenter stated that the level at which the regulation becomes applicable should be no lower than 151 AQI for PM_{2.5}, noting that AQI PM_{2.5} levels below 150 are solely intended to convey warnings to sensitive population groups, including people who have heart or lung disease, older adults, children, and teenagers.

Response: The proposed regulation only applies to a current AQI for PM_{2.5} of 151 or greater. The commenter’s concern has already been addressed, so the Board declines to make any further amendment.

Comment 2.5

The commenter stated that there is a discrepancy between how the local air districts and EPA report AQI PM_{2.5} values, writing: “Local districts use a 24-hour rolling average and values will never be reported above 500. The EPA uses an algorithm (NowCast) and values reported may exceed 500....” The commenter expressed concern that employers will rely on and make decisions based upon an Air Pollution Control District number for AQI for PM_{2.5} which is different from that shown on EPA’s website, which could result in a citation even though the employer checked the website in good faith. The commenter also believes that it will be confusing for employers to have two different numbers for the same location.

Response: The Board is aware of a discrepancy between how some local air districts and the U.S. EPA report the current AQI for PM_{2.5} values. Current AQI is defined as the method used by the U.S. EPA to report air quality on a real-time basis. It is also known as the “NowCast,” and represents data collected over time periods of varying length in order to reflect present conditions as accurately as possible. Many local districts report the current AQI in the same manner as the U.S. EPA, often linking directly to [AirNow.gov](https://www.airnow.gov). However, some local air districts display “current AQI” in a manner that suggests that they may use a different methodology.

The proposed standard allows the employer to check or obtain the AQI forecasts and the current AQI for PM_{2.5} from the specific sources listed in subsections (c)(1) and (2) to maximize accessibility. The Board has determined that this flexibility is valuable, even though circumstances could arise in which different sources could provide slightly different information about the current AQI. This flexibility allows people to select the method most appropriate to their worksite, and to use a second method if they encounter any difficulties reaching a preferred website. An employer that checks one of the sources listed in (c)(1) and (2) to determine the current AQI for PM_{2.5} has fulfilled its obligations under that subsection, even if the source does not use the NowCast algorithm in reporting the current air quality.

Comment 2.6

The commenter sought amendment of the subsection (a)(1)(B), which states that the regulation applies, under certain specified conditions, when “[t]he employer should reasonably anticipate that employees may be exposed to wildfire smoke.” The commenter wrote that this language would seemingly always apply, given the Governor’s progress report and state of emergency with regard to wildfires. The commenter noted that wildfire smoke is unpredictable, so employers would be uncertain whether the regulation applied, and noted that industry representatives have requested that an employer be able to rely on a state or local government entity’s announcement that a wildfire emergency is underway in order for them to be covered by the regulation. The commenter suggested that the interagency [Incident Information System](#) could be used as an objective trigger for employers to determine whether PM2.5 levels are due to wildfire smoke, as that website is easy to use and more up-to-date than the [Cal/Fire website](#). The commenter proposed the following amendment:

(a)(1)(B) A federal, state or local entity has issued an advisory or announcement of a wildfire emergency and notification of when the emergency no longer exists. One example of an advisory is the federal inter-agency website at: <https://inciweb.nwcg.gov/> ~~The employer should reasonably anticipate that employees may be exposed to wildfire smoke.~~

Response: The Board disagrees about the need for a specific objective trigger to determine the presence of wildfire smoke in addition to the current AQI threshold. Reasonableness is a standard commonly used in California law, including in Title 8 regulations (see sections 3395, 3342, 5120, etc.). Although wildfires have been increasing in frequency and severity, as noted by the Governor, this does not imply that an employer can “reasonably anticipate” wildfire smoke at all times. The mere fact of being located in California does not by itself indicate that wildfire smoke can be reasonably anticipated. Furthermore, even if the Board wished to rely on an “objective trigger” for wildfire smoke, there is currently no uniform mechanism in California, or nationally, by which a public agency announces wildfire smoke conditions in a particular region.

The Board disagrees that the URL provided by the commenter should be included in the regulation, since it does not provide information about smoke or air quality. The Board agrees that some interagency resources should be included, however, and has amended subsection (c)(1) and (c)(2) to include the Interagency Wildland Fire Air Quality Response Program as a source of current AQI for PM2.5. The Board has also amended the proposed regulation to add [fire.AirNow.gov](#) to Appendix B, part (c), a website developed by the Interagency Wildland Fire Air Quality Response Program and its component agencies.

Comment 2.7

The commenter stated that it is unknown whether the regulation is triggered in cases where the PM2.5 levels are due to a structural fire, not a wildfire.

Response: The regulation is not intended to apply to the smoke from an individual, isolated structure fire, caused by reasons unrelated to any wildfire, and located exclusively outside of wildlands. The regulation can indeed apply, however, to smoke from burning structures.

Emissions from fires in wildlands and “adjacent developed areas” is addressed by the proposed regulation. For any wildfire, there is no way to distinguish between the portion of the smoke that derives from burned wildlands and the portion that results from burned structures. Because of the rapid growth of the wildland-urban interface, and the speed at which a fire can spread, wildfires may burn unpopulated or sparsely populated areas but may also burn adjacent developments. The Board disagrees that amendment of the proposed regulation is necessary for clarification.

Comment 2.8

The commenter suggested that the Division send out “push” wildfire advisories similar to heat advisories.

Response: To the extent the commenter may believe such a notification could serve as an alternative to the reasonableness standard in subsection (a)(1)(B), see response to comment 2.6. While the Division has the authority to undertake outreach efforts during wildfires, if it chooses to do so; the Board declines to address such advisories in the proposed regulation.

Comment 2.9

The commenter asked whether employers should “reasonably anticipate” 18 days of wildfire smoke, in view of the 2018 Camp Fire, and stock respirators for each employee for 18 days. The commenter requested guidance in view of the extreme shortage of respirators, and noted that employer stockpiling of N95s may cause further shortages for healthcare workers.

Response: The Board disagrees that the regulation should specify how many respirators employers must keep on hand. Employers should be able to evaluate the needs of their own workplaces. The proposed regulation does not require that employers maintain a respirator stockpile. Please see the response to comment 2.1 for concerns about respirator shortages.

Comment 2.10

The commenter recommended that the regulation states when the regulation is no longer triggered, for instance when the AQI PM2.5 is less than 151 or 300. Amended language on this issue was proposed by the commenter as included above in comment 2.6.

Response: The Board is not persuaded that the requested amendment is required. The proposed language clearly states that the regulation applies when two factors are present: the AQI for PM2.5 is 151 or greater, and employee exposure to wildfire smoke could reasonably be anticipated. Even if the regulation has previously applied to a place of employment, the regulation will cease to apply when either of those conditions are not met.

Comment 2.11

The commenter stated that the proposed regulation incorrectly presumes that all industrial vehicles have cabin air filters. The commenter wrote that all industrial vehicles have air filters for the engine, but most do not have cabin air filters, and some cannot be retrofitted. Many of the cabin air filters in vehicles do not operate when the “recirculated air” option is in use as probably would be during a wildfire event. The commenter reported some employers’ findings about the

number and percentage of their vehicles that lack cabin air filters and stated that one employer found that retrofitting would cost \$150.00 per vehicle, for a total cost of \$60,000. The commenter recommended the following language in order to limit the scope of the exemption to air-conditioned vehicles and clarify that the recirculation feature reduces air intake from the exterior of the vehicle. The commenter proposed the following amendment:

(a)(2)(B) Enclosed air-conditioned vehicles ~~in which the air is filtered by a cabin air filter and when~~ the employer ensures that windows, doors, and other openings are kept closed, except when it is necessary to open doors to enter or exit the vehicle and when the employer informs employees of the ability to use the recirculation feature to reduce air intake from the exterior of the vehicle.

Response: The Board disagrees with the suggested amendment. Cabin filters are present in certain vehicles and can reduce exposure to wildfire smoke. Recirculated, air-conditioned air within closed vehicles is not equivalent to filtered air because workers are still likely to be exposed to wildfire smoke and, under some circumstances, may be exposed to elevated concentrations of carbon dioxide.

The Board is aware that not all industrial vehicles have cabin filters, and nothing in this regulation requires employers to retrofit such vehicles. The proposed language simply exempts certain vehicles from the regulation.

Comment 2.12

The commenter recommended that subsection (d)(1) be amended, stating that most employers do not employ trained meteorologists, and employers and employees cannot identify changing wind patterns, temperature inversions, or other factors leading to a worsening of air in the midst of a wildfire emergency response or evacuation. The commenter suggested the following amendment because employees may have more information about current conditions at a site than others, and because two-way communication will be most effective:

(d)(1) ~~Informing~~ Communicating with employees about of: ...

Response: The Board is not persuaded by the comment. It is the employer's responsibility to check the current AQI for PM 2.5 under subsection (c); subsection (d)(1) ensures the information is conveyed to employees when a wildfire smoke hazard exists. Furthermore, the proposal in no way prohibits two-way communication. Employers are free to discuss conditions at the worksite with individuals at that location. The regulation already recognizes the importance of two-way communication in subsection (d)(2), which states that employees should be encouraged to provide certain information to their employer. The Board disagrees that this subsection requires meteorological expertise.

Comment 2.13

The commenter sought amendment of the language in subsection (f)(3)(B) requiring "that the PM2.5 levels inside the respirator correspond to an AQI less than 151." The commenter noted that some of its members have been involved in emergency operations with AQI values above

554 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$), and because an N95 would not reduce the PM_{2.5} level within the respirator to $55.4 \mu\text{g}/\text{m}^3$ (equivalent to AQI 151), would require therefore a different respirator, probably a loose fitting PAPR. The commenter noted that loose fitting PAPRs are more expensive than N95s; changing from the latter to the former during operations adds complexity to the situation; and it is not logical to go from voluntary N95s at an AQI of 499 to a mandatory respirator of a different kind at 550. The commenter offered some calculations and stated that it will be difficult to determine compliance with in-mask concentrations: few employers have particulate monitoring equipment; the AQI is typically not posted above 500; and AQI values are not typically converted to micrograms per cubic meter. The commenter suggested the following amendment:

(f)(3)(B) Where the current AQI for PM_{2.5} exceeds 500 respirators shall be used in accordance with section 5144. The employer shall provide respirators with an assigned protection factor, as listed in section 5144, which reduces the exposure to below an AQI for PM_{2.5} of 500.~~such that the PM_{2.5} levels inside the respirator correspond to an AQI less than 151.~~

Response: The Board disagrees with the commenter's proposed amendment. The Board does not believe that allowing exposure levels within a respirator to reach an AQI for PM_{2.5} of 500, rather than limiting the AQI for PM_{2.5} within the respirator to less than 151, is sufficiently protective of employee health. The Board does not agree that monitoring equipment is required in order to comply with the regulation, and the Division has learned from the Forest Service and U.S. EPA that current AQI values above 500 will indeed be reported on AirNow.gov and thus on other sites using data from AirNow.gov. Please see response to comment 2.26, below.

Comment 2.14

The commenter responded to the portion of Appendix B, section (b) stating that "Employers shall also have effective provisions made in advance for prompt medical treatment of employees in the event of serious injury or illness caused by wildfire smoke exposure." The commenter stated that employers are already required to do this under 8 CCR section 3400 and asked that the specified language be included in the text of the regulation itself or not at all.

Response: The Board declines to make any additional modifications. Appendix B of the proposed regulation, which addresses training, consists of information to be provided to employees, so that employees are aware of their right to obtain medical treatment. Section 3400 does not specifically state what information about medical treatment must be provided to employees.

Comment 2.15

The commenter stated that there is inconsistency between the regulatory text in subsection (a)(3), the note in subsection (f)(4), and Appendix B subsection (g)(2). The commenter commended the Board for revising the version of Appendix B subsection (g)(2) included in the emergency regulation to provide more clarity but expressed concern that some manufacturer instructions state that a Respiratory Protection Program, including medical evaluation and fit testing, must be

in effect for the use of the respirator. The commenter believes that this creates confusion because voluntary use of a respirator does not require either medical evaluation or fit testing.

Response: The commenter appears to have meant to refer to the note in subsection (f)(3)(A), not subsection (f)(4) since the latter subsection contains no note. The Board is not persuaded by this comment and does not agree that there is inconsistency between the listed subsections. The proposed regulation is clear that medical evaluation and fit testing are not mandated for voluntary use of respirators.

Comment 2.16

The commenter recommends deleting all references to the maintenance, cleaning, or care of respirators, because N95s should be disposed of when dirty, or after no more than one day. As an example, the commenter states that employees of a member employer performing emergency wildfire response went through six N95s per day. The commenter proposed the following amendments to Appendix B:

(g)(2) ~~Read and follow all instructions provided by the manufacturer on use, maintenance, cleaning and care, and~~ warnings regarding the respirator's limitations.

(h) How to properly put on, ~~use and maintain~~ the respirators provided by the employer.

Response: The Board accepts the comment in part. The Board agrees that Appendix B should be clarified to ensure that employees understand that N95s are not intended to be cleaned or reused, and has amended sections (g)(2) and (h) of Appendix B through the July 23, 2020 15-Day Notice. However, because employers are free to provide respirators other than N95s, the Board has not eliminated all reference to cleaning and maintenance. Instead, the Board has distinguished between disposable and reusable respirators. The Board does not feel it necessary to remove the reference to "care," of respirators. Some manufacturer instructions refer to proper "care," even for disposable N95 respirators. Please see response to comment 2.22, below.

Comment 2.17

The commenter supports the revised language that states that employees experiencing symptoms such as difficulty breathing, dizziness, or nausea should get medical help immediately.

Response: The Board acknowledges the commenter's support for the language proposed for Appendix B section (h).

Comment 2.18

The commenter, though stating that her organization does not oppose the regulation, expressed concern that the cost estimates provided by the commenter do not appear to be incorporated in the economic estimates contained within the Initial Statement of Reasons. The commenter stated that cost information was ignored by the Division and that the estimates of \$191.19 per year for a typical business and \$150.74 for a small business are unrealistic.

Response: The Board did not ignore the cost estimates submitted by the commenter. The costs in the economic analysis were estimated on a per-employee basis. The Board applied the average number of employees per business in California and the average number of employees per small business, according to EDD data. Many employers in California have very few workers, although the Board is aware that businesses with larger workforces will have proportionally greater costs. Please note that the estimates quoted by the comment have been increased slightly; see the Modifications to the Economic Impact Analysis/Assessment shown within this Final Statement of Reasons.

Comment 2.19

The commenter stated that the 2018 wildfire season is an unrealistic basis for estimating the cost of the worst year, because the regulation does not restrict its application to employers who operate in the areas where the 2018 wildfires occurred. The commenter argued that each employer would need to look back over the last 10-20 years to see whether wildfire smoke may reasonably be anticipated at any of the areas where they work or locations where they send employees. The commenter stated that estimates omitted the cost of employers' time and resources needed to determine whether they are covered by the regulation, which will be required by every employer in the state.

Response: The Board is not persuaded by this comment. The 2018 wildfire season was used as a means of estimating the proportion of the state that could possibly be covered by the regulation in an average year and the time-span of that coverage, under a worst-case scenario. The proposal does not require employers to perform the historical analysis suggested by the commenter, so the cost of that analysis was not included. Please also see response to comment 2.6.

Comment 2.20

The commenter disagreed with the cost estimate regarding "Electric Power Generation, Transmission and Distribution" because the number of employees in that industry was listed as 18,267, but one of the commenter's members has nearly 13,000 employees and has already trained nearly 8,000 employees under the emergency regulation.

Response: The Board amended its numbers for "Electric Power Generation, Transmission and Distribution." The Initial Statement of Reasons relied on the best by-industry data available, namely EDD data, and the Board has no reason to doubt its accuracy. However, rather than include "Electric Power Generation, Transmission and Distribution" and "Natural Gas Distribution," separately, the Board has amended its analysis by using the broader category "Utilities," which includes both of those categories as well as some additional employees. Please see the Modifications to the Economic Impact Analysis/Assessment shown within this Final Statement of Reasons. The Board also notes that some employees may be counted under a different category. For instance, the NAICS code for "Utility System Construction" is included within "Construction" in the EDD data.

Comment 2.21

The commenter stated that it is not clear from the analysis whether local water district workers are included as public or private employees when calculating the cost to state and local governments. The commenter indicated they had previously provided the Division with costs incurred by two local water districts and stated that the analysis is deficient in not including local water agencies in the cost estimates.

Response: The Board disagrees with the commenter, as the estimate of local entity employees included in the Initial Statement of Reasons was gathered from the State Controller's office, which collects information about special districts, including water districts and water agencies.

Comment 2.22

The commenter disputed the estimated per-unit cost of N95 respirators of \$0.75. The commenter suggested that the Division may have considered special prices available only for public agencies and noted that its members, some of whom purchase thousands of respirators annually, cannot procure them at that cost. The commenter stated that one company reported in December 2019 that it could not purchase N95s for less than \$4.00 each, while another company reported a typical price of \$18.00 per box of ten but is now being charged \$50.00 per box of ten. The commenter stated that the employees of one employer typically use six N95s per day because of sweat and soot, and that the employer assumes 10 days of wildfire smoke for 9,500 employees at \$1.80 per respirator, suggesting that the total private sector costs are above \$50 million. The commenter noted that, given the current COVID-19 crisis, N95s are needed for healthcare workers and will be more rare and more difficult to source than typically.

Response: The Board agrees with the comment in part. During the 2019 fire season, Division staff researched suppliers selling a popular N95 manufactured by 3M to the general public in small lots. At the time, the Division noted that there was significant variation in per-unit price by vendor, so the Board understands that individual employers may have incurred higher costs, although the Board disagrees that \$1.80 per unit is a reasonable pre-pandemic *average* price. Please see the Initial Statement of Reasons for details. The Board agrees with the commenter, however, that the estimated average cost of an N95 in 2021 is likely to be higher than other years, and that the estimated average price should be increased. Please see response to comment 2.1 and the Modifications to the Economic Impact Analysis/Assessment shown within this Final Statement of Reasons.

The Board agrees with the commenter that some employers will find it necessary to provide more than one respirator per employee per day, during wildfire smoke events in which the current AQI is 151 or higher. Dirty or damaged N95s must be replaced, as stated in manufacturer recommendations. The Board disagrees that the original estimate of one N95 per day per employee was unreasonable. However, the Board has increased the estimated number of respirators required per employee per year, from ten to twenty.

To the extent that the commenter may believe the current per-employee annual estimate of N95s use is insufficient, please note that the current estimate of twenty respirators annually per employee has not been reduced to account for the fact that some potentially covered employers

will not actually have to supply respirators, or will have to provide them to fewer employees than estimated, because they have ceased or reduced work in smoky areas for reasons unrelated to the proposed regulation. These reasons include evacuation orders, blackouts, or threats to people or property from the flames themselves. Likewise, the annual number of N95s per employee has not been reduced to account for employees who may be easily removed from the scope of the regulation during temporary smoky conditions (please see comment 9.9 and its response) or who may already use respirators during wildfire smoke events due to the nature of their work and/or other respiratory hazards.

The Board does not agree that the regulation requires all employers to purchase ten days' of N95s for every employee in the first year, or in each subsequent year. Please see response to comment 2.9.

The Board thanks the commenter for the estimates provided by its member businesses but disagrees that implementing this regulation will cost over \$50 million.

Comment 2.23

The commenter disagreed with the training cost estimate of \$9.69 per employee. The commenter states that PRR's members have found that the training requires 30 minutes, not 20 as estimated, and provided examples of hourly rates ranging from \$50.00 to \$120.00, including employee benefits, as a contrast to the EDD data referenced in the Initial Statement of Reasons. The commenter stated that one of its members gave a 30-minute training for 40,000 employees in California, which was valued at \$1.2 million, and another prepared a 30 minute training for its technicians at a cost of \$600,000, later determined to be actually \$855,000. The commenter contended that the cost estimate should take into consideration the time and resources it takes to develop and deliver training to employees initially, which is especially difficult for large employers.

Response: The Board disagrees that the EDD hourly wage is an inappropriate means of approximating cost. The regulation applies across industries; while some employees will be paid more than average, others work in industries such as agriculture which are likely to pay less.

The Board does agree to increase the per-employee cost of training; please see the Modifications to the Economic Impact Analysis/Assessment shown within this Final Statement of Reasons for details. The Board notes that Appendix B, which has been translated into multiple languages by the Division, is intended to provide a quick method of conveying the necessary information in the field. Furthermore, the estimated time is an average; some employers may require more or less time.

Comment 2.24

The commenter stated that subsection (d) of the regulation requires "a system for communicating wildfire smoke hazards" which includes "effective procedures" for informing employees of "the current AQI for PM2.5" and "protective measures available to employees to reduce their smoke exposure." For businesses and job tasks identified by the U.S. Department of Homeland Security which are required to continue operations (e.g., transportation, communications), those

employers will need to have a back-up communication system in case the mobile telephone fiber cables are destroyed by fire. The commenter provided an estimated cost from a telecommunications company of \$2,137,500 for 4,750 hand-held radios, \$2,850,000 for 4,750 truck mount radios and the construction of 40-60 radio repeaters at a cost of \$50,000 per site. Response: The Board is not persuaded that such costs are mandated by the proposed regulation, which does not mandate a back-up communication system. Emergency medical services standards, sections 1512 and 3400, already require a provision for an effective communication system for contacting a doctor or emergency medical services. If an employer requires radios to communicate with workers, perhaps because they are in hard-to-reach areas without cell phone reception, then radios would presumably be necessary to summon assistance under those existing standards and/or section 3203. With regard to radio repeaters, section 3395(e)(1) [high heat procedures] requires employers in multiple industries to ensure that effective communication by voice, observation, or electronic means is maintained under specified conditions, yet the Division's Enforcement Unit is not aware of a single employer which has purchased radio repeaters in order to comply with section 3395.

Comment 2.25

The commenter stated that many of the costs discussed in her comment have already been borne by members complying with the emergency regulation, which became effective July 29, 2019.

Response: The estimated costs for the proposed regulation have not been decreased to reflect that fact that many potentially covered employers are already in compliance, either because of the existing emergency regulation 5141.1 or because of other standards addressing respiratory hazards. The actual costs may therefore be lower than estimated for those employers that have already acquired respirators or conducted training at the time this proposed regulation takes effect.

Comment 2.26

The commenter stated that, in response to the emergency regulation section 5141.1, some employers performed fit tests, medical evaluations, and some follow-up exams for mandatory respirator use above AQI for PM2.5 of over 500. One employer purchased 800 full face respirators at a cost of \$288,000. The commenter expressed concern that some employers will send workers' home rather than bear the costs of compliance, to the detriment of employees.

Response: The Board disagrees that this regulation requires employers to purchase full face respirators or perform fit testing, medical evaluations or follow-up exams for each employee. Employers involved in emergency response, including utilities, communications and medical operations that are directly aiding emergency operations or firefighting operations, are not required to provide respirators for mandatory use for the purpose of protection from wildfire smoke, even when the AQI for PM2.5 exceeds 500, and must instead provide respirators for voluntary use as mandated in subsection (f)(3)(A). Any potential confusion on that point has been clarified by additional language added to subsection (f)(4) in the Second 15-Day Notice, issued September 10, 2020. Under such emergency circumstances, no fit testing or medical evaluations are required.

AQI levels for PM2.5 over 500 are rare and occur in concentrated areas rather than across broad smoke plumes. Such conditions tend to occur very close to the wildfires themselves, often in evacuation zones, so that the majority of the employers affected by such conditions are very likely to be working in emergency response. For the very few employers not engaged in emergency response but nonetheless operating in locations where the current AQI for PM2.5 is above 500, controls to protect against that respiratory hazard were required under existing regulations (see sections 5140(b), 5141 and 5144.) Such circumstances are very dangerous to workers' health—the "hazardous" level begins at an AQI for PM2.5 of 301. Public comments made by employers and employers' representatives during the emergency rulemaking process suggested that many employers were already providing respiratory protection under such conditions.

The Board thanks the commenter for their input and participation in the rulemaking process.

3. Elizabeth Treanor, Director, Phylmar Regulatory Roundtable (PRR), by written comments dated September 30, 2019 revised October 4, 2020.

NOTE: This 2019 letter was submitted by the commenter during the notice period along with the commenter's May 12, 2020 letter (comment 2).

Comment 3.1

The commenter stated that the permanent regulation must take into account that restoring operations in the power, gas, water, and communications sectors is of critical importance in wildfire recovery efforts and expressed concern that the regulation would delay these services

Response: The Board responds that it has already taken this into consideration and exempted emergency services from certain requirements. Please see response to comments 2.2 and 2.26.

Comment 3.2

The commenter supported the exception stating that engineering and administrative controls are not necessary for utilities and communications work when such operations are directly aiding firefighting or emergency response and asked that these utility and communications operations be exempt from mandatory respirator use as well. The commenter recommended the approach taken by existing section 5141(c) and stated that traditional engineering controls are simply not practical and will require expenditure of resources needed more urgently in other places.

Response: Please see response to comment 2.2.

Comment 3.3

The commenter indicated disappointment that the Division and Board declined to suspend enforcement of respiratory protection requirements for the duration of a wildfire emergency, rather than adopting the emergency regulation.

Response: The Board disagrees that the proposed regulation should suspend respiratory protections requirements during wildfires. To the extent this comment addresses adoption of the

emergency section 5141.1, it is outside the scope of this rulemaking. To the extent the commenter does not wish the Board to pursue the current rulemaking, the Board disagrees. The Board has determined that a rulemaking is necessary to address the occupational hazard of employee exposure to PM 2.5 from wildfire smoke.

Comment 3.4

The Commenter sought changes to emergency regulation section 5141.1 when seeking a 90-day extension of that regulation, namely eliminating the requirement for mandatory respirator use for emergency operations directly aiding firefighting or emergency response and accounting for the fact that electrical utilities face arc flash hazards. In the alternative, the commenter requested a written document stating that related provisions of the emergency regulation would not be enforced.

Response: This comment addresses an issue out of the scope of the current rulemaking. The current rulemaking is not a readoption of, or amendment to, the emergency section 5141.1. The current rulemaking does not affect enforcement of that emergency standard. For arc flash, see response to comment 3.14, below.

Comment 3.5

The commenter addressed subsections (a)(1) and (a)(1)(B), making substantively the same comments as the May 12, 2020 letter.

Response: This comment is duplicative of comments made in the commenter's May 12, 2020 letter. Please see response to comments 2.3 through 2.6.

Comment 3.6

The commenter requested amendment to the exception in subsection (a)(2)(B) regarding enclosed vehicles with cabin air filters. The commenter stated that it is unreasonable to require that the employer ensures that vehicle windows, doors, or other openings are "kept closed to minimize contamination by outdoor or unfiltered air" as required in the emergency regulation. Where employees are in mobile crews, the employer is not present to ensure that these potential openings are kept closed. The commenter also made comments about this subsection that were essentially the same as in comment 2.11, above.

Response: The Board disagrees that the requirement that employers ensure doors are kept closed is unreasonable. There are other methods of ensuring compliance with a regulation other than watching employees. Please see response to comment 2.11.

To the extent this comment refers to language in the emergency rulemaking, section 5141.1 and not the proposed regulation, it is out of the scope of this rulemaking.

Comment 3.7

The commenter stated that it would be impractical, and sometimes infeasible, to track all the AQI forecasts for mobile crews that go to various locations in a day, and that doing so might yield results with no relationship to the actual AQI at a given time and employee location. The

commenter noted that employers should be able to rely on employees in the field to communicate about conditions and suggested the following amendment to subsection (c):

EXCEPTIONS: (1) Subsection (c) does not apply where an employer assumes the current AQI for PM2.5 is greater than 500 and uses that assumption to comply with subsection (f)(4)(B).

(2) For mobile employees and crews, to assure the most up to date localized information, an employee working alone or a designate crew member may be required to periodically check the AQI for PM2.5 and communicate to the employer any air quality concerns or local conditions that adversely impact air quality.

Response: The Board disagrees that the proposed amendment is required. Nothing in the regulation prevents employers from having employees in the field check the AQI themselves at the start of their shifts. Indeed, the regulation requires employers to encourage workers to report worsening air quality conditions to their employers.

Comment 3.8

The commenter expresses concern that the AirNow website is not always a reliable source to obtain an AQI and that it crashed during wildfires in 2017 and 2018 due to over-capacity. The commenter recommended that, if that problem persists, referral to the AirNow website should not be required. The commenter also noted that employers should not have to track multiple websites and that the lack of a single reliable source is a reason not to use AQI.

Response: The Board declines to make any additional modifications. The proposal does not require employers to track multiple websites; the required information can be gathered from any one of several specified sources.

For use of AQI, please see response to comment 2.3. Regarding AirNow.gov, the Division conferred with the Forest Service and U.S. EPA and was informed that the AirNow system has been upgraded since the 2018 wildfires and is now significantly more robust. The website has now been improved in order to handle heavy traffic of the kind seen in previously years without crashing. In addition, data from private monitoring networks such as PurpleAir has been incorporated into the national system by mathematically correcting their data to be comparable with existing public monitors. This can be seen at fire.AirNow.gov, which also provides a visual display of smoke plumes. This change dramatically increases the number of locations in California with monitoring data accessible through the AirNow system. In addition, during wildfires, the California Air Resource Board and the U.S. Forest Service deploy additional temporary monitors to the affected area. If data from a nearby monitor is not available, the modeling of air quality used by AirNow.gov, local air quality management districts, or the US Forest Service can be used to determine the AQI for the zip code or area where there is no monitor. Modeling is displayed by color on interactive maps. Additionally, employers can obtain communications from local air quality districts or subscribe to the EPA website

www.enviroflash.info to receive the daily and forecasted AQIs by text or email for particular cities or zip codes.

Comment 3.9

The commenter addressed subsection (d)(1), making substantively the same comments as in the commenter's May 12, 2020 letter (see comment 2.12 above).

Response: Please see response to comment 2.12.

Comment 3.10

The commenter stated that PRR members have found that classroom training is often less effective than on-the-job instruction, and that stopping to conduct training—development of curricula, attendance rosters, and following tracking processes—will delay the immediate response. The commenter stated that the words “effective training” have a particular interpretation as planned, formal programs for which compliance officers can seek records or attendance rosters. The commenter requested the following amendment:

(e) ~~Training and~~ Instruction. The employer shall provide employees with ~~effective training and instruction~~ on the information contained in Appendix B.

Response: The Board disagrees with the comment. The proposal does not require that the training be conducted in a classroom setting. Employers are not required to develop curricula. Indeed, Appendix B contains the training contents so that employers will not have develop their own plans from scratch. The only documentation of training required by section 3203(b)(2) is the date on which wildfire smoke training was provided, the person who gave it, and the employees' names or identifying numbers. For most employers, this can be done in the field in a matter of moments, by adding a note to the day's roster or asking employees to write down their names. The Board understands that some employers, especially larger ones, will prefer to incorporate this training into their overall training programs, which may be quite sophisticated and involve detailed recordkeeping. Those steps, though admirable, are not required by the regulation.

Comment 3.11

The commenter supported language within subsection (f)(1) of the emergency regulation exempting utilities and communications operations from engineering and administrative controls when they are directly aiding firefighting or emergency response, and the exemption of such activities from the requirement for mandatory respirator use. The commenter requested the following amendment:

(f)(1) In emergencies, including rescue and evacuation, subsections (f)(2), ~~and~~ (f)(3), and (f)(4)(B) do not apply, and employers shall comply with subsection (f)(4)(A). Emergencies include utilities, communications, and medical operations, when such operations are directly aiding firefighting or emergency response. This will assure that, for example, water utilities boosting station pressure for firefighters and power utilities protecting the public from downed energized power lines are able to quickly and effectively perform these needed tasks.

Response: The Board acknowledges the commenter's support for that provision. The Board has not added the suggested language. The regulation does not need to contain an explanation for the exception, only the exception itself. However, the Board has incorporated the exception supported by the commenter in subsection (f)(4) of the proposed regulation.

Comment 3.12

The commenter made essentially the same comments regarding (f)(3)(B), the insufficiency of N95s at an AQI of 550, and mandatory respirator use as in her May 12, 2020 letter (comment 2.13).

Response: See response to comments 2.13.

Comment 3.14

The commenter, addressing arc flash hazards, stated that testing of a major manufacturer's flame-resistant (FR) and non-flame resistant (NonFR) N95 filtering facepieces found that the uncovered straps for most FR masks melted. For both NonFR models that were tested, masks and/or straps ignited, melted and/or dripped at various arc energies. Utilities are unaware of manufacturers who make arc-rated respirators. The commenter requested an exception for utility and communications operations that are directly aiding firefighting or emergency response.

Response: The Board notes that the currently proposed language in subsection (f)(4) adequately addresses the commenter's concern, since it excludes utility and communication operations from mandatory use of respirators when directly aiding firefighting or emergency response. Since respirator use would be voluntary, employees could respond appropriately to arc flash hazards. In addition, employees exposed to arc flash hazards should be wearing flash resistant PPE such as face shields, hoods, or similar devices that protect the employees face and neck; these should also protect an N95 respirator worn by the employee. No additional modifications are necessary.

Comment 3.15

The commenter addressed Appendix B, making essentially the same comments as the May 12, 2020 letter (see comments 2.14 - 2.17).

Response: Please see response to comments 2.14 - 2.17.

Comment 3.16

On pages 12-16 of the letter, the commenter made suggestions specific to "Version 3.0," draft language regarding AQI levels between 100 and 151; mandatory respirator use above a current AQI of 300; specific filtration methods in buildings and vehicle ventilation systems; and arc hazards.

Response: This comment refers to draft language that is not included in the proposed regulation and is therefore outside the scope of this regulatory proposal. The Board believes that the commenter is referring to draft language that was circulated before the current rulemaking and has not be included in the proposal.

Comment 3.17

The commenter provided cost estimates for a draft version of the proposed regulation, the “Version 3.0,” draft: “Scenario 1 – Electric Power Utility; Scenario 2 – Water Utility; Scenario 3 – Electric and Gas Utility; Scenario 4 – Water Utility; Scenario 5 – General Industry, High Tech; and Scenario 6 – Telecommunications.”

Filtering facepiece respirators were stated to cost \$172,000 in Scenario 1 (N95s, no number specified); and between \$54,000 and \$270,000 in Scenario 5 (at \$1.35 per mask). Scenario 3 contained a combined cost of \$550,000 for multiple items; respirators were included but not priced separately.

Training costs for Scenario 1 were stated to be half an hour for an EHS Specialist and half an hour for an “O&M Mechanic” for a total of \$30,250 (\$50/hr for 550 employees); in Scenario 4 to cost \$50/hr average labor rate; in Scenario 5 to cost \$1.2 million (\$30/half hour for 40,000 people [all employees in California]); and in Scenario 6 to cost \$600,000 (30 minutes for 10,000 employees at \$120/hr.)

The cost of PAPRs, medical evaluation and fit testing, retrofitting vehicles and buildings, full enrollment of employees into a respiratory protection program; full face respirators and related costs for respirator training and administration were also included.

Response: To the extent this comment refers to draft language not including in the proposed regulation—for instance, building filtration systems—it is outside the scope of this rulemaking. The Board believes that the commenter was referring to draft language that was circulated before the current rulemaking and has not be included in the proposal. The Board thanks the commenter for the cost information. Please see response to comments 2.11, 2.22, 2.23 and 2.26.

The Board thanks the commenter for their input and participation in the rulemaking process.

- 4. Erin Guerrero on behalf of the California Attractions and Parks Association, the California Association of Boutique & Breakfast Inns, the California Authority of Racing Fairs, the California Fairs Alliance, the California Hotel & Lodging Association, the California Lodging Industry Association, the California Restaurant Association, the California Retailers Association, the California Travel Association, Enterprise Rent-A-Car, the Hotel Association of Los Angeles, the Long Beach Hospitality Alliance, Ski California, and the Western Fairs Association, by written comments dated May 21, 2020.**

Comment 4.1

The commenter described the value of the tourism industry to the California economy and stated that, given the effect of COVID-19, the proposed rules serve as yet another challenge to reopening and recovering. The commenters stated that the regulation’s requirements place an undue burden on Coalition constituents (particularly related to N95 supplies), are unclear, and riddled with uncertainty. The commenter also stated that the regulations overreach and, given the

ambiguity of the proposal, businesses have a difficult time knowing exactly when the regulations apply, when they cease to apply, and which employees are affected.

Response: The Board disagrees that the proposed regulation is unclear, uncertain, or overreaching. Existing regulations are not sufficiently specific about what employers should do during wildfire events to protect workers from the harmful effects of wildfire smoke. This proposal will provide clarity to employers so that they may better protect employees from the debilitating and sometimes life-threatening illnesses due to exposure to PM2.5 from wildfire smoke. The Board acknowledges the economic difficulties imposed by COVID-19; please see response to comment 2.1.

Comment 4.2

The commenter stated that the shortage of N95 respirators due to the current pandemic has created a situation in which entities are competing for limited supplies and expressed concern about whether they will be able to acquire the level of respirators that would be required to have on hand. Additionally, the commenter states that many of their businesses donated respirators to front-line workers throughout the state.

Response: Please see response to comment 2.1 and 2.9.

Comment 4.3

The commenter stated that the proposed regulation essentially identifies any worker who spends a cumulative one hour outdoors during a shift as an outdoor worker, so that many workers who spend the majority of the workday indoors would also be included in these requirements. Many of the commenters' businesses engage in rotating staff. If an employee were to spend 10 minutes outdoors 6 times in a shift, for example, that employee would no longer be exempted under subsection (a)(2)(D). Due to the expansive physical nature of the places of employment of Coalition constituents, walking from one part of a property to the other, in itself may take over 10 minutes. The commenters urge an alternative to this one-hour threshold.

Response: The Board declines to make further changes to the regulation in response to this comment. The exception for exposures of one hour or less per shift was intended to exempt workplaces where employees do not generally fall under the scope of the regulation yet need to make a brief trip outdoors. For instance, an indoor worker might need to travel from one building with filtered air to another one nearby, or might step outside in order to enter a vehicle exempt from the regulation under subsection (a)(2)(B). An employee who made six such trips, for ten minutes each—as suggested by the commenter—would not exceed the hour limit and would therefore fall within the exception. But if employees need to walk long distances, then it is appropriate to protect them from the health effects of a current AQI for PM2.5 of 151 or greater.

The Board reminds the commenter that the regulation applies only occasionally; employers whose places of work are primarily indoors can avoid application of the regulation *entirely*, on the few days in which they should reasonably anticipate wildfire smoke and the current AQI is 151 or greater, if their employees remain inside buildings and vehicles subject to the subsection (a)(2)(A) and (B) exceptions and go outside for an hour or less per shift.

Comment 4.4

The commenter stated that AQI levels should not be the basis of the regulation. The commenter argues that AQI is calculated based on assumptions of 24-hour exposure and was not designed to measure exposure over one hour; its utility is not comparable to the Permissible Exposure Limit (PEL) calculations that Cal/OSHA typically employs. The commenter stated that it is not within Cal/OSHA's jurisdiction to control environmental pollution exposures. The AQI is an environmental and not occupational limit, with the AQI thresholds including health effects on the elderly and children, not specific to a California employee. The commenter noted that AQI levels for PM_{2.5} can be exceeded even when there is no wildfire and asked how an employer could know how much of the wildfire smoke contributed to the exceedance of the AQI versus regular environmental pollution.

Response: The Board notes that the proposed regulation does not apply when the current AQI for PM_{2.5} is 151 or greater but there is no reasonably anticipated exposure to wildfire smoke. Employers are not required to evaluate how much of the PM_{2.5} can be attributed to wildfire smoke. Please see response to comments 2.3 and 2.10.

Comment 4.5

The commenter expressed concern about the location and availability of monitors. Exposure can vary widely between the monitoring site and the worksite depending on distance, topography, and microclimate in the region, and the proposed regulation does not allow the use of other non-governmental monitoring sites which may produce AQI readings more consistent with those at the worksite.

Response: The Board disagrees that the regulation should specify additional monitoring sites. The federal government has incorporated nongovernmental monitors into the AirNow network; please see response to comment 3.8. Employers may also choose to monitor PM_{2.5} themselves, under subsection (c)(3) and Appendix A, although they are not required to do so.

Comment 4.6

The commenter states the regulation lacks a requirement that the AQI for PM_{2.5} be above 150 for a sustained period before the regulation is triggered, even though AQI is based on 24-hour exposure assumptions.

Response: The Board disagrees that further amendment is required. If the AQI for PM_{2.5} level reaches 151 and the employer should reasonably anticipate that workers will be exposed to wildfire smoke, then the regulation applies. Current AQI represents data collected over time periods of varying length in order to reflect *present* conditions as accurately as possible. Please also see response to comment 2.10.

Comment 4.7

The commenter stated that the regulation lacks an indicator for when its provisions are no longer applicable. The commenter asked: if the conditions were met for the rule to apply but then the AQI dips below the 151 threshold, is the employer then allowed to stop utilizing the controls put in place?

Response: Please see response to comment 2.10.

Comment 4.8

The commenter requested a more objective standard than when the “employer should reasonably anticipate that employees may be exposed to wildfire smoke.” The commenter stated that this is uncertain and extremely subjective, as employers have no guidance as to what is reasonable or how to anticipate the future presence of wildfire smoke. There is no correlation to the present exposure to wildfire smoke nor an objective wildfire advisory.

Response: Please see response to comment 2.6.

Comment 4.9

The commenter asked that the Board consider alternative compliance measures for the hospitality and entertainment industries, stating that many of these business have environmental health and safety officers available, and often emergency medical technicians. The commenter believes the Board should develop alternatives to factor in the unique nature of the businesses involved in tourism, with a special focus on those employees who interact directly with guests, since hospitality and entertainment is highly dependent on the visual appearance of the business and employees. The commenter suggested that respirators would undermine coalition members’ ability to create a warm and inviting environment for tourists and to communicate with guests. The commenter proposed that these alternate measures might include adjustments to the one-hour outdoor threshold for certain employees, limiting physical activity while outdoors, and encouraging preventative rest breaks.

Response: The Board declines to amend the proposed regulation to include special provisions for the hospitality and entertainment industries. Limiting physical activity while outdoors and rest breaks are administrative controls under subsection (f)(2) of the proposed regulation. Please also see response to comment 4.3.

The Board thanks the commenter for their input and participation in the rulemaking process.

5. **Robert Moutrie on behalf of California Chamber of Commerce, the African-American Farmers of California, the American Composites Manufacturers Association, the American Forest & Paper Association, the American Pistachio Growers, the California Association of Joint Powers Authorities, the California Association of Sheet Metal and Air Conditioning Contractors National Association, the California Attractions and Parks Association, the California Broadcasters Association, California Citrus Mutual, the California Construction and Industrial Materials Association, the California Cotton Ginners and Growers Association, the California Farm Bureau Federation, the California Forestry Association, the California Framing Contractors Associations, the California League of Food Producers, the California Manufacturers & Technology Association, the California Professional Association of Specialty Contractors, the California Restaurant Association, the California Retailers Association, the California Strawberry Commission, the California Waste Haulers Council, the California**

Winegrape Growers, the California Construction Employers' Association, the Farwest Equipment Dealers Association, the Flasher Barricade Association, National Elevator Industry, Inc., the Nisei Farmers League, PCI West – Precast/Prestressed Concrete Institute West, the Residential Contractors' Association, the Western Agricultural Processors Association, the Western Growers Association, and the Western Steel Council, by written comments dated May 21, 2020.

Comment 5.1

The commenter expressed thanks for requested improvements to Appendix B relative to the emergency regulation and supported the exception for emergency operations.

Response: The Board acknowledges the commenter's support for those provisions.

Comment 5.2

The commenter addressed subsection (a)(2) and expressed support for the change from the emergency regulation language ("employer ensures that windows, doors, and other openings are kept closed to minimize contamination by outdoor or unfiltered air") to the current language ("kept closed except when necessary to open doors.") However, the commenter raised further concerns about this subsection, because it excludes businesses where commerce is not conducted via doors – such as drive-through food or coffee businesses. Those businesses must open and close what otherwise might be considered a "window" in order to conduct business – and should be encouraged to do so, as such transactions involve minimal air exposure to both participants. In addition, such openings may provide necessary ventilation in the manufacturing context. Similarly, the commenter stated that the proposed regulation fails to consider businesses who have roll-up doors with plastic curtains (PVC curtains), such as warehouses, which must open and close access points as part of their workflow or for traffic.

Response: The Board is not persuaded by the comment. The commenter's concerns will be addressed in most circumstances by the fact that employees exposed to an AQI for PM2.5 of 151 or greater for an hour or less per shift are not covered by the regulation.

For other workers, the goal of the proposal is to protect workers from the harmful exposure to wildfire smoke and therefore to target activities in which employees are exposure to outdoor air.

Employees working beside open windows are protected by the regulation during wildfire smoke events when the current AQI for PM2.5 is 151 or above, unless another exception applies. Likewise, employees within a building or structure which is left open to the outdoors in order to allow regular vehicle access would be covered by the regulation. Employers are still required to reduce employees' exposure to PM2.5 in such situations by closing the windows, doors, or other openings when feasible, as an engineering or administrative control.

Comment 5.3

The commenter expressed concern that the present worldwide shortage of N95 respirators due to COVID-19 may cause businesses to compete with the medical field to acquire N95 respirators in

preparation for a fire, or to re-stock mid-fire. The commenter noted that businesses and individuals were urged to donate N95 respirators to the front-line workers and must now restock. Assuming they can purchase N95 respirators, they will face increased costs to repurchase such supplies due to the worldwide shortage of such equipment. The commenter stated that they do not ask for a delay in the permanent regulation or the expiration of the emergency regulation but asks the Board and Division to consider potential competition, the increased cost and feasibility.

Response: Please see response to comments 2.1 and 2.22.

Comment 5.4

The commenter requested a more objective standard than when the “employer should reasonably anticipate that employees may be exposed to wildfire smoke.” The commenter stated that the regulation is based on an employer’s ability to reasonably anticipate that employees will be exposed to wildfire smoke, which is extremely subjective as employers have no guidance as to what is reasonable or how to anticipate the future presence of wildfire smoke. The commenter stated that there is no correlation to the present exposure to wildfire smoke nor an objective wildfire advisory. The commenter noted that wildfires are always possible in California, which seems to render the regulation inevitably triggered. The commenter expressed appreciation for the efforts of the Division to find a third-party source to identify and broadcast wildfires and hope that an objective trigger can be identified in the future.

Response: Please see response to comments 2.6 and 2.8.

Comment 5.5

The commenter requested an amendment to language exempting workplaces when employers “ensure” that vehicle doors and windows remain closed. The commenter stated that it is not feasible for employers to ensure that employees do not open a window on a hot day, therefore businesses would have to provide respiratory protection regardless.

Response: The Board disagrees that it is unreasonable for regulations to make employers responsible for employee actions; most do. The Board agrees that employers should be conscious of heat hazards when windows and doors are closed to protect against wildfire smoke, and should address those hazards appropriately. If heat is hazardous, and employee exposure cannot be sufficiently reduced by any feasible method other than opening windows, then respiratory protection should be provided according to the proposed regulation. Please see response to comment 2.11.

Comment 5.6

The commenter states that the proposed regulation is vague as to the number of N95 masks an employer should stockpile to assure that they are in compliance.

Response: Please see response to comment 2.9.

Comment 5.7

The commenter stated that the regulation should be amended to allow the use of air quality monitors which are closer to the worksite than the government monitors listed in the proposed regulation. For example, AB 1647 (2017-2018) required installation of air quality monitoring devices at refineries in California. The commenter suggested the following amendment:

(d)(3) Measure PM2.5 levels at, or within a reasonable proximity of, the worksite and convert the PM2.5 levels to the corresponding AQI in accordance with Appendix A.

Or, alternatively adding the following subsection:

(d)(4) Obtain air quality data from air quality monitoring devices within a reasonable proximity of the worksite and, if necessary, convert the PM2.5 levels to the corresponding AQI in accordance with Appendix A.

Response: Please see response to comment 3.8. It is now possible to acquire the current AQI from far more monitors than were available at the time the emergency section 5141.1 was enacted. The Board notes that AB 1647 did not specify that PM2.5 must be monitored at all California refineries. (Health and Safety Code sec. 42705.6.)

Comment 5.8

The commenter stated that AQI levels should not be the basis of the regulation. AQI is not measured over a time-weighted 8-hour average, as with the Permissible Exposure Limits (PEL) traditionally used by Cal/OSHA, it is calculated based on a rolling average of exposure, and assumes 24-hour exposure in the crafting of its thresholds. The commenter stated that a PEL would be more suitable.

Response: Please see response to comment 2.3.

Comment 5.9

The commenter stated that different entities use different calculations to determine the AQI in a given area, resulting in a possible situation where the triggering threshold of the regulation is met under some calculation methods, but not others.

Response: Please see response to comment 2.5.

Comment 5.10

The commenter stated certain regions may have no operating sensors during emergencies where smoke is pervasive, making the determination of whether the AQI is above 500 potentially problematic.

Response: Please see response to comment 3.8.

Comment 5.11

The commenter recommended against the use of a “hierarchy of controls” in subsection (f) because wildfires are inherently unexpected, making it impossible to know if a particular engineering or administrative control is “feasible.” The commenter stated that the administrative control of relocating work is not feasible in industries where the work cannot be moved, such as construction, amusement parks, and agricultural work. The commenter stated that transporting a worker away from smoke is not necessarily feasible outdoors, and engineering solutions such as building a tent or some similar apparatus over a moving group of workers is absurd. Because both engineering and administrative controls appear to be commonly infeasible in the outdoor context, the commenter urged that engineering, administrative, and respiratory controls all be given equal status within the proposed regulation.

Response: The Board is not persuaded by the comment. The proposed regulation uses the hierarchy of controls set forth in existing section 5141. When engineering or administrative controls are feasible, employers should take such action rather than relying exclusively on the provision of respiratory protection for voluntary use. Engineering and administrative controls may be more effective than N95s provided for voluntary use, since they will in some cases eliminate the hazard. The Board understands that engineering and administrative controls may not be available at all worksites and under all working conditions; that is why the Board only requires them as feasible. Please see response to comments 2.2 and 9.9.

Comment 5.12

The commenter stated that rest breaks are of unclear value in a smoky environment.

Response: The Board notes that the regulation does not mandate any particular type of administrative control. However, vigorous work increases the intake of PM2.5 and thus the hazard to workers.

Comment 5.13

The commenter disagreed with the estimated per-unit cost of N95 respirators of \$0.75, stating that it seemed inaccurate even before COVID-19. The commenter also stated that the assumption of only 72,000 affected employers seems low.

Response: The Board replies that the commenter is incorrect about the number of employers estimated as potentially affected by proposed regulation. In the Initial Statement of Reasons, the Board originally estimated that about 330,000 private employers might be covered by the proposed regulation, though fewer would be covered by the regulation in any given year. See the Modifications to the Economic Impact Analysis/Assessment shown within this Final Statement of Reasons. Please see response to comments 2.1 and 2.22.

The Board thanks the commenter for their input and participation in the rulemaking process.

6. Bill Taylor et al on behalf of the Public Agency Safety Management Association (PASMA), Elsinore Valley Municipal Water District, San Bernardino County, L.A. County Dept. of Mental Health, Santa Clara County and Contra Costa County, by written comments dated May 19, 2020.

Comment 6.1

The commenters provided economic analysis based on a stated assumption that all affected employees will need to be included in a respiratory protection program in order for the proposed standard to be at least as effective as Section 1910.134 of Title 29 of the Code of Federal Regulations, therefore employees would still be required to have respirator medical clearance fit-testing prior to working outdoors during a wildfire event at an AQI of 301. The commenters stated that employers would likely have to include all outdoor workings in a respiratory protection program to avoid citation.

Response: The Board disagrees with this comment. The representative of Federal OSHA has confirmed that this proposed regulation is at least as effective as Federal regulations. See Comment 1. Respirator fit testing and medical evaluations are not required at an AQI of 301. Employers are not required to enroll all outdoor workers in a respiratory protection program for mandatory respirator use.

Comment 6.2

The commenters listed the job titles of affected public employees, estimated to total 760,000 individuals, and provided costs per-employee for respirator medical clearance (\$43), fit-testing (\$25), and PM2.5 monitors (\$13.33). The commenters listed per-employee costs of N95s at \$7.50 (ten at \$.075 per unit), respirator training (\$5) and wildfire smoke training (\$5). The commenters stated that the proposed regulation qualifies as a “major regulation” requiring a Standard Regulatory Impact Assessment (SRIA) and estimated compliance costs for both public and private sector employers of \$300 million per year in year one; \$114 million per subsequent year. The commenters estimated the costs to be borne by the public sector as \$75,113,200 in the first year and \$28,500,000 in subsequent years.

Response: The Board thanks the commenters for the analysis. The Board has used a slightly higher estimate of the average per-unit cost of N95s than the cost experienced by the commenter (\$0.81 in non-pandemic conditions). For fit testing and medical clearance, please see response to comments 2.26 and 6.1. The regulation does not mandate the purchase of PM2.5 monitors.

The Board disagrees about the total cost of the regulation, which the commenters estimated to include costs that are not actually mandated, and disagrees about whether the proposal is a “major regulation.” The Board also disagrees about the total number of employees of local agencies likely to be covered by the regulation in a single average year. Employees who work outside or in unfiltered outdoor air will not necessarily be covered by the regulation every single year.

The Board thanks the commenters for their input and participation in the rulemaking process.

7. Scott Madar, Partner, on behalf of ORCHSE Strategies, LLC, by written comments dated May 20, 2020.

Comment 7.1

The commenter described and supported PASMA’s analysis of costs associated with this regulation (comment 6). The commenter disagreed with the Board’s estimated number of affected employees, compensation rate used for calculations, and cost of respirators. The commenter requested that planning, preparing, and mobilizing costs be included in the estimates.

Response: The Board acknowledges the support for PASMA’s comment. Please see response to comments 2.22, 2.23, and 6.2. The Board declines to estimate the cost of unspecified planning, preparing, and mobilizing costs. The Board disagrees that it understated the total number of employees potentially affected by the regulation but agrees that the percentage of those employees which may be covered by a regulation in a given year should be increased.

Comment 7.2

The commenter recommends that the definition of “wildfire” be limited to “emissions from fires in “wildlands” as defined in Title 8 Section 3402,” omitting “or in adjacent developed areas.” The commenter states that “or in adjacent developed areas” lacks clarity and could be interpreted to include municipal structure fires.

Response: The Board declines to limit the regulation as requested. The commenter’s suggested deletion would cause confusion about whether wildfire smoke was covered by the proposed regulation when a wildfire burns structures in the wildland-urban interface. The proposed regulation is intended to cover smoke from such fires. Please see response to comment 2.7.

Comment 7.3

The commenter recommends that utility restoration workers be exempted from 5141.1 in a manner similar to firefighters. The commenter states that utility restoration workers frequently work directly with firefighters, so it makes no sense to exclude only one group from this regulation. Under Section 5144, utility restoration workers would still have access to voluntary and required respiratory protection programs.

Response: The Board disagrees with the comment. Title 8 contains specialized personal protective equipment regulations for firefighters that do not apply to utility workers, section 3401 et seq.

Comment 7.4

The commenter recommended that subsection (c) “at the start of each shift” be amended to “before the start of each shift, but not more than 4 hours before the start of each shift.” Employers with many employees working at a number of different sites will not have sufficient time at the start of each shift to determine employee exposure at each of many work sites, resulting in unnecessary costs. The commenter also states that the requirement to determine

exposure “periodically thereafter” lacks clarity and should be replaced with a requirement that employers determine exposure “periodically thereafter, but no less than every 4 hours.”

Response: The Board declines to make the suggested additions. The frequency at which an employer should check the current AQI may depend on conditions at the worksite. Language in the emergency section 5141.1 mandating that AQI be checked “before each shift” was changed, for the purposes of the current rulemaking, at the suggestion of the Office of Administrative Law. The proposed regulation uses the phrase “at the start of each shift” rather than “before each shift,” because an employee may be assigned to check the current AQI at the start of the workday. Because checking the AQI is a work task, that individual has *already* begun his or her compensated shift.

Comment 7.5

The commenter stated that AQI is not an appropriate basis for an occupational health regulation, because AQI for PM_{2.5} is an environmental metric intended to provide guidance for health impact that is built on the assumption of continuous exposure. Occupational exposures are based on the premise of a workday, with some period of non-work and recovery. Occupational exposure protection focuses on the typical healthy worker, with a recognition that sensitive individuals exist and require additional protective measures. The commenter stated that changing that focus, in a section that overlaps and duplicates sections 5155 and 5144, will cause confusion. The commenter recommended that the regulation take effect due to the declaration of a public health emergency by the appropriate health authority such as the California State Department of Health, a county or city department of health, or the Division if it has such authority.

Response: Please see response to comments 2.3 and 2.6.

Comment 7.6

If AQI is used, the commenter supports keeping the threshold for voluntary use of respiratory protection at an AQI for PM_{2.5} of 151 (Unhealthy).

Response: The Board acknowledges the commenter’s support for that provision.

Comment 7.7

The commenter recommended that the threshold for mandatory respirator use be set to an AQI for PM_{2.5} of 301 (Hazardous).

Response: The Board disagrees with this comment. Mandatory respirator use would require medical evaluation and fit testing under both section 5144 and under Federal law. For the purposes of the emergency section 5141.1 and the present certificate of compliance rulemaking, which must be completed before the emergency regulation expires, the Board has determined that employers should be able to provide respirators for voluntary use in the majority of wildfire smoke conditions, without waiting for a fit test or medical evaluation. The Board declines to expand the mandatory respirator provisions of the current rulemaking as requested by the commenter. The Board notes that the Division has announced its intention to conduct advisory committee meetings to evaluate any further proposed changes to wildfire smoke protections.

Comment 7.8

The commenter recommended that subsection (f) be amended to require “effective instruction” instead of “effective training and instruction.” Provisions of section 3203 IIPP have specific qualifications for trainers that would be triggered by the training and instruction language. Employers such as utilities supporting emergency wildfire operations, with many personnel scattered across a large number of work sites, will very likely not have enough trainers meeting the criteria in section 3203. Small and medium size employers may well be reliant on consultants, who will be in high demand and potentially unavailable. Given the unpredictable nature of wildfire emergencies, there will be a lack of clarity regarding how employers are to provide such training. The commenter stated that employers complying with section 5141.1 in a wildfire emergency might potentially violate section 3203, or else would have to violate section 5141.1 by delaying instruction while implementing the voluntary respirator provisions.

Response: The Board is not persuaded by the comment. The “effectiveness” of a training relates to workers’ understanding and retention of necessary information, not the use of a highly educated trainer or consultant. Appendix B was designed to assist employers, especially small and medium size employers, by specifying the minimal required information to facilitate employer compliance. Please see response to comment 3.10. The Board does not believe that the training requirements in the proposed regulation conflict with section 3203.

Comment 7.9

The commenter requested that the proposed regulation allow a three-year period for compliance to allow facility owners to assess, re-design, upgrade, and where necessary, replace HVAC systems, after section 5141.1 is revised with MERV specifications. The commenter also made other recommendations about indoor air filter requirements.

Response: The Board disagrees that the regulation should be amended as requested. The regulation does not require any particular type of mechanical ventilation system in buildings or structures, thus no three-year lead time is required. It appears that the commenter may be referring to draft language presented during informal advisory meetings as a means to obtain stakeholder input; language which was not included in the proposed regulation. If that is correct, then this comment is outside the scope of the regulation, which does not address HVAC systems, MERV filtration, or indoor air filter specifications.

Comment 7.10

The commenter stated that N95s may be difficult or impossible to acquire in light of shortages caused by the COVID-19 pandemic, and noted the need for respirators in health care. The commenter noted that some utilities report stockpiles of up to 100,000 respirators, but calculate this may be only a few days to a week supply in a wide-spread emergency. The commenter expressed concern about competition for scarce respirators needed for medical personnel and asked that this be addressed now, because companies must estimate and purchase respirators in advance of need. If they do not, they may be forced to send workers home in a wildfire emergency, causing loss of pay. The commenter recommended that the Board suspend enforcement of the emergency regulation, and noted that the Division has made comments suggesting that parts of the regulation may be waived if necessary.

Response: The request that the Board “suspend” or repeal the emergency regulation is outside the scope of this rulemaking. To the extent that the commenter is asking the Board not to approve the proposed permanent regulation, or to remove reference to N95s, the Board disagrees. Please see response to comments 2.1 and 2.9. The Board notes that the Division does not have authority to suspend a regulation and has not suspended emergency section 5141.1. The Board thanks the commenter for information about utilities’ current supply of respirators.

Comment 7.11

The commenter recommended deleting all respirator use provisions from Section 5141.1 except the triggering thresholds for voluntary and required use, and instead reference 5144 with “waivers of any portion of Section 5144 due to a wildfire smoke emergency...” The commenter also recommended that the Board amend section 5144 to list wildfire smoke protection emergencies as “voluntary use point,” or issue of a “Letter of Interpretation (LOI)” on that point.

Response: The Board is not persuaded by the comment. As stated in the Initial Statement of Reasons, the Board has determined the necessity of the present rulemaking effort. Existing relations, including section 5144, do not provide sufficient clarity to employers and employees about the type of respirators adequate for protection from PM2.5. The recommendation to issue a Letter of Interpretation is beyond the scope of this rulemaking.

Comment 7.12

The commenter opposed the language in Appendix B section (g)(5) which states that employees with heart or lung problems should ask their health care provider before using a respirator. The commenter stated that this is an impossible standard for employees to meet at the time of a wildfire emergency that triggers section 5141.1, and an additional reason to use section 5144 to address respirator use rather than the proposed regulation.

Response: The Board is not persuaded by the comment. Advising workers to talk with their healthcare providers if they have heart or lung problems can help avoid confusion and prevent injuries. The regulation does not mandate that employees speak with a health care provider.

Comment 7.13

The commenter stated that it is dangerous to waive the requirement to shave facial hair in an emergency setting, where employees will be lightly supervised or unsupervised. Facial hair prevents a facepiece seal, and causes a significant reduction in respiratory protection effectiveness. This waiver is effectively giving employees a false sense of security regarding the effectiveness of respiratory protection. The commenter suggested the Board convene and advisory committee to assist the Board with this issue.

Response: The Board is not persuaded by the comment. The Board has determined that employees should be provided with respirators for voluntary use, for the purpose of protecting them from PM2.5 from wildfire smoke, even if the employees do not remain clean shaven for the entirety of wildfire season. To avoid giving workers a false sense of security, the training and instruction requirements advise employees that the respirator will provide much less protection if facial hair interferes with the seal.

Comment 7.14

The commenter stated that subsection (g) lacks clarity and suggested the following amendment to Appendix B:

(g) When the current AQI for PM2.5 is 151 or greater, employers shall provide their workers with proper respirators for voluntary use. If the current AQI is greater than 500, respirator use is required, except in emergencies. For employers with employees performing essential services, the condition of ‘emergency’ shall be met when they can show that respirators of the appropriate type are not available.

Response: The Board is not persuaded by the comment. The Board believes the proposed subsection is sufficiently clear and expects respirators to be available to all employers by the 2021 wildfire season, when this proposal will be in effect. See response to comments 2.1 and 9.8.

Comment 7.15

The commenter stated that the communication process in Appendix B is duplicative of section 3202 (Injury and Illness Prevention Plans) and recommended that proposed section 5141.1 simply require wildfire smoke protection provisions to be added to IPPs or, where an IIPP does not exist, require a separate plan and communication process. Appendix B could be used as a voluntary model for such a plan, absent the sections on planning/communication.

Response: The Board is not persuaded by the comment. The IIPP regulation does not provide specific guidance to assist employers to protect workers from the harmful effects of wildfire smoke.

The Board thanks the commenters for their input and participation in the rulemaking process.

8. Stanley Mantooh, Superintendent of Schools, on behalf Ventura County Office of Education, via attachment to ORCHSE’s submitted comments, letter dated April 23, 2019.

Comment 8.1

The commenter opposed a requirement for upgraded air filters, which would cause difficulties for local school districts and cost time and money better spent on education.

Response: The proposed regulation does not contain such a requirement.

Comment 8.2

The commenter stated that he is unaware of an accurate method for employers to demonstrate that air is below the AQI threshold, indoors or outdoors. The commenter asked that the regulation specify such a device and how it is used, in order to avoid inaccuracies and “a false sense of security or false alarms.”

Response: The Board disagrees that the regulation should specify particular monitors. The proposed regulation does not mandate that employers purchase or use their own monitors. Employers which choose to do so may use any equipment that complies with Appendix A. Rulemaking agencies are discouraged from prescribing regulations that provide a sole means of compliance, if there are other options that are equally effective.

Comment 8.3

The commenter stated that not all areas are covered by government monitors that measure PM2.5.

Response: Please see response to comment 3.8.

Comment 8.4

The commenter stated that N95 masks are not recommended for children and can give a false sense of security and in some cases cause deeper inhalation of toxic air.

Response: This comment is outside the jurisdiction of the Board, which has authority over workplace safety and health and does not promulgate regulations regarding the health or safety of pupils. The standard makes no reference to respirator use by children.

Comment 8.5

The commenter stated that all masks need to be properly fit tested in order to be effective.

Response: The Board is not persuaded that further amendment is required. Consistent with existing section 5144, for the voluntary use of filtering facepieces such as N95s, fit testing and medical evaluations are not required. Although the commenter is correct that fit testing maximizes effectiveness, the proposal recognizes the unpredictable nature of wildfire smoke, the speed at which the fire and wildfire smoke can propagate, and the rapidly changing conditions that workers are likely to encounter. Given those factors, the Board has determined that employees should be provided with respirators for voluntary use in wildfire smoke conditions, even if the employees have not been fit tested.

Comment 8.6

The commenter expressed concern that the regulation could cause schools to close at times when they may be the safest place for children during a hazardous smoke event.

Response: The Board disagrees with this comment. The proposed regulation does not mandate school closures, and the Board has no authority to regulate conditions for pupils. In addition, it appears that the commenter is mistaken about some of the burdens imposed by the regulation; please see comment 8.1 and its response.

The Board thanks the commenter for their input and participation in the rulemaking process.

9. Andrew Sommer, counsel, on behalf of the Wildfire Smoke Rule Industry Coalition, by written comments dated May 20, 2020.

Comment 9.1

The commenter stated that the scope of the proposed rule is unclear and ambiguous. The commenter suggested that the criteria should be clarified and narrowed. The commenter stated that subsection (a) should be amended to clarify that it applies only to outdoor workplaces, given that Petition 573, which started the rulemaking process and led to the emergency rule currently in place, sought an emergency standard to protect so-called “outdoor occupations,” including agriculture, construction, landscaping, maintenance and commercial delivery. The commenter argued that this would be consistent with the Board’s “Informative Digest of Proposed Action,” which states, “the scope of proposed regulation limits its application to workers with direct, immediate exposure to outdoor air.” The commenter proposed that the regulation be limited to employers that regularly employ a sufficient number or percentage of employees in “outdoor occupations” – that is, employees with direct, immediate exposure to outdoor air occurring regularly during the majority of their scheduled workday. The commenter stated that this would also clarify when an employer should reasonably anticipate wildfire smoke.

Response: The Board is not persuaded by the comment. Consistent with its goal of reducing employee exposure to PM2.5 from wildfire smoke, the Board has limited the application to outdoor workplaces and locations in which employees are exposed to unfiltered outdoor air. The Board believes this provides a simpler and clearer method of determining the scope of the regulation than the method proposed by the commenter.

Comment 9.2

The commenter recommended that the regulation include a baseline proximity of the AQI measurement to the affected workplace, as well as some minimum duration of readings at that level, before triggering application of the regulation. The commenter noted that the proposed rule should account for the fact that wildfire conditions vary and change rapidly based on wind patterns and other factors. Because of this, a measure of air quality in one area at one particular moment may be quite different from another area relatively close by, or not representative of the steady-state conditions in that area.

Response: The Board declines to amend the proposed regulation as suggested. The current AQI provides information about the air quality over time, so no threshold period at 151 or above is required. The Board notes that employers which do not wish to rely on nearby monitors may use their own monitors, consistent with Appendix A, although they are not obligated to do so. Please see response to comments 2.3, 2.6 and 3.8.

Comment 9.3

The commenter stated that it is unclear when section (a)(1) applies because it lacks any temporal restriction or precision. The commenter asked whether the regulation applies when an employer reasonably anticipates employee exposure to wildfire smoke in the future, or only when an employer recognizes that its outdoor employees are currently likely to be exposed to wildfire

smoke. The commenter recommends that the subsection be amended to limit the rule's application to "workers with direct, immediate exposure to outdoor air."

Response: The Board is not persuaded by the comment. The regulation applies when both requirements of subsection (a)(1) are present, and AQI for PM_{2.5} greater than 150 as well as reasonably anticipated worker exposure to wildfire smoke. Absent a wildfire event, this proposal regulation will not apply. Please see response to comments 2.3, 2.10 and 9.1.

Comment 9.4

The commenter supported language in subsection (a)(2)(A) exempting certain enclosed buildings and structures where windows, doors, bays, and other openings are kept closed "except when it is necessary to open doors to enter or exit." However, the commenter suggested that the subsection be further amended to state: "...except when it is necessary to open doors, bays and other openings to enter or exit, or for purposes of receiving freight, loading or unloading, or other similar, short duration purposes in the operation of the business." The commenter stated that doors and other openings may normally be opened for a limited duration for reasons other than individuals entering and exiting. For example, loading bays may be kept closed throughout the working day by rolling doors preventing entry of outdoor air except when trucks need to pull up and connect to the bay for purposes of loading or unloading.

Response: Please see response to comment 5.2.

Comment 9.5

The commenter stated that the requirement that exposure be determined "at the start of each shift and periodically thereafter," should be amended, because a workplace is not covered unless and until the current AQI is 151 or greater and the employer reasonably anticipates that employees may be exposed to wildfire smoke. Because a worksite will not be covered until the employer already knows the current AQI, the commenter states, this requirement is redundant, unnecessary, and burdensome. The commenter also stated that "at the start of each shift" is ambiguous, particularly where an employer has employees with overlapping or staggered work shifts. In workplaces where employees start work at different times throughout the day, this language could require employers to determine exposure continuously throughout the day, as each employee arrives to work, even though the conditions involving wildfire smoke have not materially changed. The commenter recommended that the regulation be amended to state that, "during the effective period of any wildfire smoke advisory issued by a recognized governmental agency, an employer with worksites within the geographic region covered by that advisory will have an obligation to determine the current AQI for PM_{2.5} at least once daily, and when necessary thereafter due to observed changed conditions at the specific worksite."

Response: The Board is not persuaded by the comment. Employers would not face an unnecessary or burdensome obligation to check the current AQI; the regulation does not apply unless an employer should reasonably anticipate wildfire smoke. The regulation gives discretion to the employer to determine the optimal AQI source to use, among the specified methods, and in some situations one source may apply to multiply nearby worksites. Please see response to comments 2.6, 3.7, 3.8 and 7.4.

Comment 9.6

The commenter suggested that the regulation clarify that an employer has no obligation to determine the AQI for finished buildings of third parties. In circumstances where employees visit buildings of third parties, it is not feasible for the employer to evaluate the air filtration systems at each and every building the employee enters for the purpose of determining whether the building is exempt from the standard. Only the building owner or operator can realistically verify that the mechanical ventilation system is adequately performing, and the employer whose employees are entering a finished commercial or office building can reasonably assume the building's air is being adequately filtered.

Response: The Board is not persuaded by the comment. The regulation does not require employers to determine the particular type of air filtration system used at all indoor workplaces or to test the performance of third parties' filtration systems. By law, employers are responsible for providing a safe and healthful workplace; in general, employers must comply with Title 8 even if their workers are on property owned or controlled by another person or entity.

Comment 9.7

The commenter recommended that the regulation be amended so that an employer may, in identifying potential harmful exposures, rely upon the current or forecasted AQI for the general geographic area where an employee is expected to work in a given day. The commenter stated that the employer should not be expected to determine the AQI at each location repeatedly throughout the day, especially where the locations are in geographic areas subject to the same or similar AQI forecast and the employee is moving from one site to another.

Response: Please see response to comments 7.4 and 9.5.

Comment 9.8

The commenter stated that N95s may be difficult or impossible to acquire in light of shortages caused by the COVID-19 pandemic or at other times when the supply is limited. The commenter suggested that the regulation include flexibility, similar to Federal OSHA Enforcement Guidance, permitting employers to provide other types of respirators in times of shortage. The commenter noted that such guidance allows consideration of other filtering facepiece respirators, such as N99, N100, R95, R99, R100, P95, P99, and P100, and also allows extended use, reuse, and certain foreign-certified respirators under some conditions. The commenter suggested that the regulation be amended to include a permanent level of flexibility, and to avoid the ambiguity regarding cleaning, replacing, storing, and maintaining respirators "as appropriate," by including the following language to be applicable during shortages: "the same employee may be permitted to reuse or otherwise extend the use of the respirator as long as the respirator maintains its structural and functional integrity."

Response: Please see response to comments 2.1, 2.9 and 9.8. Regarding language concerning cleaning, replacing, storing, and maintaining respirators, please see response to comment 2.16.

The proposed regulation, as written, permits use of respirators other than N95s provided that they are NIOSH-approved devices that protect wearers from inhalation of PM2.5. These may include

N99, N100, R95, R99, R100, P95, P99, and P100, or elastomeric respirators. Filtering facepiece respirators are disposable and are not designed or manufactured to withstand reuse. For reusable respirators, filters should be replaced if they get damaged, deformed, dirty, or difficult to breathe through. The Board notes that guidance from state, federal, and local authorities regarding respiratory protection for COVID-19 does not apply to respiratory protection for particulates. The hazard posed by infectious disease is very different than the hazard posed by particulates.

Comment 9.9

The commenter recommended against the use of a “hierarchy of controls” in subsection (f), because of the unique situation of protecting against wildfire smoke. The commenter stated that, unlike in a workplace chemical exposure, there is “no indication that engineering controls can tangibly or more effectively than other types of controls eliminate wildfire smoke risk for employees whose regular job duties require that they work outdoors, such as construction workers and airport ramp agents.” Easily administered administrative controls such as relocating work to another location not impacted by wildfire smoke may be more effective and desirable than implementing time- and labor-intensive engineering controls at the current work location, and may eliminate the hazard altogether. Administrative controls such as work relocation, work intensity reduction or the provision of additional rest breaks all work to effectively reduce employee exposure. The cost to implement engineering controls will be significantly higher than the cost of various administrative controls that will be just as or more effective in risk mitigation. The commenter recommended that the regulation be amended to allow an employer to reduce employee exposure by “engineering controls, where practicable, or alternatively administrative controls, or a combination of the two.”

Response: The Board does not agree that the proposed language is necessary. The Board appreciates that engineering controls are not feasible at many outdoor worksites; engineering controls are required only when they can be feasibly implemented. As noted by the commenter, effective and easily implemented administrative controls will often remove employees from the hazard *entirely*, for instance by rescheduling tasks so that work can be performed at locations or times when the current AQI is below 151, or in places that fall within an exception to the proposed regulation’s scope. This will take those employees outside the scope of regulation entirely, in which case their employers will have no need to evaluate engineering controls at all. Please also see response to comments 2.2 and 5.11.

Comment 9.10

The commenter stated that any training, instruction and other communication requirement regarding wildfire smoke hazards should be limited to outdoor workers who may actually be exposed to wildfire smoke. The commenter recommended that the regulation be amended to apply only to “employees working in outdoor occupations or who are otherwise expected to encounter non-incident exposure to wildfire smoke in the regular course of their work duties.”

Response: Please see response to comment 9.1. The Board notes that the proposed regulation does not require employers to provide training to workers who have no possible exposure to wildfire smoke; such workers would not fall within the scope of the regulation.

Comment 9.11

The commenter proposed the following language be omitted from Appendix B: “Loose-fitting powered air purifying respirators may be worn by people with facial hair since they do not have seals that are affected by facial hair.” The commenter stated that this inaccurately implies that employers may be required to provide \$1,000.00 powered air purifying respirators to employees with facial hair and fails to indicate what employers should do if an employee refuses to shave. The commenter noted that anti-discrimination laws might apply in that situation, described such laws, and asked whether employers providing respirators for mandatory use could either require employees to shave or send them home. The commenter recommended the following amendment to Appendix B:

(h) How to properly put on, use, and maintain the respirators provided by the employer.

To get the most protection from a respirator, there must be a tight seal around the face. A respirator will provide much less protection if facial hair interferes with the seal, and shaving facial hair will provide the best fit. A loose-fitting powered air purifying respirator may be worn by people with facial hair since they do not have seals that are affected by facial hair but the employer is not required to provide employees powered air purifying respirators. An employer may deny work to an employee with facial hair who refuses to shave facial hair under circumstances where respiratory protection controls apply.

Response: The Board is not persuaded by the comment. The voluntary use of filtering face respirators does not require that workers shave facial hair, and the proposal does not say that employers are required to provide powered air purifying respirators. Employers’ obligation to provide specific types of respirators for mandatory use on antidiscrimination grounds, or the legality of denying work to employees who have facial hair for reasons associated with a protected class, is both outside the jurisdiction of this Board and outside the scope of this proposal. The Board notes, however, that mandatory respirator use is required in many circumstances, under existing regulations. The Board presumes that employers complied with those regulations in a manner consistent with antidiscrimination laws and will continue to do so. Please also see response to comment 7.13.

The Board thanks the commenter for their input and participation in the rulemaking process.

10. Miles Heller, Manager, Policy & Regulatory Affairs, on behalf of Marathon Petroleum, by written comments dated May 18, 2020.

Comment 10.1

The commenter asked that the “NOTE” in subsection (f)(3)(A) clarify that the exemption from fit testing and medical evaluation contained in (f)(3)(A) also applies to the required respiratory use in the rare circumstances described by (f)(3)(B).

Response: The Board is not persuaded by the comment. The “note” provides useful information to the reader about a relevant portion of existing section 5144. Exempting fit testing and medical evaluation for mandatory respirator use would violate existing section 5144.

The Board thanks the commenter for their input and participation in the rulemaking process.

11. Michael Parreira, Chief Safety Officer, on behalf of the California Department of Water Resources, by written comments dated May 21, 2020.

Comment 11.1

The commenter disputed the estimated per-unit cost of N95 respirators of \$0.75. The commenter stated that small employers, without the Division’s knowledge of where to buy respirators, will get them at Home Depot for \$3 each or more. There are also costs associated with procuring, warehousing, and distributing N95s. The commenter disputed the estimate, for purposes of calculating costs, of one N95 per day per employee. The commenter estimated that the Dept. of Water Resources employees would require two to three N95 masks per day. The commenter stated that wildfire particulate matter and soot will clog the N95s, making it difficult for the employee to breathe. A clogged filter, unlike a virus, cannot be corrected by disinfecting, and the Division has long held that N95s are single use and, once they are removed for breaks and lunch, must be discarded. The commenter also suggested that the Board should not rely on cost data from the Public Agency Safety Managers Association (PASMA) without further information.

Response: For the number and cost of N95s, please see response to comment 2.22. Employers are not required to warehouse any particular stockpile of N95s; please see response to comment 2.9. The cost of distributing respirators to employees for donning has been estimated as part of the time needed for “training and use” of respirators. The estimated cost was increased by five minutes, relative to the estimates prepared for the emergency regulation section 5141.1, in part to account for the time associated with handing out/putting on respirators. The total minutes required for training and use has subsequently been increased a second time, in response to comments; see response to comment 2.23. Given that the proposed regulation applies only occasionally, the Board expects that many employers will conduct training and hand out respirators at time same time, in the field.

Comment 11.2

The commenter disputed the estimate of 20 minutes for the training required by this regulation. Appendix B is three and a half pages of detailed technical information; gathering employees and having them fill out documentation would require 10 minutes by itself.

Response: Please see response to comments 2.23 and 3.10.

Comment 11.3

The commenter stated that the cost analysis should address the implementation of engineering controls such as upgrading building filtration and replacing vehicles that do not have filtration, because the employer is required to use these controls when feasible.

Response: The Board is not persuaded by the comment. The regulation does not mandate updating building filtration or replacing vehicles. Indeed, in most cases employees working in buildings or vehicles will not be covered by the regulation, under proposed subsections (a)(2)(A) and (B).

Comment 11.4

The commenter stated that the proposed regulation includes a requirement for mandatory respirator use, so the cost of medical evaluation, fit testing and training should be included. It cannot be assumed that all affected employers already have a Respiratory Protection Program covering the employees affected by the regulation.

Response: Please see response to comment 2.26. The Board has not assumed that employers have existing respiratory protection programs.

The Board thanks the commenter for their input and participation in the rulemaking process.

12. Spencer Johnson, EHS Manager, Western Region, on behalf of Kemira Water Solutions, by written comments dated May 6, 2020.

Comment 12.1

The commenter expressed concern that N95s may be difficult or impossible to acquire in light of shortages caused by the COVID-19 pandemic. The commenter recommended that the regulation be amended to allow flexibility, so that employers could substitute other masks, such as surgical masks, noting that half face or full face respirators may be difficult for employees to work with in an AQI of 151 or above, and most employers do not have these respirators.

Response: The Board is not persuaded by the comment. Surgical masks do not offer any inhalation protection against PM2.5. Please see response to comments 2.1 and 9.8.

The Board thanks the commenter for their input and participation in the rulemaking process.

13. David Wilde, Industrial Hygiene Program Manager, and Kim Racine, EH&S Manager, on behalf of Genentech, Inc. by written comments dated May 20, 2020.

Comment 13.1

The commenters expressed concern that N95s may be difficult or impossible to acquire in light of shortages caused by the COVID-19 pandemic. The commenters stated that the regulation lacks clarity, because Appendix B describes an N95 as “minimum level of protection for wildfire smoke,” but does not explain what other levels are permissible. Employers and employees may believe that N95s are required, and that stockpiling these devices is the most straightforward way to ensure future compliance with the proposed rule. The commenter described and quoted CDC and FDA guidance allowing alternatives to N95 respirators under some conditions. The commenter requested the following amendment:

(f)(3) Control by Respiratory Protective Equipment.

(A) Where the current AQI for PM2.5 is equal to or greater than 151, but does not exceed 500, the employer shall provide a sufficient number of respirators to all employees for voluntary use in accordance with section 5144 and encourage employees to use respirators. Respirators shall be NIOSH-approved or equivalent foreign-certified devices that effectively protect the wearers from inhalation of PM2.5, ~~such as N95 filtering facepiece respirators.~~

Respirators shall be cleaned or replaced as appropriate, stored, and maintained, so that they do not present a health hazard to users. Employers shall use Appendix B to this section in lieu of Appendix D to section 5144 for training regarding voluntary use of respirators.

NOTE: For those employees whose only use of respirators involves the voluntary use of filtering facepieces, ~~such as N95 respirators,~~ fit testing and medical evaluations are not required by section 5144.

(f)(3)(B) Where the current AQI for PM2.5 exceeds 500, respirator use is required. Respirators shall be used in accordance with section 5144. The employer shall provide respirators with an assigned protection factor, as listed in section 5144, such that the PM2.5 levels inside the respirator correspond to an AQI less than 151. Foreign-certified devices that offer equivalent protection levels are permitted for use.

Appendix B

(g)(1) Employers shall select respirators certified for protection against the specific air contaminants at the workplace. Respirators must be certified by NIOSH, the National Institute for Occupational Safety and Health of the U.S. Center for Disease Control and Prevention, or foreign-certified under equivalent standards. A label or statement of certification should appear on the respirator or respirator packaging. It will list what the respirator is designed for (particulates, for example).

Surgical masks or items worn over the nose and mouth such as scarves, T-shirts, and bandannas will not provide protection against wildfire smoke. ~~An N95-~~ properly fitted filtering facepiece respirator, is shown in the image below, ~~is the minimum level of protection for wildfire smoke.~~

(h) How to properly put on, use, and maintain the respirators provided by the employer.

To get the most protection from a respirator, there must be a tight seal around the face. A respirator will provide much less protection if facial hair interferes with

the seal. Loose-fitting powered air purifying respirators may be worn by people with facial hair since they do not have seals that are affected by facial hair.

The proper way to put on a respirator depends on the type and model of the respirator.

For those who use an ~~N95 or other~~ filtering facepiece respirator mask that is made of filter material:

Response: The Board is not persuaded by the comment. The proposed regulation clearly states that permissible NIOSH approved particulate respirators include N95s; it does not state that N95s are the only type of respirator permitted. Please see response to comments 2.1, 2.9 and 9.8.

The Board thanks the commenters for their input and participation in the rulemaking process.

14. Elda Brueggemann, Director of Environmental and Safety, on behalf of Western Agricultural Processors Association and California Cotton Ginners and Growers Association, by written comments dated May 19, 2020.

Comment 14.1

The commenter requested that subsection (a)(2), regarding an exemption for certain enclosed structures and vehicles with openings “kept closed except when necessary to open doors to enter or exit,” be amended to include additional workplaces, for example warehouses and food manufacturing facilities that use plastic-curtain doors (i.e. PVC curtains) and operation of forklifts to move product and materials going in and out of warehouses. These doors must stay open for extended periods to help workflow and provide necessary ventilation.

Response: Please see response to comment 5.2.

Comment 14.2

The commenter expressed concern that N95s may be difficult or impossible to acquire in light of shortages caused by the COVID-19 pandemic and the needs of the healthcare industry. The commenter urged the Board to keep this in mind with regard to agricultural businesses attempting to buy N95s.

Response: Please see response to comments 2.1.

The Board thanks the commenter for their input and participation in the rulemaking process.

15. James Mackenzie, Principal Manager, on behalf of Southern California Edison, by written comments dated May 21, 2020.

Comment 15.1

The commenter expressed concern for due process, stating that the Division is acting too quickly and may be able to simplify the approach of the regulation. The commenter is unaware of a

financial impact analysis, spent over one million dollars to implement the emergency section 5141.1, believes peers spent comparable or greater amounts and stated that the Board cannot appropriately convert an emergency regulation into a permanent one without more analysis. The commenter noted that this regulation has not gone through the same stakeholder discussions as Permissible Exposure Limits.

Response: The Board disagrees with this comment. An economic and fiscal analysis was completed, and the conclusions were included in the Initial Statement of Reasons. Further analysis, in light of comments and the changing economic situation, is included in the Final Statement of Reasons. The Board has taken public comments and has complied with all legal and regulatory requirements for a Certificate of Compliance making permanent the emergency 5141.1, as amended. The Board thanks the commenter for the estimate of its costs.

Comment 15.2

The commenter stated that wildfire smoke itself results from an emergency, and emergencies require greater flexibility and relief from regulatory burdens that can slow or hinder recovery efforts. The commenter requested a regulatory approach similar to section 5141(c) which provides relief from the usual hierarchy of controls during emergencies, to better allow the use of respiratory protection, rather than minor changes to the emergency regulation.

Response: Please see response to comment 2.2.

Comment 15.3

The commenter stated that AQI is not an appropriate basis for an occupational health regulation, because it was developed for the general public, rather than for occupational exposure. The commenter stated that health and safety experts have worked with Permissible Exposure Limits (PELs) for an eight-hour time-weighted average to determine employee exposure to a contaminant. The Division has not gone through a HEAC study, in a similar fashion to that of lead. The commenter recommended that the occupational exposure limits for PM_{2.5} should be established as full shift Time Weighted Averages, ceiling, and/or short-term exposure limits based on health hazard assessments for particulate exposures during wildfire events, where the dose is both a function of concentration and duration.

Response: Please see response to comments 2.3.

Comment 15.4

The commenter stated that the regulation should not apply below an AQI for PM_{2.5} of 151. PM_{2.5} levels below 150 are solely intended to convey warnings to sensitive population groups.

Response: Please see response to comment 2.4.

Comment 15.5

The commenter made an essentially identical comment regarding proposed subsection (a)(1)(B) as comments 2.6 and 2.10.

Response: Please see response to comments 2.6 and 2.10.

Comment 15.6

The commenter stated that the proposed regulation incorrectly presumes that all industrial vehicles have cabin air filters. The commenter stated that this was untrue for industrial vehicles or base model passenger vehicles, and that 60% of the commenter's fleet lacked air cabin filters. Many of the cabin air filters in vehicles do not operate when the "recirculated air" option is in use as it typically would be during a wildfire event. The commenter recommended the same language proposed in comment 2.11.

Response: Please see response to comment 2.11.

Comment 15.7

The commenter stated that subsection (f)(3)(B) is inconsistent with other respiratory protection standards and should not require measurement of levels inside the respirator. The commenter stated that this is challenging for employers and questionable for risk reduction.

The commenter requested the following amendment:

(B) Where the current AQI for PM_{2.5} exceeds 500, ~~respirator use is required~~ respirators shall be used in accordance with section 5144. The employer shall provide respirators with an assigned protection factor, as listed in section 5144, which reduces the exposure to below an AQI for PM_{2.5} of 500. ~~such that the PM_{2.5} levels inside the respirator correspond to an AQI less than 151.~~

Response: Please see response to comment 2.13.

Comment 15.8

The commenter stated that the Respiratory Protection Standard (8 CCR 5144) and its Federal OSHA equivalent were written for situations in which there is a regular exposure to an atmospheric hazard or hazards. These hazards are to be addressed through the hierarchy of controls. The commenter argued that wildfire smoke above any designated trigger value is not a regular exposure, so section 5144 should not be applied to any emergency wildfire situations.

Response: The Board disagrees with this comment. Nothing in section 5144 prevents the regulation of PM_{2.5} from wildfire smoke. To the extent the commenter is arguing that the hierarchy of controls should not be included in the proposed regulation, please see response to comments 2.2, 5.11, and 9.2.

Comment 15.9

The commenter noted that the assigned protection factor for N-95s is 10, so employees would use the same type of respiratory protection for an AQI of 501 as they would for an AQI of 150. The commenter further stated that fit testing and medical evaluations for mandatory respirator use requires time not available during an emergency, and that no respirator that has been approved as Fire Resistant for use by electrical workers performing energized work necessary to

take out downed power lines and restore power. The commenter is not aware of the scientific justification for this requirement, and states that it will be virtually impossible for an employer to determine at what point it is necessary to switch to full-face or Powered Air Purifying Respirators (PAPRs) when the AQI reaches 151 for PM2.5 inside the N95 respirator.

Response: Please see response to comments 2.1, 2.13, and 3.14.

The Board thanks the commenter for their input and participation in the rulemaking process.

16. Nicole Marquez-Baker et al on behalf of Worksafe, California Rural Legal Assistance Foundation, California Labor Federation AFL-CIO, and State Building and Construction Trades Council of California, AFL-CIO, by written comments dated May 21, 2020.

Comment 16.1

The commenters supported the fact that the regulation is based on the Air Quality Index (AQI), clarifies employer obligations, and provides basic protections for workers while exposed to fine particulate matter (PM2.5) in wildfire smoke. The commenters noted the need to adopt a “strong and effective permanent standard to protect all workers in all industries from exposure to wildfire smoke,” and stated: “It is critical to ensure the Division has the resources and support it needs to enforce” the regulation.

Response: The Board acknowledges the commenters’ support for the proposal.

Comment 16.2

The commenters opposed any changes to the language in the temporary or permanent standard to relax the regulatory requirements.

Response: The Board acknowledges the commenters’ opposition to any changes to the language in the proposal that would relax the requirements.

Comment 16.3

The commenters requested that the regulation should be amended to apply to a workplace at a local AQI for PM2.5 of 101, rather than the current trigger of 151. The commenters stated that this is needed because the warning levels in the AQI are based on protecting the general public who spend little time outdoors, not workers who are performing strenuous outdoor work for 8 or more hours a day, and therefore have greater exposures. There is no specific threshold for PM2.5 below which health impacts do not occur. A significant proportion of workers are sensitive to wildfire smoke because they often have asthma or other common health conditions. Known health impacts associated with wildfire smoke PM2.5 include an increase in chronic obstructive pulmonary disease symptoms scores, asthma symptoms, increased corticosteroid and rescue inhaler use. According to the commenters, there is evidence that exposure to elevated levels of PM2.5 and other pollutants increases susceptibility to severe COVID-19 illness by reducing the lungs’ ability to clear pathogens and by worsening underlying respiratory and cardiovascular disease. A nationwide study conducted by Harvard School of Public Health found that an

increase in 1 ug/m³ of PM2.5 was associated with a 15% increase in COVID-19 mortality. The commenters stated that air pollution increased risk of death during the SARS outbreaks in 2003; higher PM2.5 levels located in China's Hubei province correlated with higher COVID-19 illness and mortality rates; and researchers at Dali University examined air pollution levels and COVID-19 illness and fatality rates in China, Italy and the US and found higher rates of infection in areas with higher levels of PM2.5 and other pollutants. In support of this comment, the commenters included the following documents with the commenters' letter:

- (1) April 20, 2020 Physician's Weekly Article titled Covid-19: Air Pollution May Increase Mortality Risk.
- (2) Brandt, E.B., Beck, A.F., Mersha, T.B., Air pollution, racial disparities and COVID-19 mortality, *Journal of Allergy and Clinical Immunology* (2020).

The commenters also cited the following documents:

- (3) Sutherland, E.R., Make, B.J., Vedal, S., Zhang, L., Dutton, S.J., Murphy, J.R., Silkoff, P.E., 2005. Wildfire smoke and respiratory symptoms in patients with chronic obstructive pulmonary disease. *J. Allergy Clin. Immunol.* 115 420–422;
- (4) Elliott, C.T., et. al (2013). Time series analysis of fine particulate matter and asthma reliever dispensations in populations affected by forest fires. *Environ. Health Glob. Access Sci. Source* 12, 11;

The commenters also provided a link to the following documents:

- (5) Qu, et. al., A national study on long-term exposure to air pollution and COVID-19 mortality in the US, (last accessed May 20, 2020) medRxiv 2020.04.05.20054502.
<https://doi.org/10.1101/2020.04.05.20054502>.
- (6) Pansini & Fornacca, Higher virulence of COVID-19 in the air-polluted regions of eight severely affected countries, (last accessed May 20, 2020) medRxiv 2020.04.30.20086496.
<https://doi.org/10.1101/2020.04.30.20086496>.

Response: The Board recognizes that an AQI of 101 to 150 is unhealthy for sensitive groups and thanks the commenters for additional evidence regarding the seriousness of the health hazard posed by PM2.5, and the comorbidity between PM2.5 exposure and COVID-19. For the purposes of the emergency section 5141.1 and the present certificate of compliance rulemaking, which must be completed before the emergency regulation expires, the Board has determined that it will regulate AQI levels deemed unhealthy for the general population as a whole. The Board declines to expand the scope of this regulation to address an AQI for PM 2.5 (unhealthy for sensitive groups) but notes that the Division has announced its intention to conduct advisory committee meetings to evaluate any further proposed changes to wildfire smoke protections.

Regarding strenuous work over eight hour periods or longer, the proposed regulation requires administrative controls which may include reduced activity levels, rest periods or less time spent outside.

Comment 16.4

The commenters requested the following amendment:

(a)(1)(B) ~~The employer should~~ It is reasonably anticipated that employees may be exposed to wildfire smoke.

Response: The Board disagrees that the proposed change is required. The proposed language does not appear to be a substantive amendment, since the same reasonableness standard would apply.

Comment 16.5

The commenters expressed concern about the exemptions in subsections (a)(2)(A) and (a)(2)(B) because there are no criteria regarding the design or maintenance of building and vehicle ventilation systems, and without effective filtration, the air inside buildings and vehicles may be the same or worse than the outdoor AQI. The commenters noted that section 5142 contains “minimal maintenance requirements for building ventilation systems,” but requested that indoor workplaces be exempt from the standard only upon “a demonstration of effective ventilation and filtration.”

Response: The purpose of the proposed regulation is to protect those employees most likely to be affected by the hazard of wildfire smoke, namely those working outside or in unfiltered outdoor air. The Board has determined that this is a reasonable focus for the proposed regulation and declines to extend the rulemaking in order to generally regulate air quality within buildings and vehicles.

Comment 16.6

Commenters stated that (a)(2)(B) requires that windows to the cabs of vehicles be kept closed, which may not be safe under some operating conditions.

Response: The Board agrees that closed windows can pose hazards but does not agree that amendment is required. Vehicles equipped with filtered air via cabin filters reduce employee exposure to wildfire smoke and its harmful effects. Keeping windows open would defeat this purpose. This exemption does not relieve employers of responsibility for any other hazards which may be caused by closed windows, for instance heat hazards. If other hazards preclude closed windows, then employers must comply with the proposed regulation and use feasible controls and/or respiratory protection in accordance with the provisions of the proposed regulation.

Comment 16.7

Commenters stated that harmful exposures should be identified before workers report to work, so that the appropriate training, information, and protection can be provided before they start work. Commenters stated that this training period should be paid work time. Commenters asked that the regulation for subsection (c) (incorrectly described as subsection (d)) be amended to state:

Identification of harmful exposures. The employer shall determine employee exposure to PM2.5 for worksites covered by this section before each shift. Training and instructions about protective measures shall be provided at the beginning of the shift.

Response: Please see response to comment 7.4.

Comment 16.8

The commenters supported the changes to the subsection “Communication” relative to the emergency regulation, stating that the changes were important to workers with limited or literacy and workers with limited or no English.

Response: The Board acknowledges the commenters’ support for this proposed language.

Comment 16.9

The commenters requested that the “Communication” subsection (d)(1) (incorrectly described as subsection (e)(1)(C)) add the following language, which the commenters described as similar to existing section 3395(f)(2) [outdoor heat]:

The right to obtain medical treatment without fear of reprisal and the employer’s procedures for responding to signs and symptoms of wildfire smoke exposure including but not limited to how first aid measures and emergency medical services will be provided.

Response: The Board disagrees with this comment. The commenters’ concerns are addressed in the proposed regulation’s training requirements, specifically Appendix B subsection (b).

Comment 16.10

The commenters stated that the most important means of reducing employee exposure to harmful wildfire smoke is to relocate those workers who are not essential to the emergency response to areas that are less impacted by smoke, or by providing filtered air to employee work areas. They requested that administrative controls be amended to require mandatory hourly rest periods triggered at a certain AQI threshold, ideally 101; enclosed rest areas with effective PM2.5 filtration, where feasible; and training on the right to a relief period, the triggering AQI level, and “the health implications of failing to take the relief break.” The commenters stated that workers should not have to wait until meal or rest breaks for improved AQI and noted, “...workers who are particularly vulnerable to workplace abuses, such as undocumented workers, workers who don’t speak English, or workers of color, may not take advantage of their breaks, unless the employer is required to provide them.” The commenters cited a study comparing the health benefits and economic costs to homes with indoor air filtration interventions among mortality outcomes, which “showed reduced negative health impacts, measured by a reduced likelihood of hospital admissions, and benefits exceeding costs among non-portable air filter interventions.” The commenters recommended the following amendment to subsection (f)(2), incorrectly described as (g)(3):

Administrative Controls. Whenever engineering controls are not feasible or do not reduce employee exposures to PM_{2.5} to less than a current AQI of 101 [sic], the employer shall implement administrative controls, if practicable, such as relocating work to a location where the current AQI for PM_{2.5} is lower, changing work schedules, reducing work intensity, or providing additional rest periods. A relief period of 10 minutes shall be required after each hour of work when AQI due to wildfire smoke is 101 or greater because of the added strain of working in smoky conditions.

Enclosed rest and meal areas with effective PM_{2.5} filtration must be provided unless demonstrated not to be feasible.

In support of this comment, the commenters cited the following document: Fisk, W.J. et.al, (2017) Health benefits and costs of filtration interventions that reduce indoor exposure to PM_{2.5} during wildfires. Indoor Air 27(1):191-204).

Response: The Board agrees that engineering and administrative controls must be considered prior to implementing respiratory protection but disagrees that the specific control of a rest break, or a rest area with filtration, should be expressly required by the regulation. Please see response to comments 16.3 and 16.5.

Comment 16.11

Commenters requested that the regulation's training provisions be modeled on the heat illness prevention standard and amended to include specific training requirements in subsection (e) (incorrectly described as (f)), as follows, with the contents also included in Appendix B:

Training and instruction. As required by section 3203, the employer shall provide employees with effective in-person training and instruction [sic] at the beginning of the first shift when the AQI is equal to or greater than 100 in a language easily understood by employees. At a minimum, this shall cover:

(1) Health effects of wildfire smoke exposure and health conditions that can increase sensitivity to wildfire smoke.

(2) The right to obtain prompt medical treatment and the employer's procedures for responding to signs and symptoms of wildfire smoke exposure including but not limited to how first aid measures and emergency medical services will be provided.

(3) The employer's procedures for checking the AQI for PM_{2.5} and informing employees when the level exceeds 100 and how they can check the AQI.

(4) The employer's methods for protecting employees from wildfire smoke exposure

(5) Benefits and limitations of using a respirator, including how to put on a respirator, determine when the respirator or filters need to be replaced, how to obtain a replacement respirator, how facial hair can prevent a seal and advice to ask a healthcare provider about any preexisting medical conditions that may be aggravated by working in smoke or wearing a respirator;

(6) The employer's two way communication system for i) alerting employees when the air quality is harmful and what protective measures are available and ii) encouraging employees to inform employer or supervisor, without fear of reprisal, if they think air quality is getting worse or if they are suffering any symptoms which may be due to air quality.

This training shall contain the information in Appendix B.

At the start of each shift when the AQI is greater than 100/150, a brief meeting shall be conducted to review wildfire smoke exposure prevention measures and encourage use of respirators.

Response: The Board is not persuaded by the comment. Including the training content in subsection (e) [Training and instruction] as well as Appendix B is an unnecessary change due to its redundancy. The Board believes that it is sufficient to require training and instruction to be "effective," consistent with section 3203, rather than additionally specifying daily meetings or that training must be in-person. Please see also response to comments 7.4 and 16.3.

Comment 16.12

The commenters requested that the regulation be amended to require replacement of disposable filtering facepiece respirators "at least at the beginning of each shift," because they get soiled and because "[r]epeated donning and doffing, as well as storage, may deform the respirator so that it no longer forms a facepiece seal." The commenters recommended the following amendment:

(g)(4) Control by Respiratory Protective Equipment.

(A) Where the current AQI for PM_{2.5} is equal to or greater than ~~100~~¹⁵¹, but does not exceed ~~300~~⁵⁰⁰ the employer shall provide a sufficient number of respirators to all employees for voluntary use in accordance with section 5144 and encourage employees to use respirators...

Respirators shall be cleaned or replaced as appropriate, stored, and maintained, ~~and replaced~~ so they do not present a health hazard to users. Employers shall use Appendix B to this section in lieu of Appendix D to section 5144 for training regarding voluntary use of respirators.

Disposable N95 respirators and other filtering facepiece respirators shall be replaced at minimum at the start of each shift.

Response: Although the commenters referred to subsection (g)(4)(A), it appears that this comment is actually related to (f)(3)(A). The proposed regulation already includes the requested language, with the exception of the final sentence. The Board disagrees that it is necessary to

specify that respirators be replaced at the start of each shift; the proposed regulation already requires respirators to be replaced as appropriate, and the manufacturers of filtering facepiece respirators such as N95 provide specific requirements for disposal, depending on the particular respirator. The Board agrees, however, that it is important to distinguish between respirators that are reusable and filtering facepiece respirators that require replacement. To ensure that this is clear, the Board has made additional modifications to Appendix B subsections (g) and (h). Please see the first 15 Day Notice. Please also see response to comment 16.3.

Comment 16.13

The commenters expressed disappointment that respirator use is mandated at a current AQI for PM_{2.5} of 500 rather than 300. The commenters state the EPA does not report AQI above 500, so employers can only verify whether the AQI is over 500 using historical maps or their own monitoring. The commenters argued that historical rather than real-time data does not allow an employer to respond with the proper protective equipment, and it may be cost prohibitive for employers to do their own monitoring. The commenters stated that AirNow information is readily accessible for AQI for PM_{2.5} of 300; levels of 301-500 and above are hazardous according to the EPA; and fit-testing and medical evaluation requirements should be imposed at those levels. The commenters stated that the 500 AQI threshold would undermine workers' current protection. The commenters noted that 29 Code of Federal Regulations section 1910.134(a)(2) requires a respiratory program, including fit testing and medical evaluation, where respirators are necessary to protect the health of employees. Thus, because wildfire smoke at levels of above 300 AQI for PM_{2.5} are hazardous, fit testing and medical evaluation are required. The commenters cited a Federal OSHA interpretation available at <https://www.osha.gov/laws-regs/standardinterpretations/2006-02-06-0>.

Response: The Board disagrees with this comment. The proposal is consistent with existing Title 8 regulations and at least as effective as Federal standards. In the specific context of wildfires, which are unpredictable and fast-moving, the Board has determined that it will not require mandatory respirator use until a current AQI for PM_{2.5} is above 500. This will allow employers to provide respirators promptly, without fit testing and medical evaluation. Please see comment 1 and response to comments 3.8.

Comment 16.14

The commenters stated that the exception to a full respiratory protection program for potential arc flash hazards needs to be clearer and time limited. The commenters suggest this revision:

EXCEPTION to subsection (g)(4)(B): Respirator use is not required ~~if the employer demonstrates that~~ for periods of time in which an employee is performing work in which the employee is exposed to an arc flash hazard, however respirators shall be worn for periods of work when there is no exposure to this hazard. The employer's respiratory protection program shall address when respirators are not to be used due to the arc flash hazard,

Response: The Board responds that the proposed regulation does not include the language regarding arc hazards which the commenters seek to change. This comment is outside the scope

of this rulemaking. It appears that the commenters are referring to draft language presented during informal advisory meetings as a means to obtain stakeholder input and which was not included in the proposed rulemaking. Please also see response to comment 3.14.

Comment 16.15

The commenters request that the regulation be amended to state that employees not performing emergency or essential work have a right to refuse work when the air is unhealthy due to wildfire smoke. The commenters understand that this would be enforced by the Division of Labor Standards Enforcement, but believe it's important to include in the permanent standard, because it provides a regulatory standard for employees to exercise their rights under Labor Code section 6311.

Response: The Board does not believe such amendment is required. The proposed regulation does not limit employees' rights to refuse unsafe work under existing law. Rights provided by the Labor Code need not be restated in each regulation in order to apply.

Comment 16.16

The commenters requested that the exception for emergency services be narrowed appropriate to the incident command structure and the State Emergency Plan. The commenters stated that outdoor work should not be allowed within voluntary or mandatory evacuation zones, except work permitted by the authority which has ordered the evacuation. The commenters requested additional protections for workers assisting in evacuations, including procedures for accounting for and maintaining communication between personnel, and procedures for emergency evacuation if the employees' safety is at risk. The commenters suggested the following amendment to (f)(4), incorrectly quoted and described as (g)(1):

In emergencies, including rescue and evacuation, subsections ~~(g)(f)~~(2) and ~~(g)(f)~~(3) do not apply, and employer shall comply with subsection ~~(g)(f)~~(4). Emergencies include utilities, communications, and medical operations, when such operations come under an incident command established for the emergency-
~~are directly aiding firefighting. or emergency response~~

Response: The Board notes that this comment refers to draft language that is not included in the proposed regulation. The Board is not persuaded by the comment. Given the exigencies of wildfires, the Board has determined that respirators may be provided for voluntary use, without fit testing or medical evaluation, during emergency operations, including rescue and evacuation. This also applies to utilities, communications, and medical operations that are directly aiding emergency operations or firefighting operations. Limiting the exception to incident command would reduce its value. Regarding work in evacuation zones, although the hazards present in evacuation zones may in some circumstances constitute a violation of existing Title 8 regulations, the evacuation zones themselves are generally enforced by the designating entities.

Comment 16.17

The commenters referenced additional edits to Appendix B that were not attached to the letter. The commenters also suggested edits to the Spanish translation of the emergency regulation 5141.1.

Response: This comment is outside the scope of this proposal, although the Board thanks the commenter for the suggestions.

The Board thanks the commenters for their input and participation in the rulemaking process.

17. Miles Sarvis-Willburn, Co-Founder, Mask Sonoma, by written comments dated May 19, 2020.

Comment 17.1

The commenter supported the fact that the regulation is based on the Air Quality Index (AQI), clarifies employer obligations, and provides basic protections for workers while exposed to PM2.5 in wildfire smoke. The commenter noted the need to adopt a strong and effective permanent standard to protect all workers in all industries from exposure to wildfire smoke and noted mounting evidence that exposure to elevated levels of PM2.5 and other pollutants increases susceptibility to severe COVID-19 illness.

Response: The Board acknowledges the commenter's support for the proposed regulation.

Comment 17.2

The commenter opposed any changes to the language in the temporary or permanent standard to relax the regulatory requirements. The commenter stated that, during 2017 and 2019 wildfires, huge swaths of the community lacked adequate respiratory protection. Vineyard workers, day laborers, and the unsheltered were outdoors most of the day with no viable personal protective equipment. Most of these workers are now termed "essential," yet their respiratory health was, and is, at risk.

Response: The Board acknowledges the commenter's opposition to any changes to the language in the proposal to relax the requirements and appreciates the commenter's observations.

Comment 17.3

The commenter stated that it has partnered with a major US distribution corporation to access their international supply of PPE, has been able to put major hospitals and local governments in touch with this supply, and understands that there is no shortage of supply. The commenter stated that orders are currently being filled.

Response: The Board acknowledges the commenter's assessment of current PPE supplies.

Comment 17.4

The commenter proposed the following specific changes (bullet points in original):

- Lowering the trigger for application of this standard to AQI for PM2.5 of 101 or greater;
- Requiring employers to identify harmful exposures before the shift starts so that they are prepared to provide appropriate protection and training;
- Requiring employers to clearly communicate to employees such that workers understand the plan for evacuation and have prompt access medical treatment, as detailed in Appendix B;
- Requiring that administrative controls include relocating work not essential to emergency response, requirements for hourly recovery periods, and where feasible, enclosed rest areas with effective filtration;
- Completing in-person training before an employee begins other work tasks where PM2.5 air levels are higher than 101 due to wildfire smoke;
- Requiring pre-shift meetings for review each day modeled on the outdoor heat illness prevention regulation; and
- Lowering the threshold for respiratory control that triggers fit test and medical evaluation from PM2.5 of 501 of 301.

Response: Please see response to comment 7.4, 7.7, 16.3, 16.9, 16.10 and 16.11.

The Board thanks the commenter for their input and participation in the rulemaking process.

18. Louis Rocha, Staff Representative, on behalf of Communication Workers of America, District 9, by written comments dated May 19, 2020.

Comment 18.1

The commenter supported the fact that the emergency section 5141.1, while imperfect, was based on the Air Quality Index (AQI); clarified employer obligations; and provided basic protections for workers while exposed to fine particulate matter (PM2.5) in wildfire smoke. The commenter supported adopting a strong and effective permanent standard to protect all workers in all industries from exposure to wildfire smoke and noted mounting evidence that exposure to elevated levels of PM2.5 and other pollutants increases susceptibility to severe COVID-19 illness.

Response: The Board acknowledges the commenter's support for the proposed regulation.

Comment 18.2

The commenter opposed any changes to the language in the temporary or permanent standard to relax the regulatory requirements. The commenter noted that many of its members are stationary for long hours during their work in wildfire impacted areas. The commenter stated that, as seen with the Covid-19 response in California, in times of crisis workers need the most safety protection. If not mandated, many employers will choose to ignore voluntary recommendations.

Response: The Board acknowledges the commenter's opposition to any changes relaxing the requirements in the proposed regulation. The Board agrees that mandatory protections are

necessary to protect against PM 2.5 from wildfire smoke and has promulgated this regulation accordingly.

Comment 18.3

The commenter stated that the shortage of N95 masks cannot be an excuse for employers to provide this essential PPE. It is critical that employers are made aware that the PPE to minimize inhalation of wildfire smoke will be required for workers.

Response: The Board acknowledges the commenter's support for providing the PPE to workers exposed to wildfire smoke.

Comment 18.4

The commenter recommended changes identical to those suggested in comment 17.4.

Response: Please see response to comments 7.4, 7.7, 16.3, 16.9, 16.10 and 16.11.

The Board thanks the commenter for their input and participation in the rulemaking process.

19. Linda Delp, Program Director, et al on behalf of UCLA Labor Occupational Safety and Health (LOSH) Program, by written comments dated May 21, 2020.

Comment 19.1

The commenters supported the permanent standard to protect workers from exposure to wildfire smoke, stating that a permanent standard is significant given the occupational health & safety impact of wildfires on workers in California and can also serve as a model nationwide for protecting workers during wildfires and other natural disasters.

Response: The Board acknowledges the commenter's support of the proposal.

Comment 19.2

The commenters stated that, three months after the adoption of the emergency measure, Southern California had at least nine wildfires from October to November 2019. In October, the Saddleridge Fire in the Los Angeles San Fernando Valley burned over 8,799 acres, displacing 100,000 community members, and taking the life of one person. During this, the commenters were particularly concerned about workers continuing to work in mandatory evacuation zones; the commenters found evidence of this during the October 2019 Palisades Fire. According to the commenters, the California Department of Forestry and Fire Protection reports 1,321 wildfires to date in 2020. The commenters trained employees about the emergency section 5141.1 and saw a need for more outreach and education for workers and employers regarding existing Cal/OSHA protections.

Response: The Board thanks the commenters for sharing these observations.

Comment 19.3

The commenters stated that wildfire smoke is unhealthy for many workers at 101 or below. Workers trained by commenters and their partners have expressed concerns about pre-existing health conditions that put them at higher risk when exposed to air quality levels below the standard's trigger point. Lowering the trigger for the permanent standard to an AQI for PM2.5 of 101 or higher can ensure the safety of many workers who fall under the "unhealthy for sensitive groups" category.

Response: Please see response to comment 16.3.

Comment 19.4

The commenters emphasized the extremely difficult times workers are experiencing right now, as they struggle to fight through the current COVID-19 pandemic. The commenters stated that there have already been over a thousand wildfires in the state this year, and the trend is expected to continue. The commenters have received questions and concerns from workers about the coexistent wildfire smoke and COVID-19 hazards and believe adoption of the standard will protect workers if they are forced to struggle through two public health emergencies.

Response: The Board acknowledges the commenters' support of the proposal and thanks the commenters for participating in the rulemaking process.

The Board thanks the commenter for their input and participation in the rulemaking process.

20. Jennifer Herman, FNP, Healthcare Professionals for Equality and Community Empowerment (HPEACE), by written comments dated May 21, 2020.

Comment 20.1

The commenter encouraged the Board to not delay or relax any of the requirements within either the temporary or permanent wildfire smoke standards. The commenter stated that evidence shows that exposure to elevated levels of PM2.5 and other pollutants increases susceptibility to severe COVID-19 illnesses and that it is well established in the medical and epidemiological literature that acute and chronic exposure to particulate matter is associated with deleterious effects on many aspects of human health, most notably the respiratory and cardiovascular systems. Respiratory diseases include asthma, chronic obstructive pulmonary disease, and lung cancer. Cardiovascular diseases include an increase in myocardial infarctions ("heart attacks"), irregular heart rates, stroke, hypertension and atherosclerosis. The commenter stated that these outcomes can be prevented with appropriate mask use and would concern businesses because of decreased worker productivity.

In support of its comment, the commenter provided the following links:

<https://www.epa.gov/pm-pollution/health-and-environmental-effects-particulate-matter-pm> [EPA page titled "Health and Environmental Effects of Particulate Matter (PM)"]

<https://www.pressdemocrat.com/news/8217273-181/northern-california-wildfire-smoke-linked?sba=AAS> ["Northern California wildfire smoke linked to serious health risks, emergency room visits," April 13, 2018, Mary Callahan (The Press Democrat)]

<https://www.ncbi.nlm.nih.gov/pubmed/23599837> [“The impact on emergency department visits for respiratory illness during the southern California wildfires,” Dohrenwend, Paul et al, West J Emerg Med 2013 Mar;14(2):79-84.]

Response: The Board acknowledges the commenter’s opposition to delaying or relaxing the standard and thanks the commenter for the information provided.

Comment 20.2

The commenter stated that wildfire smoke exposure leads to increased emergency department use, due to respiratory and cardiovascular complaints, and stated that Sonoma County emergency room nurses have stated that cleaning, PPE use, and reduced staff involved in patient care during the pandemic slows their work, noting that transporting a patient for an X-ray has gone from thirty minutes to upwards of two or even three hours. The commenter expressed concern that pandemic-related emergency room surges could meet wildfire smoke exposure surges and further congest the healthcare system, which is strained from the pandemic. The use of a particulate respirator to protect workers from wildfire smoke can prevent them from needing emergency department care and thus decrease the demand on healthcare systems. Emergency room visits may expose workers to COVID-19 while seeking care exposure. As shortness of breath will be the presenting complaint, the commenter stated, such workers would be placed in areas of other possible COVID-19 patients where they may be exposed and will increase the workload of healthcare workers. Additionally, emergency room visits will lead to lost work time and decreased productivity. The commenter stated that, for workers that go to a clinic rather than an emergency room, a first line treatment for shortness of breath is nebulized albuterol, but many clinics cannot offer that any longer because it increases the risk of COVID-19 exposure. The commenter noted that pandemic-related telemedicine has limited in-person patient care and that, given COVID-19, it is in our best interest to increase protections to workers.

Response: The Board acknowledges the commenter’s support for respiratory protection requirements for workers exposed to wildfire smoke.

Comment 20.3

The commenter stated that, at the end of November 2020, when we may still be in the expanding wildfire season, the emergency regulation 5141.1 should still be in place, and perhaps even stronger, so there is no gap in protection.

Response: Although this comment is outside the scope of the rulemaking proposal, the Board notes that emergency section 5141.1 is still in place.

Comment 20.4

The commenter stated that the fact the country is reopening signals that we have adequate N95 masks to meet healthcare needs. The N95 supply, along with other personal protective equipment or PPE, and the rate at which healthcare workers use up that supply, called the PPE Burn Rate, is closely monitored as a part of an overall assessment of readiness to progress in re-opening. The commenter notes that there are other particulate respirators available, such as the N100 or P100. Even if there were difficulty in the N95 supply line, there are other appropriate masks on the

market, which may even be more financially feasible as a disposable N95 will only work for up to 8 hours and a re-usable particulate respirator, such as a half face reusable respirator that has replaceable filters will last many months or a year. The commenter stated that a cloth mask, surgical mask, or dust mask does not protect workers from wildfire smoke. Those face coverings do not filter particulate matter; they only protect other people from the wearer's respiratory droplets, as in a sneeze or cough. The commenter shared her personal experience about the difficulties wearing an N95 or N100 masks in wildfire smoke, even with minimal exertion, and the headache she experienced if she removed it for more than a minute.

Response: The Board acknowledges the commenter's assessment regarding respirator supplies. The Board agrees with the commenter that cloth, surgical or dust masks do not provide protection against the harmful effects of wildfire smoke inhalation. The Board agrees that, once the current respirator shortage ends, some employers may find that reusable respirators with replaceable filters are less expensive than N95s. That would depend on the specific respiratory protection needs of an employers' workforce. However, given the fleeting nature of wildfire smoke events, the Board has not presumed these costs savings and has estimated that most employers will prefer to use disposable respirators for the hazard of wildfire smoke.

Comment 20.4

In support of lowering the trigger for application of this standard to an AQI for PM_{2.5} of 101 or greater, the commenter stated that many undocumented workers do not access the healthcare system due to fear of deportation and are more likely to have underlying conditions that have not been diagnosed or are undertreated due to inadequate monitoring. The commenter is aware that COVID-19 disproportionately affects Latinx and Indigenous communities, so adequately protecting them in their workplace is essential. Some patients do not know they have a respiratory condition, believing they are out of shape or have allergies, and lowering the AQI threshold would protect people who do not know they are in a sensitive population. The commenter stated that conditions, such as hypertension that will exacerbate or worsen with exposure to particulate matter, are not unusual.

Response: Please see response to comment 16.3.

Comment 20.5

The commenter recommended changes identical to those suggested in comment 17.4.

Response: Please see response to comments 7.4, 7.7, 16.3, 16.9, 16.10 and 16.11.

Comment 20.7

In support of requiring mandatory respirator use with fit test and medical evaluation an AQI for PM_{2.5} of 301, the commenter stated that there are many people with underlying conditions who will have worsened cardiovascular and respiratory conditions—including premature death, reduced productive work years, and increased demands on the healthcare system—due to lack of adequate protection from wildfire smoke exposure. The commenter states that testing takes time and is not easy to do quickly, particularly during a state of emergency from wildfires; lowering the threshold for fit test and medical evaluation ensures that more workers can access fit testing

and medical care. The commenter notes that respirator masks are not as effective if they do not fit properly.

Response: Please see response to comment 7.7.

The Board thanks the commenter for their input and participation in the rulemaking process.

21. Pamela Murcell, President, California Industrial Hygiene Council, by written comments dated May 21, 2020.

Comment 21.1

The commenter stated that the proposed section 5141.1 is substantially similar to the emergency section 5141.1 and supports adoption of the proposal.

Response: The Board acknowledges the commenter's support for the proposal.

Comment 21.2

The commenter expressed concern on how COVID-19 respiratory protection measures will impact employers' ability to implement the respiratory protection portion of this regulation. Current difficulties in procuring N95 filtering facepiece respirators due to their use against the COVID-19 virus raises serious concern on availability of the N95 respirators during the quickly approaching California wildfire season. The commenter asked whether the Division would provide guidance on acceptable alternatives or would be lenient in regards to enforcement of the requirement to provide N95 respirators when such may not be available.

Response: Please see response to comment 2.1. The Board responds that guidance issued by the Division, and the stringency or leniency of its enforcement efforts, are outside the scope of this proposal.

Comment 21.3

The commenter asked how comments on the proposal would be treated given that the proposed regulation is substantially similar to the emergency regulation. The commenter understood that, after this "new" regulation, the Division would convene an advisory committee to discuss the regulation further with an opportunity to explore alternative language. The commenter asked if this is still the plan and expressed concern that these efforts not be "placed on the back burner."

Response: The Board has taken public comment on the current proposal. Although the remainder of the comment is outside the scope of this proposal, it is the understanding of the Board that the Division intends to pursue an advisory committee after the present certificate of compliance rulemaking is complete.

The Board thanks the commenter for their input and participation in the rulemaking process.

II. Oral Comments Received at the May 21, 2020, Public Hearing via Teleconference per Executive Order N-29-20:

Oral Comments received at the May 21, 2020, Public Hearing in Sacramento, California.

22. Ayan Kamali on behalf of Southern California Edison.

Comment 22.1

The commenter stated that the current proposal requires PM_{2.5} levels inside the respirator to be equivalent to an AQI less than 151. In order to understand what respirator to use, the commenter converts the AQI to micrograms per cubic meter ($\mu\text{g}/\text{m}^3$). Although AQI value stops at 500, which the commenter states is equivalent to about $500 \mu\text{g}/\text{m}^3$, the concentration in the atmosphere could be much higher than that. In order to use a respirator with a proper assigned protection factor, the commenter would provide a respirator with a higher assigned protection factor than 10 when the concentration of dust in the air exceeds $550 \mu\text{g}/\text{m}^3$, to assure the concentration inside the mask stays below AQI 151, or $55 \mu\text{g}/\text{m}^3$. The commenter recommended that the proposed regulation be amended to state: "Where the current AQI for PM_{2.5} exceeds 500, respirators shall be used in accordance with Section 5144. The employer shall provide respirators with assigned protection factors, as listed in Section 5144, which reduces the exposure to below an AQI for PM_{2.5} of 500."

Response: Please see the response to comment 2.13.

The Board thanks the commenter for their input and participation in the rulemaking process.

23. Elizabeth Treanor, Director, on behalf of Phylmar Regulatory Roundtable (PRR).

Comment 23.1

The commenter stated that PRR members support the proposed regulation's intent and purpose to protect employees from wildfire smoke hazards.

Response: The Board acknowledges the commenter's support for the regulation's intent.

Comment 23.2

The commenter asked the Board to recognize that there are times, such as the present COVID-19 pandemic, when many employers are unable to procure proper respiratory protective equipment while continuing essential operations.

Response: Please see response to comment 2.1.

Comment 23.3

The commenter stated that there is a discrepancy between how local air districts and the U.S. EPA report AQI for PM_{2.5} value. Local districts use a 24-hour rolling average. EPA uses an algorithm for NowCast and values reported may exceed 500. They are concerned that an employer may rely on one source reporting an AQI different from that used by a compliance officer.

Response: Please see response to comment 2.5.

Comment 23.4

The commenter stated that an employer's ability to reasonably anticipate that employees may be exposed to wildfire smoke is not a practical trigger. The commenter expressed concern that there would be no scenario, based on the governor's wildfire progress report, in which an employer would not reasonably anticipate that employees may be exposed to wildfire smoke. The commenter requested the employers be able to rely on a federal, state or local announcement when a wildfire emergency is occurring.

Response: Please see response to comment 2.6.

Comment 23.5

The commenter supported the revisions, relative to the emergency section 5141.1, in subsections (a)(2)(A) and (a)(2)(B) regarding employees entering and exiting structures and vehicles. The commenter also supported the revised language addressing utility, communications, and emergency operations.

Response: The Board acknowledged the commenter's support for those provisions.

Comment 23.6

The commenter referenced Ayan Kamali's previous comment that employers cannot use the AQI as the metric in respiratory protection factor calculation.

Response: Please see response to comment 2.13.

Comment 23.7

The commenter stated that the cost estimates included in the Notice and the Initial Statement of Reasons did not use the cost data they had submitted to the Division on September 30 and October 4, 2019. The commenter is unaware of any N95 respirators available for 75 cents each, and no member reports anything close to the estimate of \$9.69 per employee for the required training. One employer has reported that training alone for 40,000 employees cost \$1.2 million. The commenter stated that PRR did not oppose the regulation but wanted the assessments of cost process to be carried out based on facts and with as much precision as possible.

Response: Please see response to comments 2.1, 2.18, 2.22, 2.23, and 3.17.

The Board thanks the commenter for their input and participation in the rulemaking process.

24. Andrew Sommer, counsel for Wildfire Smoke Rule Industry Coalition.

Comment 24.1

The commenter stated that the scope of the regulation has some uncertainty and ambiguity and should be clarified. The commenter stated that the scope goes beyond the earlier intent under Petition 573 and as reflected in the Informative Digest of Proposed Action, to the extent that the

proposal addresses areas that are not outdoor workplaces. The Informative Digest and the Petition are focused on outdoor occupations and areas where there are workers that are directly, immediately facing exposure to outdoor air, and the proposed regulation goes beyond this scope. The commenter expressed concerns about the “reasonably anticipated” language, because there are no “temporal restrictions.” The commenter asked whether employers would reasonably anticipate that there would be exposure to wildfire smoke in the moment, or in a week, a month or a year into the future.

Response: Please see the response to comments 2.6, 2.10 and 9.1.

Comment 24.2

The commenter expressed concern that the proximity of the forecasted or current AQI to the actual workplace, or a minimum reading, were not part of the proposed regulation. The commenter stated that wildfire conditions vary and change rapidly based on wind patterns or other factors.

Response: The Board disagrees that further amendment is needed. Please see response to comment 3.8.

Comment 24.3

The commenter proposed further clarifications around the circumstances when the exemption for buildings applies. There may be openings, other than doors, that may be opened in a similar way, for instance a bay opened for a truck pulling up, for a limited duration.

Response: Please see response comment 5.2.

Comment 24.4

The commenter addressed the identification of harmful exposures at the start of each shift, stating that the proposed language does not recognize certain circumstances where there are overlapping or staggering work shifts. The commenter stated that this is unclear for employers with employees coming throughout the day and asked whether they were expected to determine exposure levels throughout the day. The commenter stated that the regulatory language seemed to be based on a situation in which there were only a few work shifts without much variation. The commenter discussed roving work forces at sites not owned or operated by the employer and asked whether the employer is expected to determine if a building has a proper air filtration system. The commenter stated that doing so would be an undue burden. The commenter also stated that, when employees are at multiple locations within the same geographic area, the proposed regulation might require the employer to determine the air quality at different locations within a single day.

Response: Please see response to comments 3.7 and 9.5. The commenter is correct that the proposed regulation might require employers to determine the current AQI for PM2.5 at multiple worksites, if an employee travels to different locations.

Comment 24.5

The commenter stated that there is a requirement that employers provide a sufficient number of respirators, but there is a dire shortage of N95 respirators and so the regulation should have some built-in flexibility, consistent with the Federal OSHA guidance recognizing respirators other than N95 that are similar, provide equal protection, and can be used as long as the structural integrity is intact. The commenter indicated this flexibility would be useful not only for the pandemic, but also when there is a respirator shortage due to wildfires.

Response: Please see the response to comments 2.1 and 9.8.

Comment 24.6

The commenter stated that the hierarchy of controls, which is used in chemical exposure, is too rigid for this situation. The commenter asked for greater flexibility, because an employer may want to relocate the work force to a site where there is no exposure, an administrative control would be preferable and much more expedient than engineering controls.

Response: The Board disagrees that the proposed regulation would require engineering controls, if the employer were able to eliminate exposure by moving workers to a site with no exposure. Please see response to comment 5.11 and 9.9.

Comment 24.7

The commenter stated that there is some ambiguity over the Appendix B and what obligation an employer has to provide respirators to an individual that has a beard and cannot wear an N95 because of a lack of a complete seal with the mask. The commenter stated that the proposed regulation suggests an employer may be obligated to provide an air purifying respirator, which could cost more than \$1,000 each.

Response: Please see the response to comment 9.11.

The Board thanks the commenter for their input and participation in the rulemaking process.

25. Bruce Wick on behalf of California Professional Association of Specialty Contractors (CALPASC).

Comment 25.1

The commenter supported the written comments submitted by Mr. Moutrie.

Response: The Board acknowledges the support for those comments.

Comment 25.2

The commenter stated this rule is lengthy and fairly complex, so smaller employers will have difficulty complying. The commenter recommended that the Division provide guidance to smaller employers, based on their different operations, and convene an advisory committee or round table discussion to seek consensus, get buy-in from employers and employees, and make changes for the long term after the current certificate of compliance rulemaking. The commenter

stated this is one-size-fits-all and hard to implement across the variety of industries and sizes of employers.

Response: The Board declines to make further changes to the proposed regulation based on this comment, but thanks the commenter for the suggestions regarding further advisory meetings.

Comment 25.3

The commenter stated that construction job sites change every day, so going through the hierarchy of controls can be problematic.

Response: Please see response to written comments 5.11 and 9.9.

Comment 25.4

The commenter stated that the cost of compliance was greatly understated in both the original proposal and the current proposal.

Response: The Board disagrees that the economic estimates greatly understated expected costs at the time the Initial Statement of Reasons was issued. However, the Board agrees that the economic estimates required upward adjustment. Please see the Modifications to the Economic Impact Analysis/Assessment shown within this Final Statement of Reasons.

Comment 25.5

The commenter stated that many contractors gave most of their N95 supply to medical facilities and tried to keep just a skeleton amount to cover their own needs for such matters as silica exposure. The commenter expressed concern that employers might compete for N95 respirators, noting that just a couple of industries buying three or five N95s per employee would take 15 or 20 million N95s out of the marketplace which are needed for medical personnel and first responders. The commenter suggested that the Division inform employers about what to do during the shortage.

Response: Please see the response to comment 2.1.

The Board thanks the commenter for their input and participation in the rulemaking process.

26. Pamela Murcell on behalf of the California Industrial Hygiene Council.

Comment 26.1

The commenter stated the proposed regulation is substantially similar to the emergency regulation and supported its adoption.

Response: The Board acknowledges the commenter's support in adopting the proposal.

Comment 26.2

The commenter expressed concern on how COVID-19 respiratory protection measures will impact employers' ability to implement the respiratory protection portion of this regulation.

Difficulties in procuring N95 filtering facepiece respirators due to their use against the COVID-19 virus raises serious concern on availability of the N95 respirators during the quickly approaching California wildfire season. The commenter asked whether the Division would provide some guidance on acceptable alternatives or would be lenient in regards to enforcement of the requirement to provide N95 respirators when such may not be available.

Response: Please see response to comment 2.1. The Board responds that guidance issued by the Division, and the stringency or leniency of its enforcement efforts, are outside the scope of this proposal.

Comment 26.3

The commenter asked how comments on the proposal would be treated given that the proposed regulation is substantially similar to the emergency regulation. The commenter understood that, after this “new” regulation, the Division would convene an advisory committee to discuss the regulation further with an opportunity to explore alternative language. The commenter asked if this is still the plan and expressed concern that these efforts not be “placed on the back burner.”

Response: The Board responds that comments have been received on this proposal, separate from the emergency section 5141.1. Please see response to comment 21.3.

The Board thanks the commenter for their input and participation in the rulemaking process.

27. Erin Guerrero on behalf of California Attractions and Parks Association.

Comment 27.1

The commenter stated that the whole tourism industry, and parks and attractions in particular, place extreme importance on the health and safety of employees but are concerned with their ability to comply with the proposed regulation in light of the current COVID-19 pandemic. The governor has referred to this procurement process for personal protective equipment, PPE, as “the wild, wild west,” and obtaining this critical PPE has been highly competitive. The commenter stated that its member organization contributed masks to front line workers and are concerned about their ability to obtain the requisite supply as directed by the proposed regulations.

Response: Please see response to comment 2.1.

The Board thanks the commenter for their input and participation in the rulemaking process.

28. Nicole Marquez-Baker on behalf of Worksafe.

Comment 28.1

The commenter encouraged the Board not to delay the requirements within the emergency section 5141.1 or permanent wildfire smoke standard. The commenter stated that evidence shows that exposure to elevated levels of PM2.5 and other pollutants will increase susceptibility to severe COVID-19 illnesses and that personal protective equipment, engineering and

administrative controls should be incorporated into agricultural workplaces. The commenter expressed alarm regarding wildfire smoke exposure among vulnerable workers such as immigrants, day laborers, and domestic workers as well as workers in construction and communications.

Response: The Board acknowledges the commenter's support for the proposal.

Comment 28.2

The commenter recommended that the regulation apply when the current AQI is 101 or higher, as this is unhealthy for sensitive groups. The commenter recommended requiring employers to identify harmful exposures before the shift starts, so that they're prepared to provide appropriate controls and protection, protective equipment and training. The commenter asked for a requirement that employers clearly communicate to employees the plan for evacuation and prompt access to medical treatment, as detailed in Appendix B. The commenter stated medical evaluations should be required at a current AQI for PM2.5 of 301 instead of it at 501.

Response: Please see the response to comments 7.4, 7.7, 16.3, 16.9 and 16.11.

The Board thanks the commenter for their input and participation in the rulemaking process.

29. Katie Hansen, on behalf of the California Restaurant Association.

Comment 29.1

The commenter expressed appreciation for the change in section 5141.1(a)(2)(A), relative to the emergency section 5141.1, to exempt enclosed buildings and take into account the necessity of open doors to enter or exit the building. The commenter stated, however, that drive-through food facilities must open and close a drive-through window to serve customers. The commenter would like to see drive-through windows at food facilities included in the exception.

Response: Please see response to comment 5.2.

Comment 29.2

The commenter described the shortage of N95 respirators due to the lack of adequate PPE supplies for essential front line workers and expressed concern that restaurants would not be able to obtain N95 masks to comply with this regulation.

Response: Please see response to comment 2.1.

Comment 29.3

The commenter stated that the regulation applies to employees who spend one hour or more outdoors and is concerned that this is too short. Employees who spend the majority of their work day indoors, especially managers, would also be included in these requirements due to occasionally going outdoors throughout their eight-hour shift.

Response: The Board disagrees that the one-hour period needs to be lengthened. An employee who goes outside only occasionally is unlikely to fall within the scope of this regulation. Please see response to comment 4.3.

Comment 29.4

The commenter stated that the proposed regulation needs more clarity overall, so restaurants understand when the regulation applies in the event of a wildfire, and can address the varying AQI readings throughout the work day.

Response: The Board disagrees that further amendment is needed. Please see the response to comments 2.6 and 2.10.

The Board thanks the commenter for their input and participation in the rulemaking process.

30. Nancy Zuniga, representing the Instituto de Educacion Popular del Sur de California (IDEPSCA)

Comment 30.1

The commenter stated that the permanent standard should be stronger than the emergency standard and requested that the current AQI threshold be lowered to 101. The commenter's experience with workers, particularly first responders, showed that many ended up in the emergency room because of health conditions; they were sensitive groups for PM2.5 exposure. Lowering the threshold to 101 would protect immigrant workers.

Response: Please see response to comment 16.3.

Comment 30.2

The commenter is aware of the current issue with PPE but wants to ensure that the regulatory requirement is not relaxed. The commenter stated that, before COVID-19, a lot of workers did have access to PPE, which is very important. The commenter also stated that other requirements should not be weakened, such as administrative controls, like taking breaks. The commenter stated that workers are already vulnerable, wildfires are happening earlier in the year, and now front line workers are dealing with COVID-19 as well.

Response: The Board acknowledges the commenter's opposition to weakening the regulatory requirements.

The Board thanks the commenter for their input and participation in the rulemaking process.

31. Mitch Steiger, representing California Labor Federation.

Comment 31.1

The commenter supported the comments of Ms. Zuniga from IDEPSCA and Ms. Marquez-Baker from Worksafe.

Response: The Board acknowledges the commenter's support for those comments.

Comment 31.2

The commenter responded to other commenters' objections, stating that the emergency section 5141.1 was never going to be perfect and can be improved after the certificate of compliance rulemaking. The commenter stated that the proposed regulation is a great start. The commenter addressed the N95 shortage, stating that the fires will come regardless of COVID-19, and since the emergency regulation was in effect, employers hopefully stocked up on N95s. The commenter commended employers who donated N95s to the health care industry and stated that we can find ways of dealing with that issue going forward, but it is premature to discuss weakening the standard or limiting enforcement.

Response: The Board acknowledges the commenter's support of the proposed regulation. Please see response to comment 2.1.

The Board thanks the commenter for their input and participation in the rulemaking process.

32. Rob Moutrie on behalf of the California Chamber of Commerce.

Comment 32.1

The commenter thanked the Board for changes made relative to the emergency section 5141.1, which addressed clarity concerns raised by the commenter and others, including a change to the illustration in Appendix B. The commenter stated that he was not asking the Board to stop this regulation or weaken it.

Response: The Board acknowledges the commenter's support for those changes relative to the emergency section 5141.1.

Comment 32.2

The commenter expressed concern that the regulation was not sufficiently feasible or understandable. The commenter noted the comments made by many others about the shortage of PPE due to COVID-19 and asked the Board to keep in mind that some employers had donated PPE. The commenter supported Ms. Treanor's comments about the costs estimates, which the commenter believed to be inaccurate.

Response: Please see the response to comments 2.1, 2.22, 2.23, and 2.25.

Comment 32.3

The commenter supported Mr. Sommer's comment regarding the vagueness of the regulation's scope, namely a two-part trigger for the AQI level and the anticipation of exposure. The commenter stated that it is difficult for businesses to know exactly when the proposed regulation is triggered because an employer may not know if there is a wildfire nearby. The commenter requested an objective trigger that would determine whether the proposed regulation is in effect.

Response: Please see response to comment 2.6.

Comment 32.4

The commenter stated that there are ongoing questions about how much businesses should be stockpiling respirators, given that they do not know how long wildfires will be pending or if there will be one in their area.

Response: Please see response to comment 2.9.

Comment 32.5

The commenter referred to the language about closing windows, doors, etc. except when it is necessary to open doors to enter or exit. The commenter referenced Mr. Sommer's comments, stating that the changes to that section relative to the emergency section 5141.1 were appreciated, but further changes were needed. The commenter stated that language with regard to vehicles was impossible because the employer cannot prevent drivers from opening windows.

Response: Please see response to comments 5.2 and 5.5.

Comment 32.6

The commenter recommended that the proposed regulation allow the use of other nearby air quality monitors. The commenter stated that refineries in California are required to have an air quality monitor, so businesses near those existing monitors would be dealing with better and more applicable AQI data than a public website.

Response: Please see the response to comment 5.7.

The Board thanks the commenter for their input and participation in the rulemaking process.

33. Anne Katten, representing California Rural Legal Assistance, Inc. (CRLA).

Comment 33.1

The commenter supported the comments by Worksafe, IDEPSCA and the California Labor Federation in support of the proposed regulation. The commenter stated that we can deal with the N95 shortage without weakening the regulation, expressing concern about the exposure of farm workers and other outdoor workers to wildfire smoke. The commenter stated that mounting evidence from studies in the United States, China and Europe show exposures to elevated levels of PM2.5 increase the susceptibility to severe COVID-19 illness. PM2.5 could increase the severity of infection directly by reducing the lungs' ability to clear the pathogens, or indirectly by worsening underlying respiratory and cardiovascular disease. Compounding this, the commenter stated, farm workers and many other outdoor workers are doing hard, physical work, and they may have a pre-existing health condition.

Response: The Board acknowledges the commenter's support for the proposed regulation and for the specified prior comments.

The Board thanks the commenter for their input and participation in the rulemaking process.

34. Dan Leacox on behalf of the National Elevator Industry.

Comment 34.1

The commenter stated that it is important that the economic analysis be accurate. The commenter asked the Board give due consideration to the results of the proposed regulation, not only in terms of safety but also workers' and employers' lives, and the fact that people practice safety for the purpose of returning to work to feed their families and improve their lives. The commenter expressed support for the Board's work and stated that its biggest impact on safety is leadership in safety culture, which requires "a good, feasible, rational rule that makes sense" to employers, and can be followed. The commenter noted that the economic analysis is legally required and is also necessary for the Board to be well informed when evaluating the proposal. The commenter stated that it seems that the estimate of the cost of respirators was based on an attempt to see the lowest price that could be found on the market, which is not a realistic assessment, and that current demand has raised the price. The commenter also stated that the economic assessment incorrectly stated that only 72,000 businesses, or 4.5% of the total, would buy respirators and added that there is a question about when respirators would have to be purchased.

Response: The commenter is incorrect about the number and percentage of businesses estimated to require the purchase of respirators in a given year. Please see response to comments 2.1, 2.9, 2.22 and 5.13, and the Modifications to the Economic Impact Analysis/Assessment shown within this Final Statement of Reasons.

Comment 34.2

The commenter objected that the economic estimate indicates that there are no costs incurred until the time of a fire, even though all employers will have to prepare in advance, not just one third of employers. The commenter also stated that the economic assessment has not accounted for the shut-down costs for employers and local governments. The commenter stated that it is troubling that the assessment mentioned that some requirements are preexisting requirements, even though that did not reduce the cost estimates. Taking such an approach could be used to dismiss real regulatory costs, for instance by attributing costs to the existing Injury and Illness Prevention regulation, section 3203, instead of a newly proposed regulation. This can be true in all rulemakings, not just this one.

Response: The Board responds that it has increased estimated costs. Please see the Modifications to the Economic Impact Analysis/Assessment shown within this Final Statement of Reasons.

The Board disagrees that the cost estimate presumes that costs will only be incurred at the time of a fire. Rather, the economic analysis recognizes that the number of affected employers and employees will vary dramatically from year to year and therefore attempts to provide annual per-employee costs. The Board notes that an employer which chooses to purchase respirators in advance but does not require them in a given year may use them in a future year. Filtering facepiece respirators such as the N95, for instance, usually have a five-year expiration period. For training costs, please see response to comment 2.23.

As for shutdown costs, while the Board recognizes that wildfires endanger workplaces and result in shutdowns, this regulation does not require employers to cease work, and the Board is not obligated to estimate the economic effects of wildfires generally, or of evacuation/exclusion zones created by other entities. Regarding preexisting costs, the Board acknowledges that many employers are already in compliance with the proposed regulation, either because of the emergency section 5141.1, regulatory requirements that predate the emergency regulation, or their own internal safety and health policies. However, the commenter correctly observed that the Board has not reduced the estimated costs to account for that fact.

The Board thanks the commenter for their input and participation in the rulemaking process.

35. Bryan Little, representing the California Farm Bureau.

Comment 35.1

The commenter supported the comments of Ms. Treanor, Mr. Moutrie, Mr. Wick, and Mr. Leacox. The commenter stated that agriculture activities have required respirators, with N95s being the most popular type. They have been commonly available in the past and easy to use for a variety of purposes. The commenter opposed the estimated per-respirator cost of \$0.75; he had contacted about 20 vendors, and N95 respirators were not available. The commenter stated that he found one vendor who could deliver a limited number of N95 respirators for \$6.70 a respirator on a two-week delivery. That is significantly higher than any other price he had ever seen for an N95. The commenter noted that the 2020 wildfire season might coincide with another flare-up of COVID-19 and hopes for improvement in the supply chain for respirators, which collapsed in January through March. The commenter stated that he did not recommend weakening the standard but that the shortage of respirators would cause a problem in the fall.

Response: The Board acknowledges the commenter's support for the prior comments. Please see the response to comments 2.1 and 2.9.

The Board thanks the commenter for their input and participation in the rulemaking process.

36. Michael Miiller on behalf of the California Association of Winegrape Growers.

Comment 36.1

The commenter supported the comments by Ms. Treanor, Mr. Moutrie, Mr. Leacox, Mr. Wick and Mr. Little. The commenter reminded the Board of his testimony at prior board meetings in which he had discussed the problem of a power shutoff during a wildfire. If the mutual air board is shut down and the monitor has no power, there is no AQI information available online. The commenter stated that this is a real challenge, as experienced last year during the wildfires in the North Bay and the North Coast.

Response: The Board acknowledges the commenter's support of those prior comments. Please see response to comment 3.8.

Comment 36.2

The commenter stated the availability and the costs of the masks will be greater than reflected in the cost analysis, because of limited availability. The commenter stated that he has received many offers to sell N95s that are either fraudulent or demand very high prices. The commenter stated that a Google search for N95s would produce the message: "Product availability may be limited and we removed results with excessive price increases," along with a message regarding alternatives to those respirators. The commenter stated that, if there are no masks available, this regulation would essentially create a work stoppage, and there is no way to know how long the pandemic will last. The commenter noted CDC guidance to optimize the availability of N95 masks and asked the Board to fully explore alternatives to NIOSH-approved respirators, for example an "origami" mask developed at the University of Minnesota.

Response: Please see the response to comments 2.2 and 9.8.

The Board thanks the commenter for their input and participation in the rulemaking process.

37. Christy Lubin on behalf of the Graton Day Labor Center.

Comment 37.1

The commenter expressed support for the regulation. The commenter shared her experience with wildfires in Sonoma County, including in the Tubbs fire and the Kincadee fire, and smoke from the Lake County and Paradise fires. The commenter has interviewed workers and helped workers get medical care, and is aware of a person who passed away after working outside for four days without a mask in an AQI over 200. He was an older man with respiratory health issues. The commenter is aware of workers hospitalized after working outside in fire cleanup, while the fires were still burning, and who harvested grapes while fires were still burning. The commenter noted that Sonoma County had only received 50-60 percent of its normal rainfall this year, so the fire season will presumably start sooner than October. The commenter expressed concern about the combined effect of COVID-19 and wildfires, stating that the Latino community in Sonoma County has a COVID-19 rate that is 4.5 times that of white people, attributed to underlying health from poverty, lack of access to health care, and living in overcrowded housing.

Response: The Board thanks the commenter for sharing information about wildfires in Sonoma County and their effect on the community. The Board offers condolences for the loss of the person discussed and notes that the proposed regulation would require employers to provide workers N95s for voluntary use at the AQI for PM 2.5 which he experienced. The Board agrees that there is comorbidity between COVID-19 and PM 2.5 exposure.

Comment 37.2

The commenter requested that the regulation take effect at an AQI of 101 rather than 151.

Response: Please see response to comment 16.3.

Comment 16.3

The commenter requested that employers be required to plan for evacuation and medical care, because she was aware of workers impacted by wildfire smoke whose employers did not take responsibility for them. The commenter stated that many workers in the county in construction, farm labor, gardening and other industries lack health insurance because they are undocumented and avoid hospitals and urgent care.

Response: Please see response to comments 16.9 and 16.11. The Board notes that the employers observed by the commenter may have occupational safety and health obligations related to evacuation and/or wildfire-related hazards under existing Title 8 provisions.

The Board thanks the commenter for their input and participation in the rulemaking process.

38. Cassie Hilaski on behalf of Nibbi Brothers General Contractors.

Comment 38.1

The commenter urged the Board to address the concerns presented by Mr. Moutrie and others regarding ambiguities in the regulation to make it easier for the employers to comply and to protect employees.

Response: To the extent the commenter was referring to the scope of the regulation, please see response to comments 2.6 and 2.10. To see all responses to Mr. Moutrie's written comments, please see response to comments 5.1 through 5.13.

The Board thanks the commenter for their input and participation in the rulemaking process.

Oral Comments by Members of the Occupational Safety and Health Standards Board:

39. Chris Laszcz-Davis.

Comment 39.1

Board Member Laszcz-Davis stated that the wildfire safety regulations could be clearer, more understandable or more feasible, so an advisory committee process should occur, spear-headed by the Division, to further evaluate the issue. The Member noted that cost of compliance was a common theme in the comments.

Response: The Board acknowledges the Member's comment.

40. Chairman Dave Thomas.

Comment 40.1

The Chair stated that the price of respirators is going to be high for a long time because of pandemic and wildfires. It may not be \$7.00, but it will be substantially more than \$0.75. The Chair noted that they were unavailable now and will likely be for several months into the future.

Response: The Board responds that it has revised the expected per-unit cost of N95s as stated in the Modifications to the Economic Impact Analysis/Assessment shown within this Final Statement of Reasons. Please see response to comments 2.1 and 2.22.

**MODIFICATIONS AND RESPONSE TO COMMENTS RESULTING FROM
THE FIRST 15-DAY NOTICE OF PROPOSED MODIFICATIONS
July 23, 2020 – August 12, 2020**

As a result of written comments to the proposed modifications contained in the 15-Day Notice of Proposed Modifications mailed on July 23, 2020, and/or further evaluation by Board or Division staff, the following substantive, nonsubstantive and/or sufficiently related modifications have been made to the Informative Digest published in the California Regulatory Notice Register dated April 3, 2020.

Subsection (f)(4)(A) was amended to clarify that, in emergencies, employers should provide respirators for voluntary use not only from an AQI for PM 2.5 of 151 to 500, but also for levels above 500.

ADDITIONAL DOCUMENTS RELIED UPON

- State of California Employment Development Department, “Industry Employment & Labor Force – by Annual Average,” dated March 27, 2020, available at [https://www.labormarketinfo.edd.ca.gov/file/indhist/cal\\$haw.xls](https://www.labormarketinfo.edd.ca.gov/file/indhist/cal$haw.xls) (Historical Annual Average Data, Not Seasonally Adjusted, California 1990-2019)

This document is available for review BY APPOINTMENT Monday through Friday, from 8:00 a.m. to 4:30 p.m., at the Standards Board’s office at 2520 Venture Oaks Way, Suite 350, Sacramento, California 95833. Appointments can be scheduled via email at oshsb@dir.ca.gov or by calling (916) 274-5721.

ADDITIONAL DOCUMENTS INCORPORATED BY REFERENCE

None.

**SUMMARY AND RESPONSE TO WRITTEN COMMENTS
RESULTING FROM THE FIRST 15 DAY COMMENT PERIOD:**

**41. Michael Geyer, Project Director-President, on behalf of KERKNTEC Industries, Inc.,
by written comments dated August 10, 2020.**

Comment 41.1

The commenter stated that the title of the regulation is misleading; AQI above 151 can be caused by sources other than wildfire smoke, and that such AQI levels occur without wildfire smoke in the San Joaquin Valley. The commenter described airborne particulate conditions in southern

California and particularly the San Joaquin Valley, stating that the proposed regulation is inequitable towards that region and seems to regulate PM2.5 from all sources, not just wildfires. The commenter noted that particulates stagnate in Kern County but is undetectable to most persons, so it unreasonable for employers in Kern to “reasonably anticipate” wildfire smoke that cannot be seen. The commenter expressed concern that the proposed regulation will shut down industries that rely on outdoor commerce. The commenter discussed the exemption for firefighters engaged in wildland firefighting and requested that one of the two revisions be made (numbering in original):

- 1) Remove all references to wildfire smoke; or
- 2) 5151.1(a)(1)(A) be revised to state: The current Air Quality Index (current AQI) for PM2.5 or greater immediately downwind of visible wildfire smoke; and 5141.1(a)(1)(B) The employer should reasonable anticipate that employees may be exposed to visible wildfire smoke.

Response: The comment is outside the scope of the 15-Day Notice.

Comment 41.2

The commenter opposed the economic forecast from the Department of Finance included as a document relied upon by the Board as inadequate. The commenter requested that, before promulgating the regulation, the Board should involve stakeholders in the San Joaquin Valley and provide an accurate economic impact study, particularly with reference to that region.

Response: The Board disagrees that it should not rely upon the cited economic forecasts. The Board notes that the rulemaking process was open to all stakeholders and that the document from the Department of Finance is not the sole basis of its economic analysis.

The Board thanks the commenter for their input and participation in the rulemaking process.

42. Roger Isom on behalf of the African-American Farmers of California, the California Apple Commission, the California Blueberry Association, the California Citrus Mutual, the California Cotton Ginners and Growers Association, the California Fresh Fruit Association, the California Rice Industry Association, the Fresno County Farm Bureau, the Grower-Shipper Association of Central California, the Milk Producers Council, the Nisei Farmers League, the Olive Growers Council of California and the Western Agricultural Processors Association, by written comments dated August 12, 2020.

Comment 42.1

The commenters stated that the organizations’ primary concern is the availability of N95 masks and the lack of alternatives in the event of a shortage such as the one currently being experienced as a result of the Covid-19 pandemic. The commenter stated that N95 masks remain difficult, if not impossible, to obtain and can cost as much as \$8 per mask or more. The commenter stated that the annual average number of employees in agriculture in the San Joaquin Valley is 210,000 workers, citing “Annual Average Employment Data (1990 – Current), State of California Employment Development Department, August 11, 2020,” and asked that KN95 masks or

equivalents be permitted, at least until the shortage is over, since priority has been given to frontline workers such as nurses and first responders. The commenter stated that the state distributed N95 masks for agriculture, but they were prescribed for pesticide use only.

Response: The Board responds that the economic projections referenced in the 15-Day Notice provide an estimate for the number of agricultural workers in the entire state, including the San Joaquin Valley. Although the remainder of the comment is outside the scope of the 15-Day Notice, please see response to comments 2.1, 2.22 and 9.8.

The Board thanks the commenters for their input and participation in the rulemaking process.

43. James Mackenzie, Principal Manager, on behalf of Southern California Edison, by written comments dated August 12, 2020.

Comment 43.1

The commenter made comments identical to commenter's May 21, 2020 letter (comments 15.2 through 15.9) and expressed concern that previous comments had not been adequately addressed.

Response: These comments are outside the scope of the 15-Day Notice. Please see response to comments 15.2 through 15.9.

Comment 43.2

The commenter stated that the regulation should be based on the health risk for the constituents of wildfire smoke and should be developed, vetted, and scientifically accepted by the occupational health and safety community, not the EPA. The commenter stated that the regulation should be based on worker exposure, not public exposure, and should not be based on monitoring sites that may be 50 to 100 miles apart and which do not take thermal lift into account.

Response: This comment is outside the scope of the 15-Day Notice. However, please see response to comments 2.3 and 3.8.

The Board thanks the commenter for their input and participation in the rulemaking process.

44. Pamela Murcell, President, on behalf of the California Industrial Hygiene Council, by written comments dated August 11, 2020.

Comment 44.1

The commenter stated that the changes proposed in the 15-Day Notice were acceptable.

Response: The Board acknowledges the commenter's support.

Comment 44.2

The commenter asked questions regarding the application of the AQI for time periods such as eight or ten hours rather than 24, the duration of time that triggers AQI applicability, and the

basis for the one-hour exception. The commenter questioned the location of AQI measurements in California relative to workplaces; how employers should respond to AQI changes over short periods of time; the separate thresholds of 151 for voluntary use of respirators and 500 for mandatory use of respirators; the difficulty of quick, responsive implementation engineering or administrative controls; the existing permissive exposure limit for PM 10; the issue of treating PM2.5 from wildfire smoke differently from PM2.5 from other sources; methods to measure AQI; the use of respirators in the context of toxic dust under section 5144; and the feasibility, potential hazards, and necessity of mandatory respirator use over an AQI of 500.

Response: The comment is outside the scope of the 15-Day Notice. However, please see response to comments 2.3, 2.10, 3.7, 3.8, 4.3, 4.4, 4.6, 5.4, 5.11, 7.7, 9.2, 9.3, and 16.3, which may address some of the commenter's topics of concern.

The Board thanks the commenter for their input and participation in the rulemaking process.

45. Jora Chang et al on behalf of Worksafe, California Rural Legal Assistance Foundation, California Labor Federation AFL-CIO, and State Building and Construction Trades Council of California, AFL-CIO, by written comments dated August 12, 2020.

Comment 45.1

The commenters noted that the Apple Fire, the first major wildfire of 2020, had already burned over 20,000 acres in Riverside and San Bernardino Counties and that Hidden Valley had also experienced several days with an AQI for PM2.5 exceeded 150 due to wildfire smoke. The commenters stated that PM2.5 and other pollutants increase the likelihood of developing the most severe symptoms of COVID-19. The commenters supported the proposed regulation and the revisions proposed in the 15-Day Notice, because they did not weaken the regulation.

Response: The Board acknowledges the commenter's support for the proposed regulation.

Comment 45.2

With respect to the revisions to Appendix B, the commenters suggested the following additional amendment, because the subsection covers changing respirator cartridges and replacing filtering facepiece respirators:

(h) How to properly put on, ~~and~~ use, and maintain or replace the respirators supplied by the employer.

Response: The Board disagrees that a change to the heading of Appendix B subsection (h) is necessary. Altering the heading will not change the contents of subsection (h) or increase the information provided to employees.

Comment 45.3

The commenters asked that the proposed regulation apply at an AQI for PM2.5 of 101 and that fit testing and medical evaluation be required for respirators at an AQI of 301. The commenters

reiterated their written comments from May 21, 2020: 16.4, 16.7, 16.9, 16.11, 16.12 and 16.16. The commenters recommended that subsection (a)(2)(A) use the following language from the emergency section 5141.1: “Enclosed buildings or structures in which the air is filtered by a mechanical ventilation system and the employer ensures that windows, doors, bays, and other openings are kept closed to minimize contamination by outdoor or unfiltered air.”

Response: The comment is outside the scope of the 15-Day Notice. However, please see response to comments 16.4, 16.7, 16.9, 16.11, 16.12, and 16.16.

The Board thanks the commenters for their input and participation in the rulemaking process.

46. Gabriel Machabanski, Associate Director, on behalf of Centro Laboral de Graton / Graton Day Labor Center, by written comments dated August 12, 2020.

Comment 46.1

The commenter supported strengthening regulations related to outdoor work during wildfire, including the provision of respiratory masks, trainings, and fit tests. The commenter noted that the pandemic has heightened the need for a protective and enforceable wildfire smoke protection standard, because PM2.5 exposure may increase the severity of a COVID-19 infection.

Response: The Board acknowledges the commenter’s support of the proposed regulation.

Comment 46.2

The commenter asked that the regulation take effect at an AQI for PM2.5 of 101 and that fit testing and medical evaluation be required at an AQI of 301. The commenter supported and reiterated comments from the August 12, 2020 letter from Ms. Trang et al. The commenter noted that the pandemic has heightened the need for a protective and enforceable wildfire smoke protection standard, because PM2.5 exposure may increase the severity of a COVID-19 infection.

Response: The comment is outside the scope of the 15-Day Notice. However, please see the responses to comments 16.4, 16.7, 16.9, 16.11, 16.12 and 16.16.

The Board thanks the commenters for their input and participation in the rulemaking process.

47. Hene Kelley, Legislative Director, on behalf of the California Alliance for Retired Americans, by written comments dated August 11, 2020.

Comment 47.1

The commenter made an essentially identical comments to comment 46.2.

Response: This comment is outside the scope of the 15-Day Notice. Please see response to comments for 46.2.

The Board thanks the commenters for their input and participation in the rulemaking process.

48. Victor Esparza, by written comments dated August 11, 2020.

Comment 48.1

The commenter supported making the emergency section 5141.1 into a permanent standard to protect workers.

Response: The Board acknowledges the commenter’s support for the proposed regulation.

The Board thanks the commenters for their input and participation in the rulemaking process.

**MODIFICATIONS AND RESPONSE TO COMMENTS RESULTING FROM THE
SECOND 15-DAY NOTICE OF PROPOSED MODIFICATIONS
September 10, 2020 – September 25, 2020**

No further modifications to the information contained in the Initial Statement of Reasons are proposed as a result of the 15-day Notice of Proposed Modifications mailed on September 10, 2020.

ADDITIONAL DOCUMENTS RELIED UPON

None.

ADDITIONAL DOCUMENTS INCORPORATED BY REFERENCE

None.

**SUMMARY AND RESPONSE TO WRITTEN COMMENTS
RESULTING FROM THE SECOND 15-DAY COMMENT PERIOD:**

**49. Dean Yarbrough, Director, on behalf of Southern California Edison, by written
comments dated September 25, 2020.**

Comment 49.1

The commenter made comments identical to comment 15.1.

Response: Please see response to comment 15.1.

Comment 49.2

The commenter expressed concern about the cost estimates. The commenter was not aware of a financial impact analysis and stated that the statewide costs appear to be greater than \$50 million. If so, the proposal would be a “major regulation,” and the commenter stated that a standardized

regulatory impact analysis (SRIA) should be prepared and submitted to the Department of Finance.

Response: An economic and fiscal impact analysis was performed. The Board disagrees that the proposal is a “major regulation.”

Comment 49.3

The commenter stated that the additional document relied upon, “Industry Employment & Labor Force—by Annual Average,” underestimates the number of employees in Electric Power generation, Transmission and Distribution. The document lists 18,200, when there are 12,000 working for Southern California Edison alone.

Response: Please see response to comment 2.20 and the Modifications to the Economic Impact Analysis/Assessment shown within this Final Statement of Reasons.

The Board thanks the commenter for their input and participation in the rulemaking process.

50. Colton Rogers, Environmental Health and Safety Specialist, on behalf of Contra Costa Water District, by written comment dated September 21, 2020.

Comment 50.1

The commenter stated that the proposed change to (f)(4)(A) may be interpreted as an inclusion within the AQI of pollutants other than PM 2.5. The commenter noted that the EPA calculates the AQI for ground level ozone, particulate matter, carbon monoxide, sulfur dioxide, and nitrogen dioxide. The commenter suggested the following amendment:

(f)(4)(A) “...for all AQI levels for PM2.5 equal to or greater than 151.”

Response: The purpose of the amendment was to make clear that, in emergencies subject to (f)(4), the language in (f)(3)(A) applies even above a current AQI for PM 2.5 of 500. The Board disagrees that this language may include AQI levels for other pollutants, because (f)(3)(A), and indeed the entire regulation, refers only to current AQI for PM 2.5. Only PM 2.5 is regulated in this proposal, not any other respiratory hazard.

The Board thanks the commenter for their input and participation in the rulemaking process.

51. Vince Hundley, President and CEO, SMART Safety Group, by written comment dated September 15, 2020.

Comment 51.1

The commenter asked the Board to consider the obstacles created by requiring NIOSH-approved respirators without allowing KN95 respirators, given the current challenges of obtaining N95s. The commenter suggested the following amendment:

(f)(3)(A) “Where the current AQI for PM2.5 is equal to or greater than 151, but does not exceed 500, the employer shall provide a sufficient number of respirators to all employees for voluntary use in accordance with section 5144 and encourage employees to use respirators. Respirators shall be ~~NIOSH-approved devices that effectively protect the wearers from inhalation of PM2.5, such as N95-filtering facepiece respirators~~ with an efficiency rating of 95% or greater.”

Response: Please see the response to comments 2.1 and 9.8.

The Board thanks the commenter for their input and participation in the rulemaking process.

52. Peter Arthur, EHS Specialist II, on behalf of Calpine Corporation, by written comment dated September 14, 2020.

Comment 52.1

The commenter stated that much is unknown about chronic exposure to wildfire smoke (long or short-term exposure) and small particle effect in the lungs as well as the toxic and harmful combination of pollutants found in wildfire smoke. The commenter recommended a more strenuous approach to employee’s health and safety when AQI levels reach Hazardous (AQI 301 - 500), because voluntary use respiratory protection at hazardous levels does not protect workers. The commenter disagreed that 5144 mandates fit testing and medical evaluations and stated that employees should be required to wear N95 or P95 masks when the AQI exceeds 301.

Response: Please see response to comment 7.7.

The Board thanks the commenter for their input and participation in the rulemaking process.

DETERMINATION OF MANDATE

This standard does not impose a mandate on local agencies or school districts as indicated in the Initial Statement of Reasons.

ALTERNATIVES CONSIDERED

The Board invited interested persons to present statements or arguments with respect to alternatives to the proposed standard. No alternative considered by the Board would be (1) more effective in carrying out the purpose for which the action is proposed; or (2) would be as effective as and less burdensome to affected private persons than the adopted action, or (3) would be more cost-effective to affected private persons and equally effective in implementing the statutory policy or other provision of law. Board staff were unable to come up with any alternatives or no alternatives were proposed by the public that would have the same desired regulatory effect.

DEPARTMENT OF INDUSTRIAL RELATIONS
Occupational Safety and Health Standards Board
2520 Venture Oaks Way, Suite 350
Sacramento, CA 95833
Tel: (916) 274-5721 Fax: (916) 274-5743
Website address www.dir.ca.gov/oshsb



INITIAL STATEMENT OF REASONS

CALIFORNIA CODE OF REGULATIONS

TITLE 8: New Section 5141.1 of the General Industry Safety Orders

Protection from Wildfire Smoke

SPECIFIC PURPOSE AND FACTUAL BASIS OF PROPOSED ACTION

This rulemaking was originally initiated in response to Petition File Number 573 submitted on December 10, 2018 by Mitch Steiger, California Labor Federation; Douglas Parker, Worksafe; and Anne Katten, California Rural Legal Foundation. The petitioners requested emergency rulemaking to protect employees from the harmful effects of wildfire smoke. The Board voted to grant the petition in part, and requested that the Division of Occupational Safety and Health (Division) draft an emergency rulemaking proposal. The resulting emergency regulation was approved by the Occupational Safety and Health Standards Board (Board) on July 18, 2019 and became effective on July 29, 2019.

Wildfires in California became dramatically worse in 2018, causing deaths and economic damage that dwarfed previous years. The catastrophic Camp Fire was the deadliest and most destructive wildfire in state history, killing 86 people and destroying 18,804 structures. On January 8, 2019, Governor Gavin Newsom issued Executive Order N-05-19, declaring that 2018 was the most destructive fire season in California history, with over 7,600 wildfires burning across 1,846,445 acres. The Order states that "...the reality of climate change – persistent drought, warmer temperatures and more severe winds – has created conditions that will lead to more frequent and destructive wildfires."¹

Consistent with the Governor's Order, research conducted by the U.S. Environmental Protection Agency (U.S. EPA) found that fires are increasing in frequency, size and intensity, creating the potential for greater smoke production and chronic smoke exposures in the United States, particularly in the West.² This suggests that the 2018 wildfires were not merely an aberration, and that state agencies should be prepared for a high likelihood of widespread exposure to wildfire smoke in 2019 and beyond. On March 22, 2019, Governor Newsom acknowledged the danger posed by the 2019 wildfire season, proclaiming a state of emergency in California "due to

¹ [Gavin Newsom, Governor of California, Executive Order N-05-19](https://www.gov.ca.gov/wp-content/uploads/2019/01/1.8.19-EO-N-05-19.pdf). <https://www.gov.ca.gov/wp-content/uploads/2019/01/1.8.19-EO-N-05-19.pdf>

² United States Environment Protection Agency (U.S. EPA); [Website Wildland Fire Research to Protect Health and the Environment](https://www.epa.gov/air-research/wildland-fire-research-protect-health-and-environment). <https://www.epa.gov/air-research/wildland-fire-research-protect-health-and-environment>; and U.S. EPA. Website accessed 1-7-2019. [Wildland Fire Research: Health Effects Research](https://www.epa.gov/air-research/wildland-fire-research-health-effects-research). <https://www.epa.gov/air-research/wildland-fire-research-health-effects-research>

a vast tree die-off” which “has contributed to worsening forest conditions, creating extremely dangerous fire risk...”³

While thousands of chemical compounds are present in wildfire smoke, the principal harmful pollutant of concern for persons not in close proximity to the flames is particulate matter with an aerodynamic diameter of 2.5 micrometers or smaller, known as PM_{2.5}. Airborne particle size is directly linked to the potential for causing health risks. Small particles less than 2.5 micrometers in diameter pose the greatest risk because they penetrate deep into the lungs and can enter the bloodstream.⁴ These health effects of PM_{2.5} include eye irritation, respiratory tract irritation, cough, difficulty breathing, reduced lung function, bronchitis, exacerbation of asthma, heart failure, premature death, increased local lung and systemic inflammation, acute and chronic cardiovascular effects, and acute and chronic respiratory effects.⁵ Adding to the risk, toxic organic compounds and metals can be adsorbed by airborne PM_{2.5}.⁶

The National Oceanic and Atmospheric Administration (NOAA) determined that wildfire smoke can spread thousands of miles from its source, affecting communities near and far.⁷ Winds also alter the dispersion pattern of smoke.⁸

Occupational safety and health standards within Title 8 of the California Code of Regulations protect workers from harmful respiratory hazards in general, but there is currently no regulation that specifically addresses either PM_{2.5} or wildfire smoke. The primary measurement of air

³ Gavin Newsom, Governor of California; [Proclamation of a State of Emergency](#); March 22, 2019. <https://www.gov.ca.gov/wp-content/uploads/2019/03/03.22.19-State-of-Emergency-Attested.pdf>

⁴ U.S. EPA; [Health and Environmental Effects of Particulate Matter \(PM\)](#). <https://www.epa.gov/pm-pollution/health-and-environmental-effects-particulate-matter-pm>

⁵ U.S. EPA; U.S. Forest Service; U.S. Centers for Disease Control and Prevention; California Air Resources Board; Wildfire Smoke - [A Guide for Public Health Officials](#); pages 4-7; August 2019. <https://www3.epa.gov/airnow/wildfire-smoke/wildfire-smoke-guide-revised-2019.pdf>

California Air Resources Board; [Inhalable Particulate Matter and Health \(PM_{2.5} and PM₁₀\)](#) August 10, 2017. <https://ww3.arb.ca.gov/research/aaqs/common-pollutants/pm/pm.htm>

Reisen F, Durán S, Flannigan M, Elliot C, Rideout K; [Wildfire Smoke and Public Health Risk](#); International Journal of Wildland Fire; August 2015; 24, 1029-1044.

https://www.researchgate.net/publication/281035322_Wildfire_smoke_and_public_health_risk

Health Effects Institute; State of Global Air/2018: [A Special Report on Global Exposure to Air Pollution and Its Disease Burden: Special Report](#); Boston, MA; Health Effects Institute.

<https://www.stateofglobalair.org/sites/default/files/soga-2018-report.pdf>

⁶ Zhang HH, Li Z, Liu Y, et al; [Physical and chemical characteristics of PM_{2.5} and its toxicity to human bronchial cells BEAS-2B in the winter and summer](#); Journal of Zhejiang University-Science B (Biomedicine and Biotechnology); 2018;19(4):317–326; <https://doi.org/10.1631/jzus.B1700123>. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5964345/pdf/JZUSB19-0317.pdf>

⁷ [National Oceanic and Atmospheric Administration Twitter](#).

<https://twitter.com/noaasatellites/status/1032311533668319232?lang=en>

National Oceanic and Atmospheric Administration; [Satellite and Information Service](#). Website accessed 1-9-2019.

<https://www.nesdis.noaa.gov/content/amtrak-relies-new-noaa-satellite-smoke-data-protect-passengers-during-dangerous-california>

Navarro KM; [Assessment of Ambient and Occupational Exposures to Air Contaminants from Wildland Fire Smoke](#); Dissertation; Fall 2016; University of California, Berkeley, California.

http://digitalassets.lib.berkeley.edu/etd/ucb/text/Navarro_berkeley_0028E_16683.pdf

⁸ [Smoke Management Guidelines for Prescribed Burning in the Southeast, Smoke Dispersion](#).

http://www.auburn.edu/academic/forestry_wildlife/fire/smoke_guide/smoke_dispersion.htm

quality is the Air Quality Index (AQI),⁹ but AQI standards are not mentioned anywhere in Title 8. Without a specific reference to either PM_{2.5} or wildfire smoke, the existing regulations rely on employers to determine whether a given exposure is “harmful” and whether respirators are “necessary to protect the health of the employee.” (Cal. Code Regs., tit. 8, §§ 5141, 5144.) Based on the calls received by the Division during the height of recent wildfires, a significant number of employers were uncertain about what protective measures to use or when to use them. Many of these businesses had no previous experience with wildfire smoke until the last two years. Without specific regulatory guidance, these employers were confused about how to evaluate and respond to this hazard.

This confusion also causes the Division to expend staff resources in order to respond to questions that would be answered by Title 8, new section 5141.1.

The Board is proposing this regulation, Title 8, new section 5141.1, to preserve worker safety and health and to clarify employers’ existing obligations, making compliance easier, simpler, and more straightforward.

Current regulations are not sufficiently specific as to what employers are required to do during wildfire events. This results in confusion on behalf of both employers and employees, leaving many employees unprotected. The proposed regulation, Protection from Wildfire Smoke, Title 8, new section 5141.1 will provide clarity to employers so that they may better protect employees from the toxic and harmful effects of wildfire smoke.

New Section 5141.1. Protection from Wildfire Smoke.

This proposed standard, new section 5141.1, would be in Article 107, Dusts, Fumes, Mists, Vapors and Gases, directly after section 5141, Control of Harmful Exposure to Employees. The regulation would include the following specific requirements.

New Section 5141.1(a). Scope.

This proposed subsection (a)(1) establishes the application of the proposed regulation to all workplaces where the current Air Quality Index (AQI) for PM_{2.5} is 151 or greater and the employer should reasonably anticipate that employees may be exposed to wildfire smoke.

The subsection is necessary to establish the conditions in which employers will be required to comply with the proposed regulation and to take action to protect employees from the harmful effects of wildfire smoke.

Proposed subsection (a)(2) sets forth exceptions to the application of the regulation. Petition 573 sought protection from wildfire smoke for outdoor workers in particular, and the scope of

⁹ Electronic Code of Federal Regulations; [Title 40, Protection of Environment; Part 58, Ambient Air Quality Surveillance; Appendix G, Uniform Air Quality Index \(AQI\) and Daily Reporting](https://www.ecfr.gov/title40/protection-of-environment/part58/ambient-air-quality-surveillance/appendix-g-uniform-air-quality-index-aqi-and-daily-reporting); February 19, 2020. https://gov.ecfr.io/cgi-bin/text-idx?SID=455b88cb0ce9e587f8162e9eb0b2bece&mc=true&node=ap40.6.58.0000_0nbspnbspnbsp.g&rgn=div9

U.S. EPA; [Integrated Science Assessment for Particulate Matter](https://www.epa.gov/particlematter/integrated-science-assessment-for-particulate-matter); (Final Report, December 2009); Includes Errata Sheet Created on February 10, 2010; U.S. EPA, Washington, DC, EPA/600/R-08/139F, December 2009, Provided by Compact Disk. https://cfpub.epa.gov/si/si_public_record_report.cfm?Lab=NCEA&dirEntryId=216546

proposed regulation limits its application to workers with direct, immediate exposure to outdoor air. This is accomplished by exempting enclosed and mechanically ventilated buildings and structures, as long as any windows, doors, bays, or other openings are kept closed, except when it is necessary to open doors for persons to enter or exit. Likewise, enclosed vehicles are exempted when the air is filtered by a cabin air filter and windows, doors, and other openings are kept closed when not using a door to enter or exit.

Workplaces are also exempt if the employer can demonstrate that the concentration of PM2.5 in the air does not exceed a concentration that corresponds to a current AQI of 150. This is necessary to allow employers who choose to monitor the PM2.5 level at their worksites rather than relying on the reported current AQI. Employers seeking this exemption would have to follow Appendix A, described below, to ensure the accuracy of their measurements.

This subsection also exempts employees exposed to a current AQI for PM2.5 of 151 or greater for an hour or less during a shift, and firefighters engaged in wildland firefighting.

Proposed subsection (a)(3) makes it clear that employers within the scope of this regulation should comply with this section for the purpose of addressing the hazard of wildfire smoke resulting in a current AQI for PM2.5 of 151 or higher, rather than referring to the more general requirements in the existing respiratory protections found in sections 5141 and 5155.

New Section 5141.1(b). Definitions.

This proposed subsection provides definitions for the terms “Current Air Quality Index (Current AQI),” “NIOSH,” “PM2.5,” and “Wildfire Smoke.”

The table listing the levels of health concerns for the AQI categories was sourced from [Title 40 Code of Federal Regulations, Part 58, Appendix G](https://gov.ecfr.io/cgi-bin/text-idx?SID=455b88cb0ce9e587f8162e9eb0b2bece&mc=true&node=ap40.6.58.0000_0nbspnbspnbsp.g&rgn=div9). https://gov.ecfr.io/cgi-bin/text-idx?SID=455b88cb0ce9e587f8162e9eb0b2bece&mc=true&node=ap40.6.58.0000_0nbspnbspnbsp.g&rgn=div9

The National Institute for Occupational Safety and Health (NIOSH) is a division of the federal Centers for Disease Control and Prevention (CDC) and is the recognized national expert on workplace safety and health research. NIOSH is the world’s preeminent occupational safety and health research organization who through the scientific method, develops the data that is often used to established occupational safety and health standards by the Federal Occupational Safety and Health Administration and other public entities charged with this responsibility. NIOSH tests, approves, and certifies respirators used in the workplace pursuant to [Title 42 Code of Federal Regulations Part 84](https://gov.ecfr.io/cgi-bin/retrieveECFR?gp=&SID=bc6a566fab760f99f57e382e3f16fac5&mc=true&n=pt42.1.84&r=PART&ty=HTML#se42.1.84_130). https://gov.ecfr.io/cgi-bin/retrieveECFR?gp=&SID=bc6a566fab760f99f57e382e3f16fac5&mc=true&n=pt42.1.84&r=PART&ty=HTML#se42.1.84_130

The subsection is necessary to clarify the application and meanings of terms used in the proposed regulation.

New Section 5141.1(c). Identification of harmful exposures.

This proposed subsection requires employers to obtain the current AQI for PM2.5 for their workplaces at the start of each shift and periodically thereafter, as needed to protect the health of employees. An employer may acquire this information by checking specified government agency websites, obtaining the current AQI for PM2.5 directly from listed government agencies, or by measuring the PM2.5 levels at the worksite. This subsection encourages compliance by listing reputable resources for employers to easily find AQI forecasts for current AQI for PM2.5, while allowing employers to also identify other effective methods that may be more suitable for their work environment.

The subsection is necessary to ensure that employers regularly check the AQI levels during wildfire events so they will be able to determine when protective measures are needed.

An exception is provided for employers who *assume* the AQI is over 500 and comply with subsection (f), control of harmful exposures to employees, using that assumption. This exception is included because there is no need for an employer to monitor the current AQI for PM2.5 if the employer is already complying with the maximum respiratory protection requirements of the regulation.

For the same reason, there is an exception for employers in an emergency subject to subsection (f)(4). If they *assume* an AQI of 151 or greater and comply with (f)(3)(A) using that assumption, there is no need to monitor the AQI because they are already providing the maximum protection required by the regulation in emergency situations.

New Section 5141.1(d). Communication.

The proposed subsection refers to section 3203, Injury and Illness Protection Program (IIPP), which requires employers establish a system for communicating wildfire smoke hazards with employees in a language and manner readily understandable by employees. This subsection clarifies the application of that requirement in the context of wildfire smoke. Under the proposed subsection, employers must communicate the current AQI for PM2.5 and related protective measures in a language and manner that employees can understand. The subsection also requires employers to encourage employees to inform their employer about worsening air quality or possible adverse symptoms of wildfire smoke exposure. This subsection identifies minimum items to be communicated to employees for compliance with the communication requirement of 5141.1, and guidelines for when employees should report to employers conditions that may indicate 5141.1 triggering events exist.

The subsection is necessary both to ensure employees receive accurate and timely information and to ensure the employer receives necessary feedback from employees at their work location.

New Section 5141.1(e). Training and instruction.

The proposed subsection refers to section 3203, Injury and Illness Protection Program (IIPP), which requires employers to provide effective training and instruction in a language easily

understood by employees. The training shall contain, at a minimum, the information contained in Appendix B, described below, and must be presented in a language and manner readily understandable by employees.

The subsection is necessary to ensure that employees understand various topics necessary to protect their health during wildfire events, including the hazards posed by wildfire smoke and the appropriate use of respirators.

New Section 5141.1(f). Control of harmful exposures to employees.

The proposed subsection requires employers to protect employees using the hierarchy of controls set forth in existing section 5141. In order of priority, these are: engineering controls, administrative controls, and control by respiratory protective equipment.

Proposed subsections (f)(1), (f)(2), and (f)(3) clarify the application of the hierarchy of controls to the specific context of wildfire smoke exposure.

Subsections (f)(1) and (f)(2) give examples of engineering and administrative controls that may reduce employees' exposure to PM_{2.5} from wildfire smoke. Engineering controls should be used to the extent feasible and include providing enclosed structures or vehicles where the air is filtered. If engineering controls are not feasible, employers shall implement administrative controls, if practicable. Administrative controls can include relocating work, changing work schedules, reducing work intensity, or providing additional breaks. Proposed subsections 5141.1(f)(1) and (f)(2) are similar to existing subsections 5141(a) and (b).

Subsections (f)(1) and (f)(2) are necessary to clarify for employers that engineering and administrative controls (already required in existing section 5141) are appropriate to reduce employees' exposure to PM_{2.5} from wildfire smoke.

Subsection (f)(3)(A) mandates that employers provide a sufficient number of respirators consistent with Title 8, section 5144 for employees' voluntary use when the current AQI for PM_{2.5} is 151 or greater, but not exceeding 500. Subsection (f)(3)(A) specifically states that N95 filtering facepiece respirators are appropriate for these conditions and provides requirements for the selection, maintenance, and replacement of respirators. It also explains that employers shall provide training about respirator use in accordance with section 5141.1 Appendix B rather than section 5144 Appendix D.

This subsection is necessary because it provides clarity for those employers who may be uncertain about what type of respiratory protection is appropriate for wildfire smoke.

Under section 5144(c)(2), if respirators are provided but not required, employers may give filtering facepiece respirators such as N95s to their workers without completing medical evaluations or fit testing as required under section 5144(c)(1) when respirator use is mandatory. A Note to the proposed subsection (f)(3)(A) ensures that employers understand this.

Under the proposed subsection (f)(3)(B), respirator use would be required when the AQI for PM_{2.5} exceeds 500. The U.S. EPA AirNow program has occasionally published AQI levels

above 500 within California, but that occurs so rarely that the EPA's AQI categories, depicted in the chart in proposed subsection (b), only go up to 500.

This subsection is necessary to address conditions that are so infrequent, and pose such a serious potential health risk, that more protective measures are necessary. Subsection (f)(3)(B) also states that respirators provided for mandatory use should have an assigned protection factor in accordance with section 5144. The existing section 5144 provides a method for employers to determine which respirators will reduce the current AQI for PM_{2.5} within the respirator to 151 or less.

Proposed subsection (f)(4) states that only voluntary respiratory protection per subsection (f)(3)(A) is required during emergencies, including rescue and evacuation, for all AQI levels of 151 or above. Emergencies include utilities, communications, and medical operations, when they are directly aiding firefighting or emergency operations.

This subsection is necessary to allow employers and workers responding to an emergency to act quickly, without evaluating the possible application of engineering or administrative controls, and without performing medical evaluations and fit testing for mandatory respirator use. Under this subsection, respirators for voluntary use can be provided quickly and easily to emergency personnel and other employees directly assisting emergency response.

New Appendix A to New Section 5141.1: Measuring PM_{2.5} Levels at the Worksite (Mandatory if an Employer Monitors with a Direct Reading Instrument)

This appendix sets forth the requirements for measuring the PM_{2.5} levels using a direct-reading particulate monitor for employers who elect this option to determine PM_{2.5} levels. The appendix also states how such measurements can be used to determine the equivalent current AQI for the purposes of proposed section 5141.1, using a table adapted from Title 40 Code of Federal Regulations, Part 58, Appendix G, Table 2. The appendix also states that a person with the necessary training or experience shall conduct and evaluate the monitoring and the interpretation of the results, so that exposures are not underestimated.

This appendix is necessary to ensure that employers who elect to perform their own PM_{2.5} monitoring do so using accurate equipment and methods.

New Appendix B to New Section 5141.1: Information to Be Provided to Employees (Mandatory)

The appendix provides information about the health effects of wildfire smoke, medical treatment, how to obtain the current AQI for PM2.5, the requirements of the proposed regulation, the employer's two-way communication system, employer's methods to protect employees from wildfire smoke, the benefits and limitations of respirators when exposed to wildfire smoke, and how to properly use and maintain employer provided respirators.

This appendix is necessary in order to assist employers with training regarding wildfire smoke hazards and to ensure that employees have information critical for protecting their health. Employers addressing the potential hazard of wildfire smoke for the first time may be uncertain about what training should be provided. This appendix provides a convenient method for ensuring that critical information is conveyed to employees, including the health effects of wildfire smoke, available protections, and the appropriate use of respirators. For ease of use, the appendix includes blank lines to allow employers to easily customize the information.

REFERENCE TO COMPARABLE FEDERAL REGULATION

Code of Federal Regulations, Title 29, section 1910.134 is similar to the existing respiratory protection regulation in California Code of Regulations, Title 8, section 5144.

Code of Federal Regulations, Title 29, subsection 1910.1000(e) is similar to the existing regulation to control harmful exposures to employees in California Code of Regulations, Title 8, section 5141.

No federal law or regulation exists or has been promulgated that specifically addresses occupational exposure to either wildfire smoke or PM2.5.

TECHNICAL, THEORETICAL AND/OR EMPIRICAL STUDIES, REPORTS OR DOCUMENTS RELIED ON BY THE BOARD

The Board has relied upon the following documents as part of this rulemaking action:

1. Gavin Newsom, Governor of California, [Executive Order N-05-19](https://www.gov.ca.gov/wp-content/uploads/2019/01/1.8.19-EO-N-05-19.pdf). January 8, 2019.
<https://www.gov.ca.gov/wp-content/uploads/2019/01/1.8.19-EO-N-05-19.pdf>
2. Gavin Newsom, Governor of California; [Proclamation of a State of Emergency](https://www.gov.ca.gov/wp-content/uploads/2019/03/03.22.19-State-of-Emergency-Attested.pdf). March 22, 2019.
<https://www.gov.ca.gov/wp-content/uploads/2019/03/03.22.19-State-of-Emergency-Attested.pdf>
3. [Petition No. 573](https://www.dir.ca.gov/oshsb/documents/petition-573.pdf), submitted by Mitch Steiger, California Labor Federation; Douglas Parker, Worksafe; and Anne Katten, California Rural Legal Assistance Foundation, dated December 10, 2018.
<https://www.dir.ca.gov/oshsb/documents/petition-573.pdf>
and

- Occupational Safety and Health Standards Board; [Petition 573; Adopted Decision](#); March 21, 2019.
<https://www.dir.ca.gov/oshsb/documents/petition-573-adopteddecision.pdf>
4. [Division of Occupational Safety and Health's Evaluation of Petition 573](#); February 8, 2019.
<https://www.dir.ca.gov/oshsb/documents/petition-573-dosheval.pdf>
 5. United States Environmental Protection Agency (U.S. EPA); Website [Wildland Fire Research to Protect Health and the Environment](#).
<https://www.epa.gov/air-research/wildland-fire-research-protect-health-and-environment>
 6. U.S. EPA; Website accessed January 7, 2019; [Wildland Fire Research: Health Effects Research](#); Last updated on June 4, 2019.
<https://www.epa.gov/air-research/wildland-fire-research-health-effects-research>
 7. U.S. EPA; U.S. Forest Service; U.S. Centers for Disease Control and Prevention; California Air Resources Board; [Wildfire Smoke - A Guide for Public Health Officials](#); pages 4-7; August 2019. <https://www3.epa.gov/airnow/wildfire-smoke/wildfire-smoke-guide-revised-2019.pdf>.
 8. [National Oceanic and Atmospheric Administration Twitter](#).
<https://twitter.com/noaasatellites/status/1032311533668319232?lang=en>
 9. National Oceanic and Atmospheric Administration; Satellite and Information Service; [AMTRAK Relies on New NOAA Satellite Smoke Data to Protect Passengers During Dangerous California Wildfires](#); Website accessed 1-9-2019.
<https://www.nesdis.noaa.gov/content/amtrak-relies-new-noaa-satellite-smoke-data-protect-passengers-during-dangerous-california>
 10. Navarro KM; [Assessment of Ambient and Occupational Exposures to Air Contaminants from Wildland Fire Smoke](#); Dissertation; Fall 2016; University of California, Berkeley, California.
http://digitalassets.lib.berkeley.edu/etd/ucb/text/Navarro_berkeley_0028E_16683.pdf
 11. [Smoke Management Guidelines for Prescribed Burning in the Southeast, Smoke Dispersion](#).
http://www.auburn.edu/academic/forestry_wildlife/fire/smoke_guide/ and
http://www.auburn.edu/academic/forestry_wildlife/fire/smoke_guide/smoke_dispersion.htm
 12. California Air Resources Board; [Inhalable Particulate Matter and Health \(PM2.5 and PM10\)](#) August 10, 2017.
<https://www3.arb.ca.gov/research/aaqs/common-pollutants/pm/pm.htm>
 13. U.S. EPA; [Health and Environmental Effects of Particulate Matter \(PM\)](#); June 20, 2018.
<https://www.epa.gov/pm-pollution/health-and-environmental-effects-particulate-matter-pm>
 14. Reid CE, Brauer M, Johnston FH, Jerrett M, Balmes JR, Elliot CT; [Critical Review of Health Impacts of Wildfire Smoke Exposure](#); Environmental Health Perspectives; September 2016; 124(9); Pages 1334 - 1343.
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5010409/pdf/ehp.1409277.pdf>
 15. Wettstein Z, Hoshiko S, Fahimi J, Harrison R, Cascio W, Rappold A; [Cardiovascular and Cerebrovascular Emergency Department Visits Associated With Wildfire Smoke Exposure in California in 2015](#); Journal of the American Heart Association; April 17, 2018;7(8):e007492; Published online April 11, 2018; doi:10.1161/JAHA.117.007492.
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6015400/>
 16. Delfino R, Brummel S, Wu J, Stern H, Ostro B, et al; [The relationship of respiratory and cardiovascular hospital admissions to the southern California wildfires of 2003](#); Occupational

- and Environmental Medicine; March 2009; 66(3): 189-197; Published online November 18, 2008; doi:10.1136/oem.2008.041376.
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4176821/>
17. Hutchinson J, Vargo J, Milet M, French N, Billmire M, Johnson J, Hoshiko S; [The San Diego 2007 wildfires and Medi-Cal emergency department presentations, inpatient hospitalizations, and outpatient visits: An observational study of smoke exposure periods and a bidirectional case-crossover analysis](#); PLOS Medicine; July 10, 2018; 1002601; Pages 1 – 14. <https://journals.plos.org/plosmedicine/article?id=10.1371/journal.pmed.1002601>
 18. U.S. EPA; [Integrated Science Assessment for Particulate Matter; \(Final Report, December 2009\)](#); Includes Errata Sheet Created on February 10, 2010; U.S. EPA, Washington, DC, EPA/600/R-08/139F, December 2009, Provided by Compact Disk.
https://cfpub.epa.gov/si/si_public_record_report.cfm?Lab=NCEA&dirEntryId=216546
 19. U.S. EPA; Electronic Code of Federal Regulations; [Title 40, Protection of Environment; Part 58, Ambient Air Quality Surveillance; Appendix G, Uniform Air Quality Index \(AQI\) and Daily Reporting](#). https://gov.ecfr.io/cgi-bin/text-idx?SID=455b88cb0ce9e587f8162e9eb0b2bece&mc=true&node=ap40.6.58.0000_0nbspnbspnbsp.g&rgn=div9
 20. Health Effects Institute; [State of Global Air/2018: A Special Report on Global Exposure to Air Pollution and Its Disease Burden](#); Special Report; Boston, MA; Health Effects Institute; pages 9-11. <https://www.stateofglobalair.org/sites/default/files/soga-2018-report.pdf>
 21. Reisen F, Durán S, Flannigan M, Elliot C, Rideout K; [Wildfire Smoke and Public Health Risk](#); International Journal of Wildland Fire; August 2015; 24, 1029-1044.
https://www.researchgate.net/publication/281035322_Wildfire_smoke_and_public_health_risk.
 22. Zhang HH, Li Z, Liu Y, et al; [Physical and chemical characteristics of PM2.5 and its toxicity to human bronchial cells BEAS-2B in the winter and summer](#); Journal of Zhejiang University-Science B (Biomedicine and Biotechnology); 2018;19(4): 317–326.
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5964345/pdf/JZUSB19-0317.pdf>
 23. May 8, 2019 [Public Hearing Transcript in the Matter of: Department of Industrial Relations, Wildfire Smoke Protection](#) by Clark Reporting and Video Conferencing, 2140 Shattuck Avenue, Suite 407, Berkeley, California 94704.
<https://www.dir.ca.gov/dosh/doshreg/Protection-from-Wildfire-Smoke/Meeting-Transcript.pdf>
 24. June 20, 2019 [Transcript of Public Meeting/Public Hearing/Business Meeting of the Occupational Safety and Health Standards Board Regarding Discussion of Draft Protection from Wildfire Smoke \(Emergency\) Regulations to be Considered for Adoption at the July 18, 2019 Business Meeting](#), Reported by Noelle C. Krawiec, CSR No. 14255, Job No. 32422.
<https://www.dir.ca.gov/oshsb/documents/transcriptJun2019.pdf>
 25. August 27, 2019 [Transcript of Cal/OSHA Advisory Meeting, Protection of Workers from Wildfire Smoke](#); Clark Reporting and Video Conferencing, 2140 Shattuck Avenue, Suite 407, Berkeley, California 94704. <https://www.dir.ca.gov/dosh/doshreg/Protection-from-Wildfire-Smoke/Meeting-Transcript-2019-08-27.pdf>
 26. [Economic Impact Analysis: Emergency Regulations for Wildfire Smoke](#); to Division of Occupational Safety and Health, Research and Standards Unit; from Public Agency Safety

- Management Association (PASMA); by letter dated May 13, 2019.
<https://www.dir.ca.gov/dosh/doshreg/Protection-from-Wildfire-Smoke/Comments-2/PASMA.pdf>
27. California Air Resources Board (CARB); [Air Quality and Meteorological Information \(AQMIS\)](#); Query Tool. CARB data based on June 24, 2019 queries.
<https://www.arb.ca.gov/aqmis2/aqselect.php>
 28. [State of California Executive Order N—5-19 finding that the 2018 wildfire season was the worst in California](#). <https://www.gov.ca.gov/wp-content/uploads/2019/01/1.8.19-EO-N-05-19.pdf> and CalFire; 2018 Incident Information; [List Fires and Acres](#).
<https://www.fire.ca.gov/incidents/2018/>
 29. Employment Development Department; [Size of Business Data for California \(Quarterly\)](#); Labor Market Information Resources and Data; 2018 Q4; Payroll and Number of Businesses by Size of Business – Classified by Industry (Table 2A) and Number of Employees by Size Category – Classified by Industry (Table 2B).
https://www.labormarketinfo.edd.ca.gov/LMID/Size_of_Business_Data_for_CA.html
<https://www.labormarketinfo.edd.ca.gov/file/indsize/2A-18-3-FINAL.xlsx>
<https://www.labormarketinfo.edd.ca.gov/file/indsize/2B-18-3-FINAL.xlsx>
<https://www.labormarketinfo.edd.ca.gov/file/indsize/2A-18-4-FINAL.xlsx>
<https://www.labormarketinfo.edd.ca.gov/file/indsize/2B-18-4-FINAL.xlsx>
 30. The Occupational Safety and Health Standards Board’s July 18, 2019 Business Meeting Pertaining to Discussion and Adoption of Protection from Wildfire Smoke (Emergency), provided by compact disk.
 31. California Employment Development Department. [Statewide average wage in California for Q1 2019](#), the most recent data available as of this writing.
<https://www.labormarketinfo.edd.ca.gov/data/oes-employment-and-wages.html#OES> [https://www.labormarketinfo.edd.ca.gov/file/occup\\$/oeswages/cal\\$oes2019.xls](https://www.labormarketinfo.edd.ca.gov/file/occup$/oeswages/cal$oes2019.xls)
 32. California Employment Development Department. [Employment by Industry Data for California, Seasonally Adjusted, 2000-current](#). Months relied upon: [Q3 2019](#).
<https://www.labormarketinfo.edd.ca.gov/data/employment-by-industry.html>
[https://www.labormarketinfo.edd.ca.gov/file/indhists/cal\\$shws.xls](https://www.labormarketinfo.edd.ca.gov/file/indhists/cal$shws.xls)
 33. California State Controller’s Office. [Number of state and local government employees in California](#). <https://publicpay.ca.gov/>
[CalTrans](#):
<https://publicpay.ca.gov/Reports/State/StateEntity.aspx?entityid=3854&year=2018>
[CHP](#): <https://publicpay.ca.gov/Reports/State/StateEntity.aspx?entityid=3743&year=2018>
[All State Departments](#): <https://publicpay.ca.gov/Reports/State/State.aspx>
[University of California](#):
<https://publicpay.ca.gov/Reports/HigherEducations/UniversityOfCalifornia.aspx>
[California State University](#):
<https://publicpay.ca.gov/Reports/HigherEducations/StateUniversity.aspx>
 34. Table created by Division of Occupational Safety and Health containing NAICS codes selected, percentages applied, and results of calculations: “Determination of businesses and employees possibly covered by regulation, based on seasonally adjusted monthly average by

industry, Q3 2019.” Form 399 Attachment for Certificate of Compliance of title 8 section 5141.1.

These documents are available for review Monday through Friday from 8:00 a.m. to 4:30 p.m. at the Standards Board Office located at 2520 Venture Oaks Way, Suite 350, Sacramento, California.

PETITION

Petitioner: Mitch Steiger, California Labor Federation.

File No.: 573.

Doug Parker, Worksafe

Anne Katten, California Rural Legal Assistance Foundation

The Occupational Safety and Health Standards Board received a petition on December 13, 2018 (submitted December 10, 2018) to add an emergency provision to the safety orders contained in Title 8 of the California Code of Regulations to protect outdoor employees from the harmful effects of wildfire smoke. On March 21, 2019, the Occupational Safety and Health Standards Board granted the petition in part as follows:

- The Board finds specific grounds for considering exposure of outdoor workers to wildfire smoke events to constitute the basis for an emergency regulation. Therefore, the Board requests the Division to draft an emergency rulemaking proposal for consideration no later than the July Board meeting. The Board further instructs Board staff to work with the Division to develop a timeline to ensure that the proposal will be ready for consideration and adoption at that meeting.
- The Board also request that the Division convene an advisory committee process to develop a permanent regulation regarding control of exposure of employees to hazardous levels of wildfire smoke. Experts from the California Department of Public Health, Cal/EPA, CAL FIRE and other state and local government agencies, as well as labor and management representatives should be invited to participate.
- The Division held advisory meetings and reviewed stakeholder input in composing and modifying the text of the emergency regulation and the certificate of compliance.¹⁰

A copy of the petition, the Division’s evaluation, and the Board’s petition decision are included as Documents Relied Upon.

¹⁰ [May 8, 2019 Transcript of Cal/OSHA Advisory Meeting, Protection of Workers from Wildfire Smoke](https://www.dir.ca.gov/dosh/doshreg/Protection-from-Wildfire-Smoke/Meeting-Transcript.pdf); Clark Reporting and Video Conferencing, 2140 Shattuck Avenue, Suite 407, Berkeley, California 94704.

<https://www.dir.ca.gov/dosh/doshreg/Protection-from-Wildfire-Smoke/Meeting-Transcript.pdf>

[June 20, 2019 Transcript of Public Meeting/Public Hearing/Business Meeting of the Occupational Safety and Health Standards Board Regarding Discussion of Draft Protection from Wildfire Smoke \(Emergency\) Regulations to be Considered for Adoption at the July 18, 2019 Business Meeting](https://www.dir.ca.gov/dosh/doshreg/Protection-from-Wildfire-Smoke/Meeting-Transcript.pdf), Reported by Noelle C. Krawiec, CSR No. 14255, Job No. 32422.

<https://www.dir.ca.gov/dosh/doshreg/Protection-from-Wildfire-Smoke/Meeting-Transcript-2019-08-27.pdf>

[August 27, 2019 Transcript of Cal/OSHA Advisory Meeting, Protection of Workers from Wildfire Smoke](https://www.dir.ca.gov/dosh/doshreg/Protection-from-Wildfire-Smoke/Meeting-Transcript-2019-08-27.pdf); Clark Reporting and Video Conferencing, 2140 Shattuck Avenue, Suite 407, Berkeley, California 94704.

<https://www.dir.ca.gov/dosh/doshreg/Protection-from-Wildfire-Smoke/Meeting-Transcript-2019-08-27.pdf>

ADVISORY COMMITTEE

This proposal was developed with the assistance of an advisory committee. (A copy of the May 8, 2019 transcript is included as a Document Relied Upon.)

FIRE PREVENTION STATEMENT

This proposal does not include fire prevention or protection standards. Therefore, approval of the State Fire Marshal pursuant to Government Code section 11359 or Health and Safety Code section 18930(a)(9) is not required.

SPECIFIC TECHNOLOGY OR EQUIPMENT

This proposal requires, under certain specified conditions, that employers must provide NIOSH approved respirators that effectively protect the wearers from inhalation of PM2.5, if the employer is unable to reduce employees' exposure sufficient through other means (for instance, relocating work away from wildfires smoke or into ventilated buildings, or postponing tasks until the smoke clears).

Providing such respirators under the conditions covered by this proposed regulation is already required by existing law in Title 8 sections 5141 and 5144, and Labor Code sections 6400, 6401, 6402, 6403, and 6404.

Existing law, Title 8, section 5140, "Definitions," states that a "harmful exposure" is an "exposure to dusts, fumes, mists, vapors, or gases" which is either "(a) In excess of any permissible limit prescribed by section 5155; or (b) Of such a nature by inhalation as to result in, or have a probability to result in, injury, illness, disease, impairment, or loss of function." No permissible limit for PM2.5 is prescribed by section 5155, and no existing Title 8 regulation specifies when wildfire smoke may result in injury, illness, disease, impairment, or loss of function.

Existing law, Title 8, section 5141, "Control of Harmful Exposures to Employees," lists the hierarchy of controls that employers must follow to address employee exposure to harmful air contaminants. Employers must first rely on engineering controls whenever feasible, but if engineering controls are not feasible or do not achieve full compliance, administrative controls must be implemented "if practicable." When engineering and administrative controls fail to achieve full compliance, then respiratory protective equipment shall be used.

Existing law, Title 8, section 5144, "Respiratory Protection," establishes that respirators "applicable and suitable for the purpose intended" must be provided "when such equipment is necessary to protect the health of the employee." To determine when respiratory equipment is necessary, section 5144 requires employers to "identify and evaluate the respiratory hazard(s) in the workplace" and "include a reasonable estimate of employee exposures to respiratory hazard(s) and an identification of the contaminant's chemical state and physical form." Section 5144 sets forth the requirements for respiratory protection programs, how appropriate respirators

should be selected, and related matters. This regulation does not expressly state the protection necessary for wildfire events, the concentration of PM2.5 necessitating respiratory protection, nor does it expressly identify a type of respirator providing at least minimally effective filtration of PM2.5 from wildfire smoke exposure, or make specifically clear what circumstances and conditions in which voluntary use of such respirators could occur in permissible accord with existing Title 8 respiratory protection requirements.

Existing law, Title 8, section 5155, “Airborne Contaminants,” sets permissible exposure limits for particular substances. No permissible exposure limit is listed for either wildfire smoke or PM2.5.

Labor Code section 6400 requires every employer to furnish employment and place of employment that is safe and healthful for its employees.

Labor Code section 6401 requires employers to furnish and use safety devices and safeguards which are reasonably adequate to render employment and place of employment safe and healthful and to do every other thing reasonably necessary to protect the life, safety, and health of employees.

Labor Code section 6402 prohibits employers from requiring or permitting any employee to go or be in an employment or place of employment which is not safe and healthful.

Labor Code section 6403 prohibits employers from failing to or neglecting to provide and use safety devices and safeguard reasonably adequate to render the employment and place of employment safe.

Labor Code section 6404 prohibits employers from occupying or maintaining any place of employment that is not safe and healthful.

However, existing law and regulations do not *expressly* address the hazard of PM2.5 from wildfire smoke, leading to confusion about the appropriate respiratory protection and noncompliance. This regulation, therefore, clarifies the particular type of respirators that fulfill existing requirements in that specific context. The proposed regulation requires respirators approved by NIOSH for PM2.5, because without NIOSH certification there is no guarantee that the respirator has been tested and evaluated appropriately. Likewise, the respiratory must effectively protect the user from inhalation of PM2.5—surgical masks, for instance, provide no protection. A performance standard such as those included in existing law would not have provided clarity to employers and employees about the type of respirators adequate for protection from PM2.5.

Although the regulation states that an N95 filtering facepiece respirator meets this standard, that particular respirator is not mandated. Although N95s are particularly accessible and inexpensive, there are other methods of respiratory protection that protect against PM2.5 and which would be permissible under the proposed regulation.

The other piece of equipment included in the proposed regulation, direct-reading particulate monitors, are also not mandated. Employers may choose to use such monitors in lieu of relying on AQI from specified government sources.

ECONOMIC IMPACT ANALYSIS/ASSESSMENT

The proposed regulation will not have any effect on the creation or elimination of California jobs or the creation or elimination of California businesses or affect the expansion of existing California businesses.

The annual cost of the proposal for a typical business is very low, and there is no cost to private individuals who are not employers. In addition, many California businesses affected by this regulation are already prepared to provide N95 respirators and related training to employees in the event of wildfire smoke exposure, in compliance with existing Title 8 sections.

A small business is expected to incur a cost of \$150.74 in the first year, and in every year thereafter, to comply with the respirator and training requirements described above. A typical business is expected to incur a cost of \$191.19 in the first year, and in every year thereafter.

This has been calculated using data from the Employment Development Department (EDD) about the average number of employees per business in California (17,624,394 employees / 1,584,626 businesses) and the average number of employees per small business (13,886,430 employees / 1,581,846 businesses), and then applying the per-employee costs (\$17.19) described in detail below.¹¹

The number of businesses affected by wildfire smoke will vary greatly from year to year. Many workplaces are exempt from the proposal, including buildings and vehicles with air filtration, along with workers who are exposed to outdoor air for less than an hour per shift (for instance, while traveling between buildings or walking to or from a vehicle).

The Division of Occupational Safety and Health (Division) estimated the number of private employers and employees that may be subject to this regulation in a given year by:

1. Estimating the total number of employers that could *possibly* be covered by the proposal, even for single day or fraction of a day. This is an estimate of all employers in California with employees who work outdoors—or in buildings, structures, or vehicles that are either entirely unfiltered or open to the outside air, such as sheds—for more than one-hour per shift. This number is the “*maximum possible number of employers.*”

¹¹ Table 2A and 2B, 2018 Q3 and Q4: https://www.labormarketinfo.edd.ca.gov/LMID/Size_of_Business_Data_for_CA.html
<https://www.labormarketinfo.edd.ca.gov/file/indsize/2A-18-3-FINAL.xlsx>
<https://www.labormarketinfo.edd.ca.gov/file/indsize/2B-18-3-FINAL.xlsx>
<https://www.labormarketinfo.edd.ca.gov/file/indsize/2A-18-4-FINAL.xlsx>
<https://www.labormarketinfo.edd.ca.gov/file/indsize/2B-18-4-FINAL.xlsx>

2. Estimating the total number of employees that could *possibly* be covered by the proposal, even for single day or fraction of a day (i.e. an estimate of Californians working outdoors or in unfiltered outdoor air for more than one-hour per shift.) This number is the “*maximum possible number of employees.*”
3. Determining the portion of employers or employees from the totals above that might be affected by wildfire smoke in a given year. These numbers are the “*number of possible employers per year*” and the “*number of possible employees per year.*”

The Division determined the total number of employers and employees in California for each industry sector, according to the North American Industry Classification System (NAICS) as applied by the Employment Development Department (EDD).¹² Even though no data exists to provide a specific number or proportion of employees engaged in outdoor work within California, separating employers and employees by industry using NAICS codes allowed the Division to estimate the people and businesses that could possibly be covered by the proposed regulation. The Division estimated the percentage of employees, for each industrial sector, who work outdoors or in structures/vehicles with unfiltered air on any given day. The Division based its assumptions on agency experience with the industries in question, including experience derived from onsite investigations and other enforcement activities, research, and consultation with employers.

Using this methodology, the Division compiled EDD data on the number of employers and employees for 34 industries, each one a 3- or 4-digit NAICS codes or, when used by EDD, a combination of codes.¹³ For each category, based on the types of industry included in the code or codes, the Division estimated the percentage of employees for whom this regulation might possibly apply.

The total number of employers in the selected industries was 329,797. The total number of employees, adjusted to account for the percentage estimated to work outdoors or in outdoor, unfiltered air in each industry, was 2,399,318.

The Division then determined the number of potentially affected employees and employers which might be covered by the regulation in a given year. Using 2018 geographic and air quality data from the California Air Resources Board, the Division calculated that about $\frac{1}{3}$ of the California population may be exposed to unhealthy levels of PM2.5 from wildfire smoke for ten days over the course of a year, under a worst-case scenario.¹⁴ The year 2018 was used because it was the most destructive wildfire season in California history with over 7,600 fires burning an

¹² [Seasonally adjusted monthly average](https://www.labormarketinfo.edd.ca.gov/data/employment-by-industry.html) for Q3 2019, the last full quarter available at the time of this writing, available at <https://www.labormarketinfo.edd.ca.gov/data/employment-by-industry.html>
[https://www.labormarketinfo.edd.ca.gov/file/indhist/cal\\$shws.xls](https://www.labormarketinfo.edd.ca.gov/file/indhist/cal$shws.xls)

¹³ Table created by Division of Occupational Safety and Health containing NAICS codes selected, percentages applied, and results of calculations: “Determination of businesses and employees possibly covered by regulation, based on seasonally adjusted monthly average by industry, Q3 2019.” Form 399 Attachment for Certificate of Compliance of title 8 section 5141.1.

¹⁴ [Proportion of the population exposed to a current Air Quality Index \(AQI\) of 151 or greater during the 2018 wildfires, and the number of days of exposure, based on queries](https://www.arb.ca.gov/aqmis2/aqdselect.php) made at: <https://www.arb.ca.gov/aqmis2/aqdselect.php>

area of 1,846,445 acres, the largest area of burned acreage ever recorded in a fire season according to the California Department of Forestry and Fire Protection.

Number of possible employees and employers covered per year, worst-case scenario

	Total maximum possible	Possible per year (Total * 1/3)
Number of employers	329,797	109,932
Number of employees	2,399,318	799,773

Under existing regulations (sections 5141 and 5144), employers subject to the proposed regulation already have an obligation to protect workers from the hazards of PM2.5 from wildfire smoke as set forth in the proposed section 5141.1. Employers are already required to use engineering and administrative controls when appropriate (for instance by moving tasks indoors or delaying non-critical tasks until the smoke clears) and, when such controls are infeasible or insufficient, providing respiratory protective equipment in the form of respirators.

However, in addition to the performance standard above, the proposed regulation includes *prescriptive* elements, the costs of which have been quantified by the Division.

The proposed regulation explicitly states that N95 filtering face piece respirators are appropriate for protecting wearers from inhalation of PM2.5 due to wildfire smoke. The cost per N95 respirator was estimated by the Public Agency Safety Management Association (PASMA) to be approximately \$0.75 per mask.¹⁵ This estimate was accepted as reasonable based on the Division’s own research. During the 2019 fire season, Division staff researched companies which N95 manufacturer 3M listed as authorized sellers of Model 8210, one of the most popular filtering facepiece respirators. The Division found five businesses selling those items at a cost between \$0.64 and \$0.81 per unit.¹⁶

The training required in Appendix B of the proposed regulation, plus the time required for distributing and donning N95 masks and communicating required information to employees, is estimated to take about 20 minutes to complete. Cost has been estimated based on average hourly earnings as reported by EDD.¹⁷

¹⁵ [Economic Impact Analysis: Emergency Regulations for Wildfire Smoke](https://www.dir.ca.gov/dosh/doshreg/Protection-from-Wildfire-Smoke/Comments-2/PASMA.pdf); to Division of Occupational Safety and Health, Research and Standards Unit; from Public Agency Safety Management Association (PASMA); by letter dated May 13, 2019. <https://www.dir.ca.gov/dosh/doshreg/Protection-from-Wildfire-Smoke/Comments-2/PASMA.pdf>.

¹⁶ These were Enviro-safety (\$0.64), USA Safety Supply (\$0.65), Fairmont Supply (\$0.77), Amazon (\$0.75), and Pack n Tape (\$0.81). Per unit price was based on a box of 20 units, except for Pack n Tape, which sold by the case (160 units). The Division also found two vendors listed by 3M which charged per unit costs of \$1.24 (Stauffer) and \$1.56 (Zoro), but those were so much higher than the other prices that they were considered outliers. Other retailers not listed by 3M charged prices above \$0.81 but significantly below Stauffer and Zoro. Prices checked on or shortly before October 1, 2019.

¹⁷ [Statewide average wage in California for Q1 2019](https://www.labormarketinfo.edd.ca.gov/data/oes-employment-and-wages.html#OES), the most recent data available as of this writing, at <https://www.labormarketinfo.edd.ca.gov/data/oes-employment-and-wages.html#OES> [https://www.labormarketinfo.edd.ca.gov/file/occup\\$/oeswages/cal\\$oes2019.xls](https://www.labormarketinfo.edd.ca.gov/file/occup$/oeswages/cal$oes2019.xls)

The Division has estimated maximum costs below by assuming that *all* covered businesses will incur new costs by complying with this proposed regulation, even though many private employers already have respiratory protection programs in place to respond to wildfire smoke, especially utilities and large construction companies.

Likewise, in the midst of a wildfire smoke event, many employers covered by the regulation may shut down work entirely or suffer reduced productivity for reasons *unrelated to this regulation*, namely mandated evacuations, other direct fire risks, and blackouts. This will be especially true if utilities continue the practice of preemptive blackouts to the extent witnessed in 2019. The numbers below have not been reduced to account for the fact that employers covered by the regulation may cease or reduce work in smoky areas due to the fire itself or related circumstances, rather than the regulation itself.

Private sector annual cost of proposal, worst-case scenario¹⁸

Safety and Health Requirement in 5141.1	Total exposed employees	Cost per employee	Days of wildfire smoke exposure	Cost/year
N-95 Respirator	799,773	\$0.75	10	\$5,998,298
Training and use of respirators	799,773	\$9.69		\$7,749,800
Total cost				\$13,748,098

The total, statewide savings that would result from the proposed regulation cannot be quantified. The Board is not aware of a study that quantifies the effects of deaths/illnesses from *occupational wildfire smoke*-related PM2.5 as opposed to exposures to PM2.5 from other sources, such as dust and pollution, or non-occupational exposures. Despite that, there is ample evidence that reducing exposure to PM2.5 in general and wildfire smoke in particular will result in improved health for California employees and reduce the financial costs caused by medical care and lost workdays, costs which may be borne by employees, their families, employers, insurers, and public benefits programs.

To give some idea of the extent of the anticipated health benefits, a 2018 epidemiologic analysis examined increased emergency room visits in eight air basins in California from May 1 to Sept 30, 2015, a year in which over 800,000 acres burned.¹⁹ The study determined that days with dense wildfire smoke had multiplied cardiovascular emergency room visits (all causes) by 1.08 and respiratory emergency room visits (all causes) by 1.09.²⁰

Some of the prescriptive elements of proposed section 5141.1 would result in savings to employers. Existing section 5144(d)(1)(C) requires employers to “*evaluate the respiratory*

¹⁸ See table above for the basis of this number of total employees exposed. As described above, [the number of days of exposure is based on queries regarding the 2018 fire season](https://www.arb.ca.gov/aqmis2/aqdselect.php) made at: <https://www.arb.ca.gov/aqmis2/aqdselect.php>

¹⁹ Wettstein Z, Hoshiko S, Fahimi J, Harrison R, Cascio W, Rappold A; [Cardiovascular and Cerebrovascular Emergency Department Visits Associated With Wildfire Smoke Exposure in California in 2015](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6015400/); Journal of the American Heart Association; April 17, 2018;7(8):e007492; Published online April 11, 2018; doi:10.1161/JAHA.117.007492. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6015400/>

²⁰ “Dense” was defined using a lower AQI than the threshold used by the proposed regulation, but this is the best available evidence.

hazard(s) in the workplace... includ[ing] a reasonable estimate of employee exposures to respiratory hazard(s) and an identification of the contaminant's chemical state and physical form.” Given the large and varying number of respiratory hazards in wildfire smoke, the cost of complying with this subsection during unhealthy wildfire smoke conditions cannot be estimated: costs vary significantly between worksites depending on the local air conditions, the nature of the work, and the breadth of the employer’s existing respiratory protection program. But compliance with the existing regulation likely requires monitoring by an industrial hygienist for some public employers, in some circumstances, while the proposed regulation does not. Proposed section 5141.1 will therefore reduce costs by giving employers an easy and efficient method of evaluating the respiratory hazards resulting from wildfire smoke by using the AQI for PM2.5, without the need for any specialized knowledge.

The fact that the proposed regulation allows employers to provide N95s to workers in response to wildfire smoke without performing medical evaluation or fit testing may result in some marginal savings. The exact amount would depend on the number, location, extent, and length of wildfires and cannot be quantified. Furthermore, the degree to which employers could really take advantage of these potential savings is unknown, because such entities would presumably continue to provide medical evaluations/fit testing for that portion of their workforce which is required to use respiratory protection equipment as a part of regular job duties, regardless of the presence of wildfire smoke.

BENEFITS OF THE PROPOSED ACTION

Exposure to PM2.5 poses serious risk of adverse health outcomes through multiple biological mechanisms. These adverse health effects include, but are not limited to increased local lung and systemic inflammation, acute and chronic cardiovascular effects, and acute and chronic respiratory effects.²¹

Numerous published scientific epidemiological studies have found an association between wildfire smoke and respiratory morbidity in general (for instance respiratory emergency visits, physicians visits, and declines in lung function among children), along with exacerbation of asthma and chronic obstructive pulmonary disease.²² Epidemiological studies also show that short-term exposures to PM2.5 can cause stroke, heart failure, and arrhythmias, as well as myocardial ischemia and infarction.²³ Emergency room admissions for respiratory,

²¹ Navarro KM; [Assessment of Ambient and Occupational Exposures to Air Contaminants from Wildland Fire Smoke](#); Dissertation.; Fall 2016; University of California, Berkeley, California.

http://digitalassets.lib.berkeley.edu/etd/ucb/text/Navarro_berkeley_0028E_16683.pdf

²² Reid CE, Brauer M, Johnston FH, Jerrett M, Balmes JR, Elliot CT; Critical Review of Health Impacts of Wildfire Smoke Exposure; Environmental Health Perspectives; September 2016; 124(9); 1334 - 1343.

²³ Wettstein Z, Hoshiko S, Fahimi J, Harrison R, Cascio W, Rappold A; [Cardiovascular and Cerebrovascular Emergency Department Visits Associated With Wildfire Smoke Exposure in California in 2015](#); Journal of the American Heart Association; April 17, 2018; 7(8):e007492; Published online April 11, 2018; doi:10.1161/JAHA.117.007492. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6015400/>

cardiovascular, and cerebrovascular illnesses increase during wildfire smoke incidents.²⁴ As wildfire seasons worsen, the proposed regulation will avoid a potential increase in debilitating and sometimes life-threatening illnesses faced by workers exposed to wildfire smoke.

Using the AQI for PM_{2.5}—developed by the U.S. EPA and easily accessible online—would make it easier for employers to understand and comply with their existing obligation to protect workers from respiratory hazards caused by wildfire smoke. The proposed regulation also clarifies when employers must respond to a heightened risk of employee exposure to wildfire smoke—namely, when the AQI for PM_{2.5} exceeds 150 (unhealthy for everyone). When it is not feasible for employers to eliminate workers’ exposure through engineering controls (e.g. enclosed structures with air filtration), administrative controls (e.g. shifted time or location of work), or a combination of both, then, the proposal makes clear, employers must make effective respirators available to employees. N95 masks are a commonly available type of respirator which provide effective protection, when used as directed, under suitable conditions.

By specifying when such respirators should be provided for voluntary use, under a simply evaluated metric (AQI), the proposed regulation is intended to provide employers with readily understandable parameters for such respirators’ permissible use in accordance with existing Title 8 respiratory protection standards. The proposed regulation also identifies (per its Appendix B) the basic elements of employee training essential to the appropriate use of such respirators. The regulation should therefore increase compliance among employers and correct respirator use among employees.

The proposed regulation also responds to the uniquely unpredictable nature of wildfire smoke, an issue which is not included in any existing regulation. Section 5144 of Title 8 primarily addresses mandatory respirator use requiring both medical evaluations and fit testing prior to use, which can be an unrealistic requirement in the context of wildfires, given the speed at which large areas can be covered with harmful smoke.

This regulation is expected to be neutral to and will provide neither a benefit nor a detriment to the state’s environment.

EVIDENCE SUPPORTING FINDING OF NO SIGNIFICANT STATEWIDE ADVERSE ECONOMIC IMPACT DIRECTLY AFFECTING BUSINESSES

The Board has made an initial determination that this proposal will not result in a significant, statewide adverse economic impact directly affecting businesses/individuals, including the ability of California businesses to compete with businesses in other states.

²⁴ Delfino R, Brummel S, Wu J, et al; [The relationship of respiratory and cardiovascular hospital admissions to the southern California wildfires of 2003](https://doi.org/10.1136/oem.2008.041376); Occupational and Environmental Medicine; March 2009; 66(3): 189-197; Published online November 18, 2008; doi:10.1136/oem.2008.041376. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4176821/> and Hutchinson J.A, Vargo, J, Milet M, French N, Billmire M, Johnson J, Hoshiko S; [The San Diego 2007 wildfires and Medi-Cal emergency department presentations, inpatient hospitalizations, and outpatient visits: An observational study of smoke exposure periods and a bidirectional case-crossover analysis](https://doi.org/10.1371/journal.pmed.1002601); July 10, 2018; PLOS Medicine; 15(7): e1002601; Pages 1 – 14. <https://journals.plos.org/plosmedicine/article?id=10.1371/journal.pmed.1002601>

Employers that cannot feasibly move the time/location of a workplace task to reduce exposure to wildfire smoke below an AQI of 151 (or utilize other engineering or administrative controls) can rely on the N95 masks to comply with the proposed section. N95s are easily available and inexpensive. The annual cost of the proposal for a typical and representative business is very low (about \$191, as stated above). Only businesses with employees who work outdoors or in unfiltered air for more than an hour per day are even *potentially* covered by the regulation, and in a given year most such businesses will not actually experience workplace conditions necessitating respiratory controls. Appendix B, included in the regulation, provides a brief and efficient method of training employees on the hazard of wildfire smoke.

REASONABLE ALTERNATIVES TO THE PROPOSAL AND THE BOARD'S REASONS FOR REJECTING THOSE ALTERNATIVES

The Board has considered the following alternatives:

Alternative 1: No regulation – Because the proposed regulation clarifies existing law rather than imposing new requirements, the Division could enforce existing regulations. The Division has authority under sections 3203, 5141, and 5144 to issue citations against employers which do not limit employees' exposure to PM2.5 from wildfire smoke, provide N95s in unhealthy wildfire smoke conditions, give employees appropriate training, etc. Employers would therefore incur costs similar to the proposed regulation. The lack of clarity in existing regulatory language, however, would likely result in added expense. Under existing section 5144(d)(1)(C), employers must identify and evaluate all respiratory hazards by identifying the contaminants' chemical states and physical forms; an evaluation which may require technical and medical expertise as wildfire smoke is a complex mixture of many harmful respiratory hazards. Though the exact cost would vary depending on the particular circumstances of each employer, and cannot be estimated, this alternative would certainly cost significantly more than the proposed regulation. Likewise, enforcement would be more difficult and costly for the Division under this alternative.

This alternative would result in economic benefits from improved employee health if compliance with the existing regulations were to increase significantly, but the monetary benefit cannot be quantified. The number of noncompliant employers in 2020 and afterwards would likely be higher under this alternative, since businesses have had difficulty understanding and applying existing regulatory language. Thus, the economic benefit would be significantly lower than under the proposed regulation.

For these reasons, the Board rejected this alternative, consistent with its decision to grant Petition No. 573.

Alternative 2: Including workplaces in the scope of the regulation unless indoor air was filtered by particular means – Petition No. 573 partially granted by the Board referred to outdoor workers. The proposed regulation addresses the issue of what work is "outdoor" for purposes of wildfire smoke by its limited scope. Only workers exposed to outdoor, unfiltered air are covered by the proposed regulation.

An alternative is to impose requirements on workplaces that are indoors or within vehicles, if the air is not filtered by a method that effectively removed PM2.5 from the air such as a HEPA or MERV 13 filter. This would broaden the regulation beyond the scope of the proposed language, which targets those workers most likely to be exposed to unhealthy levels of PM2.5 from wildfire smoke, i.e. people working outside or in locations with outdoor or *entirely* unfiltered air.

This alternative would lead to an unquantifiable decrease in employee exposure to PM2.5 and a concomitant decrease in related illnesses. The cost of this alternative would be significantly higher than the proposed section 5141.1, as it would apply to almost all employers in California, except for certain facilities which already have specialized air filtering, such as some medical buildings, building with sensitive equipment or products, and buildings that are required to meet enhanced indoor environmental air quality standards due to local ordinances. The costs of this alternative could vary dramatically, depending on the particular indoor air filtering methods required by regulation, and the degree to which employers would need to alter existing ventilation systems. Because these complexities would require significant time to consider, this alternative would not be a timely means of addressing Petition 573.

For those reasons, the Board has rejected this alternative at this time.

FIRST 15-DAY NOTICE

DEPARTMENT OF INDUSTRIAL RELATIONS
Occupational Safety and Health Standards Board
1017 L Street, PMB #254
Sacramento, CA 95814-3805
Tel: (916) 274-5721 Fax: (916) 274-5743
Website address www.dir.ca.gov/oshsb



NOTICE OF PROPOSED MODIFICATION TO
CALIFORNIA CODE OF REGULATIONS

TITLE 8: New Section 5141.1
of the General Industry Safety Orders

Protection from Wildfire Smoke

Pursuant to Government Code Section 11346.8(c), the Occupational Safety and Health Standards Board (Standards Board) gives notice of the opportunity to submit written comments on the above-named standards in which modifications are being considered as a result of public comments and/or Board staff consideration.

On May 21, 2020, the Standards Board held a Public Hearing to consider revisions to Title 8, Section 5141.1 of the General Industry Safety Orders. The Standards Board received oral and written comments on the proposed revisions. The standard has been modified as a result of these comments and Board consideration. Modifications are now proposed for subsection (c) and Appendix B.

A copy of the full text of the standards as originally proposed, with the modifications clearly indicated, is attached for your information. Anything that has been added is indicated by a bold double underline, and anything that has been removed is indicated by a bold double strike-out.

Pursuant to Government Code Section 11347.1, notice is also given of the opportunity to submit comments concerning the addition to the rulemaking file of the following document relied upon by the Board:

ADDITIONAL DOCUMENT RELIED UPON

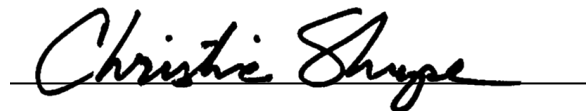
- State of California Department of Finance, “[California Economic Forecast MR 2020-21](#)” (tab: ANNUAL), prepared April 2020, available at http://www.dof.ca.gov/Forecasting/Economics/Eco_Forecasts_Us_Ca/

Any written comments on these modifications or document relied upon must be received by 5:00 p.m. on August 12, 2020 at the Occupational Safety and Health Standards Board, 1017 L Street, PMB #254, Sacramento, California 95814-3805 or submitted by fax to (916) 274-5743 or e-mailed to oshsb@dir.ca.gov. Please confine your comments to the modification of the text and the additional document. This proposal will be scheduled for adoption at a future business meeting of the Standards Board.

The Standards Board's rulemaking files on the proposed action are open for public inspection BY APPOINTMENT Monday through Friday, from 8:00 a.m. to 4:30 p.m., at the Standards Board's office at 2520 Venture Oaks Way, Suite 350, Sacramento, California 95833. Appointments can be scheduled via email at oshsb@dir.ca.gov or by calling (916) 274-5721.

Inquiries concerning the proposed changes may be directed to the Executive Officer, Christina Shupe, at (916) 274-5721.

OCCUPATIONAL SAFETY AND HEALTH
STANDARDS BOARD

A handwritten signature in black ink, reading "Christina Shupe", is written over a horizontal line.

Christina Shupe, Executive Officer

Date: July 23, 2020

PROPOSED MODIFICATIONS

**(Deleted regulatory language is shown in bold double strike-out
and new regulatory language is shown in bold double underline.)**

**STANDARDS PRESENTATION
TO
CALIFORNIA OCCUPATIONAL SAFETY AND HEALTH STANDARDS BOARD**

TITLE 8, DIVISION 1, CHAPTER 4

Subchapter 7. General Industry Safety Orders
Group 16. Control of Hazardous Substances
Article 107. Dusts, Fumes, Mists, Vapors and Gases

Add new Section 5141.1 to read:

§5141.1. Protection from Wildfire Smoke.

(a) Scope.

(1) This section applies to workplaces where:

- (A) The current Air Quality Index (current AQI) for PM_{2.5} is 151 or greater, regardless of the AQI for other pollutants; and
- (B) The employer should reasonably anticipate that employees may be exposed to wildfire smoke.

(2) The following workplaces and operations are exempt from this section:

- (A) Enclosed buildings or structures in which the air is filtered by a mechanical ventilation system and the employer ensures that windows, doors, bays, and other openings are kept closed, except when it is necessary to open doors to enter or exit.
- (B) Enclosed vehicles in which the air is filtered by a cabin air filter and the employer ensures that windows, doors, and other openings are kept closed, except when it is necessary to open doors to enter or exit the vehicle.
- (C) The employer demonstrates that the concentration of PM_{2.5} in the air does not exceed a concentration that corresponds to a current AQI of 151 or greater by measuring PM_{2.5} levels at the worksite in accordance with Appendix A.
- (D) Employees exposed to a current AQI for PM_{2.5} of 151 or greater for a total of one hour or less during a shift.
- (E) Firefighters engaged in wildland firefighting.

(3) For workplaces covered by this section, an employer that complies with this section will be considered compliant with sections 5141 and 5155 for the limited purpose of exposures to a current AQI for PM_{2.5} of 151 or greater from wildfire smoke.

**STANDARDS PRESENTATION
TO
CALIFORNIA OCCUPATIONAL SAFETY AND HEALTH STANDARDS BOARD**

TITLE 8, DIVISION 1, CHAPTER 4

(b) Definitions.

Current Air Quality Index (Current AQI). The method used by the U.S. Environmental Protection Agency (U.S. EPA) to report air quality on a real-time basis. Current AQI is also referred to as the “NowCast,” and represents data collected over time periods of varying length in order to reflect present conditions as accurately as possible.

The current AQI is divided into six categories as shown in the table below, adapted from Table 2 of Title 40 Code of Federal Regulations, Part 58, Appendix G.

<u>Air Quality Index (AQI) Categories for PM2.5</u>	<u>Levels of Health Concern</u>
<u>0 to 50</u>	<u>Good</u>
<u>51 to 100</u>	<u>Moderate</u>
<u>101 to 150</u>	<u>Unhealthy for Sensitive Groups</u>
<u>151 to 200</u>	<u>Unhealthy</u>
<u>201 to 300</u>	<u>Very Unhealthy</u>
<u>301 to 500</u>	<u>Hazardous</u>

NIOSH. The National Institute for Occupational Safety and Health of the U.S. Centers for Disease Control and Prevention. NIOSH tests and approves respirators for use in the workplace.

PM2.5. Solid particles and liquid droplets suspended in air, known as particulate matter, with an aerodynamic diameter of 2.5 micrometers or smaller.

Wildfire Smoke. Emissions from fires in “wildlands,” as defined in Title 8, section 3402, or in adjacent developed areas.

(c) Identification of harmful exposures. The employer shall determine employee exposure to PM2.5 for worksites covered by this section at the start of each shift and periodically thereafter, as needed to protect the health of employees, by any of the following methods:

- (1) Check AQI forecasts and the current AQI for PM2.5 from any of the following **websites:** U.S. EPA AirNow ~~website~~, U.S. Forest Service ~~Wildland Air Quality Response Program website~~, **the Interagency Wildland Fire Air Quality Response Program, the U.S Forest Service, the California Air Resources Board ~~website~~, the local air pollution control district ~~website~~, or the local air quality management district ~~website~~**; or
- (2) Obtain AQI forecasts and the current AQI for PM2.5 directly from the **U.S. EPA, the Interagency Wildland Fire Air Quality Response Program, the U.S. Forest Service, the California Air Resources Board, the local air pollution control district, or the local air quality management district** by telephone, email, text, or other effective method; or

**STANDARDS PRESENTATION
TO
CALIFORNIA OCCUPATIONAL SAFETY AND HEALTH STANDARDS BOARD**

TITLE 8, DIVISION 1, CHAPTER 4

(3) Measure PM_{2.5} levels at the worksite and convert the PM_{2.5} levels to the corresponding AQI in accordance with Appendix A.

EXCEPTION: Subsection (c) does not apply if:

1. The employer assumes the current AQI for PM_{2.5} is greater than 500 and complies with subsection (f) using that assumption; or
2. In an emergency subject to subsection (f)(4), the employer assumes the current AQI for PM_{2.5} is 151 or greater and complies with subsection (f)(3)(A) using that assumption.

(d) Communication. As required by section 3203, the employer shall establish and implement a system for communicating wildfire smoke hazards in a language and manner readily understandable by employees, including provisions designed to encourage employees to inform the employer of wildfire smoke hazards at the worksite without fear of reprisal. The system shall include effective procedures for:

(1) Informing employees of:

- (A) The current AQI for PM_{2.5} as identified in subsection (c); and
- (B) Protective measures available to employees to reduce their wildfire smoke exposures.

(2) Encouraging employees to inform the employer if any of the following occurs:

- (A) Worsening air quality.
- (B) Adverse symptoms that may be the result of wildfire smoke exposure such as asthma attacks, difficulty breathing, and chest pain.

(e) Training and instruction. As required by section 3203, the employer shall provide employees with effective training and instruction in a language and manner readily understandable by employees. At a minimum, this shall contain the information in Appendix B.

(f) Control of harmful exposures to employees.

(1) Engineering Controls. The employer shall reduce employee exposure to PM_{2.5} to less than a current AQI of 151 by engineering controls whenever feasible, for instance by providing enclosed buildings, structures, or vehicles where the air is filtered. If engineering controls are not sufficient to reduce exposure to PM_{2.5} to less than a current AQI of 151, then the employer shall reduce employee exposures to the extent feasible.

**STANDARDS PRESENTATION
TO
CALIFORNIA OCCUPATIONAL SAFETY AND HEALTH STANDARDS BOARD**

TITLE 8, DIVISION 1, CHAPTER 4

(2) Administrative Controls. Whenever engineering controls are not feasible or do not reduce employee exposures to PM_{2.5} to less than a current AQI of 151, the employer shall implement administrative controls, if practicable, such as relocating work to a location where the current AQI for PM_{2.5} is lower, changing work schedules, reducing work intensity, or providing additional rest periods.

(3) Control by Respiratory Protective Equipment.

(A) Where the current AQI for PM_{2.5} is equal to or greater than 151, but does not exceed 500, the employer shall provide a sufficient number of respirators to all employees for voluntary use in accordance with section 5144 and encourage employees to use respirators. Respirators shall be NIOSH-approved devices that effectively protect the wearers from inhalation of PM_{2.5}, such as N95 filtering facepiece respirators. Respirators shall be cleaned or replaced as appropriate, stored, and maintained, so that they do not present a health hazard to users. Employers shall use Appendix B to this section in lieu of Appendix D to section 5144 for training regarding voluntary use of respirators.

NOTE: For those employees whose only use of respirators involves the voluntary use of filtering facepieces, such as N95 respirators, fit testing and medical evaluations are not required by section 5144.

(B) Where the current AQI for PM_{2.5} exceeds 500, respirator use is required. Respirators shall be used in accordance with section 5144. The employer shall provide respirators with an assigned protection factor, as listed in section 5144, such that the PM_{2.5} levels inside the respirator correspond to an AQI less than 151.

(4) Emergencies. The following applies to emergency operations, including rescue and evacuation. The following also applies to utilities, communications, and medical operations that are directly aiding emergency operations or firefighting operations.

(A) The employer shall comply with subsection (f)(3)(A).

(B) Subsections (f)(1), (f)(2), and (f)(3)(B) do not apply.

NOTE: Authority cited: Section 142.3, Labor Code. Reference: Sections 142.3 and 144.6, Labor Code.

STANDARDS PRESENTATION
TO
CALIFORNIA OCCUPATIONAL SAFETY AND HEALTH STANDARDS BOARD

TITLE 8, DIVISION 1, CHAPTER 4

Add new Appendix A to new Section 5141.1 to read:

Appendix A to Section 5141.1. Protection from Wildfire Smoke
Measuring PM_{2.5} Levels at the Worksite
(Mandatory if an Employer Monitors with a Direct Reading Instrument)

- (a) An employer may use a direct-reading particulate monitor to determine PM_{2.5} levels for section 5141.1, if the employer can demonstrate that it has complied with this appendix and selected a monitor that:
- (1) Does not underestimate employee exposures to wildfire smoke; or
 - (2) May underestimate wildfire smoke exposures, but the employer has obtained information on the possible error of the monitor from the manufacturer and has accounted for the error of the monitor when determining exposures to PM_{2.5} to ensure that employee exposure levels are not underestimated.
- (b) The monitor shall be designed and manufactured to measure the concentration of airborne particle sizes ranging from an aerodynamic diameter of 0.3 micrometers or less up to and including 2.5 micrometers ($\leq 0.3\mu\text{m}$ to $2.5\mu\text{m}$).
- (c) The employer shall ensure that the monitor and all necessary monitor accessories are calibrated, maintained, and used, in accordance with the manufacturer's instructions for accurately measuring particles with an aerodynamic diameter of 0.3 micrometers or less up to and including 2.5 micrometers ($\leq 0.3\mu\text{m}$ to $2.5\mu\text{m}$). The employer may use an air monitor that measures particles less than 0.3 micrometers to greater than 2.5 micrometers ($< 0.3\mu\text{m}$ to $> 2.5\mu\text{m}$) if the employer treats the result as the PM_{2.5} level.
- (d) The employer shall use the following table to convert the PM_{2.5} concentration to the AQI for PM_{2.5}.

<u>PM_{2.5} in Micrograms per Cubic Meter ($\mu\text{g}/\text{m}^3$)</u>	<u>Air Quality Index (AQI) Categories for PM_{2.5}</u>
<u>0 to 12.0</u>	<u>0 to 50</u>
<u>12.1 to 35.4</u>	<u>51 to 100</u>
<u>35.5 to 55.4</u>	<u>101 to 150</u>
<u>55.5 to 150.4</u>	<u>151 to 200</u>
<u>150.5 to 250.4</u>	<u>201 to 300</u>
<u>250.5 to 500.4</u>	<u>301 to 500</u>

**STANDARDS PRESENTATION
TO
CALIFORNIA OCCUPATIONAL SAFETY AND HEALTH STANDARDS BOARD**

TITLE 8, DIVISION 1, CHAPTER 4

- (e) The person supervising, directing, or evaluating workplace monitoring for PM_{2.5} shall have the training or experience necessary to apply this section and to ensure the correct use of the monitor and the interpretation of the results, so that exposures are not underestimated.

NOTE: Authority cited: Section 142.3, Labor Code. Reference: Sections 142.3 and 144.6, Labor Code.

STANDARDS PRESENTATION
TO
CALIFORNIA OCCUPATIONAL SAFETY AND HEALTH STANDARDS BOARD

TITLE 8, DIVISION 1, CHAPTER 4

Add new Appendix B to new Section 5141.1 to read:

**Appendix B to Section 5141.1. Protection from Wildfire Smoke
Information to Be Provided to Employees (Mandatory)**

(a) The health effects of wildfire smoke.

Although there are many hazardous chemicals in wildfire smoke, the main harmful pollutant for people who are not very close to the fire is “particulate matter,” the tiny particles suspended in the air.

Particulate matter can irritate the lungs and cause persistent coughing, phlegm, wheezing, or difficulty breathing. Particulate matter can also cause more serious problems, such as reduced lung function, bronchitis, worsening of asthma, heart failure, and early death.

People over 65 and people who already have heart and lung problems are the most likely to suffer from serious health effects.

The smallest—and usually the most harmful—particulate matter is called PM2.5 because it has a diameter of 2.5 micrometers or smaller.

(b) The right to obtain medical treatment without fear of reprisal.

Employers shall allow employees who show signs of injury or illness due to wildfire smoke exposure to seek medical treatment, and may not punish affected employees for seeking such treatment. Employers shall also have effective provisions made in advance for prompt medical treatment of employees in the event of serious injury or illness caused by wildfire smoke exposure.

(c) How employees can obtain the current Air Quality Index (AQI) for PM2.5.

Various government agencies monitor the air at locations throughout California and report the current AQI for those places. The AQI is a measurement of how polluted the air is. An AQI over 100 is unhealthy for sensitive people and an AQI over 150 is unhealthy for everyone.

Although there are AQIs for several pollutants, Title 8, section 5141.1 only uses the AQI for PM2.5.

The easiest way to find the current and forecasted AQI for PM2.5 is to go to www.AirNow.gov and enter the zip code, **town, or city of the location** where you will be working. **The current AQI is also available at fire.AirNow.gov, an interactive map which also provides information about some fires and smoke plumes.** ~~The current AQI is also available from the U.S. Forest Service at <https://tools.airfire.org/>~~ ~~You can also visit the website of your or a local air district, which can be located at www.arb.ca.gov/capcoo/disap.htm.~~ Employees who do not have access to the

**STANDARDS PRESENTATION
TO
CALIFORNIA OCCUPATIONAL SAFETY AND HEALTH STANDARDS BOARD**

TITLE 8, DIVISION 1, CHAPTER 4

internet can contact their employer for the current AQI. The EPA website www.enviroflash.info can transmit daily and forecasted AQIs by text or email for particular cities or zip codes.

(d) The requirements of Title 8, section 5141.1.

If employees may be exposed to wildfire smoke, then the employer is required to find out the current AQI applicable to the worksite. If the current AQI for PM2.5 is 151 or more, the employer is required to:

- (1) Check the current AQI at the start of each shift and periodically thereafter.
- (2) Provide training to employees.
- (3) Lower employee exposures.
- (4) Provide respirators and encourage their use.

(e) The employer's two-way communicationsystem.

Employers shall alert employees when the air quality is harmful and what protective measures are available to employees.

Employers shall encourage employees to inform their employers if they notice the air quality is getting worse, or if they are suffering from any symptoms due to the air quality, without fear of reprisal.

The employer's communication system is:

(f) The employer's methods to protect employees from wildfire smoke.

Employers shall take action to protect employees from PM2.5 when the current AQI for PM2.5 is 151 or greater. Examples of protective methods include:

- (1) Locating work in enclosed structures or vehicles where the air is filtered.
- (2) Changing procedures such as moving workers to a place with a lower current AQI for PM2.5.
- (3) Reducing work time in areas with unfiltered air.
- (4) Increasing rest time and frequency, and providing a rest area with filtered air.
- (5) Reducing the physical intensity of the work to help lower the breathing and heart rates.

STANDARDS PRESENTATION
TO
CALIFORNIA OCCUPATIONAL SAFETY AND HEALTH STANDARDS BOARD

TITLE 8, DIVISION 1, CHAPTER 4

The employer's control system at this worksite is:

(g) The importance, limitations, and benefits of using a respirator when exposed to wildfire smoke.

Respirators can be an effective way to protect employee health by reducing exposure to wildfire smoke, when they are properly selected and worn. Respirator use can be beneficial even when the AQI for PM2.5 is less than 151, to provide additional protection.

When the current AQI for PM2.5 is 151 or greater, employers shall provide their workers with proper respirators for voluntary use. If the current AQI is greater than 500, respirator use is required, except in emergencies.

A respirator should be used properly and kept clean.

The following precautions shall be taken:

(1) Employers shall select respirators certified for protection against the specific air contaminants at the workplace. Respirators must be certified by NIOSH, the National Institute for Occupational Safety and Health of the U.S. Center for Disease Control and Prevention. A label or statement of certification should appear on the respirator or respirator packaging. It will list what the respirator is designed for (particulates, for example).

Surgical masks or items worn over the nose and mouth such as scarves, T-shirts, and bandannas will not provide protection against wildfire smoke. An N95 filtering facepiece respirator, shown in the image below, is the minimum level of protection for wildfire smoke.

(2) Read and understand the manufacturer's instructions on the respirator's use, **care, and replacement**~~maintenance, cleaning, and care~~, along with any warnings regarding the respirator's limitations. **If the respirator is reusable, read and understand the instructions for cleaning and maintenance.** The manufacturer's instructions must be followed except for medical evaluations, fit testing, and shaving of facial hair, which are recommended but not required for voluntary use of filtering facepiece respirators.

(3) Do not wear respirators in areas where the air contains contaminants for which the respirator is not designed. A respirator designed to filter particles will not protect employees against gases or vapors, and it will not supply oxygen.

(4) Employees should keep track of their respirator so that they do not mistakenly use someone else's respirator.

STANDARDS PRESENTATION
TO
CALIFORNIA OCCUPATIONAL SAFETY AND HEALTH STANDARDS BOARD

TITLE 8, DIVISION 1, CHAPTER 4

(5) Employees who have a heart or lung problem should ask their health care provider before using a respirator.

(h) How to properly put on, ~~and~~ use, ~~and maintain~~ the respirators provided by the employer.

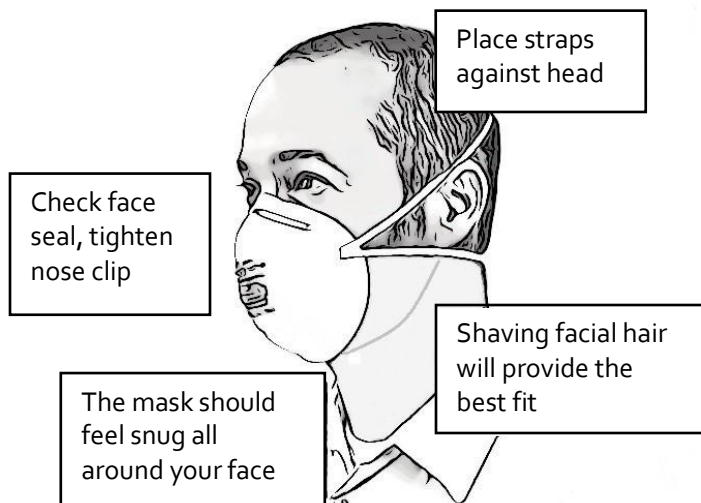
To get the most protection from a respirator, there must be a tight seal around the face. A respirator will provide much less protection if facial hair interferes with the seal. Loose-fitting powered air purifying respirators may be worn by people with facial hair since they do not have seals that are affected by facial hair.

The proper way to put on a respirator depends on the type and model of the respirator.

For those who use an N95 or other filtering facepiece respirator mask that is made of filter material:

(1) Place the mask over the nose and under the chin, with one strap placed below the ears and one strap above.

(2) Pinch the metal part (if there is one) of the respirator over the top of the nose so it fits securely.



*Drawing Showing Proper Fitting of a Filtering Facepiece Respirator
(shaving is not required for voluntary respirator use)*

**STANDARDS PRESENTATION
TO
CALIFORNIA OCCUPATIONAL SAFETY AND HEALTH STANDARDS BOARD**

TITLE 8, DIVISION 1, CHAPTER 4

For a respirator that relies on a tight seal to the face, check how well it seals to the face by following the manufacturer's instructions for user seal checks. Adjust the respirator if air leaks between the seal and the face. The more air leaks under the seal, the less protection the user receives.

Respirator filters should be replaced if they get damaged, deformed, dirty, or difficult to breathe through. Filtering facepiece respirators are disposable respirators that cannot be cleaned or disinfected. A best practice is to replace filtering facepiece respirators at the beginning of each shift.

If you have symptoms such as difficulty breathing, dizziness, or nausea, get medical help immediately.

NOTE: Authority cited: Section 142.3, Labor Code. Reference: Sections 142.3 and 144.6, Labor Code.

CALIFORNIA INDUSTRIAL HYGIENE COUNCIL

*Advancing public policy to improve the health and safety
of workers and the community.*

August 11, 2020

Via email: oshsb@dir.ca.gov

Occupational Safety and Health Standards
Board 1017 L Street, PMB #254
Sacramento, CA 95814-3805

RE: Draft Permanent Regulation §5141.1, Protection from Wildfire Smoke

Dear Board Staff:

The California Industrial Hygiene Council (CIHC) appreciates the opportunity to comment on the draft permanent regulation §5141.1, Protection from Wildfire Smoke. We have a few comments on this draft as provided with the 15-day Notice of Proposed Modification to California Code of Regulations dated July 23, 2020.

The proposed modifications to the language in 8 CCR 5141.1 are acceptable to CIHC. We recognize that the OSHSB has indicated that comments should be confined to the proposed modifications. However, there are several comments provided previously that CIHC would like to reiterate that we consider still applicable to the regulatory language, and which need to be discussed in the advisory committee.

Use of the AQI for Exposure Limits

The AQI is established by the Environmental Protection Agency for 24-hour exposures to the public and not for the basis of evaluating shorter term worker exposures. Therefore, what is the calculated risk for the duration of a work shift (such as 8 hours or 10 hours) versus a 24-hour exposure (an exposure that may not occur if the workers live outside the high AQI area)? What is the duration of exposure that triggers AQI applicability? It appears from the language in 8 CCR 5141.1 that this may be an exposure in excess of one hour above an AQI of 150. However, this is not clear from the current language. Is there scientific information that establishes a dose/response relationship for an exposure greater than 1 hour? In other words, what is the basis for determination of the potential for health affects and the duration of exposure?

What information do we have regarding the location of the AQI measurements within the State relevant to specific workplace locations and potential exposures in those locations? In another way of stating, do the AQI data adequately protect in accordance with the language? How should employers evaluate their workplace and adequately prepare for control implementation with respect to the location of the actual AQI measurements and the possible changes of the AQI over relatively short periods of time? Without additional context, it would be difficult for most employers to apply this information effectively.

The language establishes a type of “action” level at an AQI of 150 (described as “unhealthy”) and a type of “permissible exposure limit” at an AQI above 500 (“hazardous”). Normally, at a

Cal/OSHA action level, there are increased monitoring and other requirements. In this language, at an AQI of 150, voluntary use of respirators is encouraged and engineering controls and/or administrative procedures are required. Respirators are *required* by the proposed language at an AQI above 500. Quick, responsive implementation of engineering controls, and some administrative controls, to provide adequate protection under the language is not possible for most employers. How should they proactively and effectively ensure protection based on the language?

PM2.5 vs. Occupational Definition of Respirable Particulate

An additional issue to add for discussion is that the current Cal/OSHA PEL for respirable particulate (<10 microns effective diameter) is 5 mg/m³ vs. the >0.5 mg/m³ (500.4 ug/m³) as the basis for AQI calculation. How can we say that an airborne work place exposure to PM2.5 respirable particulate of >0.5 mg/m³ is unhealthy during a wildfire, but for the rest of the time and in other work environments, the exposure must exceed 5 mg/m³ to be unhealthy?

Employer Option to Measure the AQI

An employer option to show compliance is to measure the AQI in the workplace to show that exposures do not exceed an AQI of 150. Currently, this is not a quick evaluation method and requires this to be performed by a knowledgeable, experienced person (generally an industrial hygienist). The use of a direct-reading instrument may offer an alternative method that does not require laboratory analysis or the same level of expertise. However, the user must be proficient in the use of the instrument and the instrument requires calibration to afford adequate reliance on the measurements obtained. Also, interpretation of the results can be difficult for a variety of technical reasons not elaborated here. A further complication is that this instrumentation is not plentiful at this time, and may be difficult to obtain on short notice such as during a wildfire emergency.

Use of Respiratory Protection

Exposure to PM 2.5 above an AQI of 150 – voluntary use of respirators.

Firstly, the voluntary use of respiratory protection for potentially **toxic** dusts may not comply with Section 5144. The voluntary use of respirators for particulates is interpreted as pertaining to *non-toxic* dusts. This needs to be reconciled. There are reasons for this distinction, pertaining to technical issues, as well as potential health affects, that are outlined in the preamble for the respiratory protection regulation. These should be carefully considered prior to implementing any use of respirators based on this language.

Exposure to PM 2.5 above an AQI of 500 – required use of respirators.

The feasibility of implementing an adequately effective respiratory protection program in a quick, responsive manner to afford protection under this language must be considered. Given the requirements of the language, it may be necessary for employers to be pre-prepared for the potential for exposure above the AQI of 500.

The misuse of respirators is potentially a high-risk outcome of this language. There has been a long-standing determination that the misuse of respirators can be more hazardous than no use. In addition, the requirement for use of respirators based on this language may trigger an employer to have a respiratory protection program in compliance with Section 5144 when they have no need for a respiratory protection program otherwise. This could be just one of many unintended consequences of this language.

The CIHC, founded in 1990, represents the industrial hygiene and the occupational and environmental health professions in California. CIHC is affiliated with the national American Industrial Hygiene Association (AIHA), an 8,000-member organization. The CIHC is formally comprised of industrial hygienists and occupational and environmental health and safety professionals who are members of the five California AIHA local sections represented by the CIHC Board of Directors. The CIHC's mission is to provide sound scientific and technological input to the regulatory and legislative processes, and establish a legislative presence in the state Capitol through professional representation.

CIHC appreciates the ability to be involved in the development of this regulation. We look forward to participating in the advisory committee and acting as a technical resource for the process. Please contact me on behalf of CIHC at (916) 712-4547 or kwa-sacramento@att.net.

Very truly yours,
California Industrial Hygiene Council

A handwritten signature in cursive script that reads "Pamela Murcell". The signature is written in black ink on a white background.

Pamela Murcell, MS, CIH
President, CIHC



WORKSAFE

safety, health, and justice for workers
seguridad, salud y justicia para los trabajadores

August 12, 2020

Chairman David Thomas
Occupational Safety and Health Standards Board
2520 Venture Oaks Way, Suite 350
Sacramento, CA 95833
EMAIL: oshsb@dir.ca.gov

Sent via email

RE: Comments to the 15 day Revisions to the Proposed Permanent Wildfire Smoke Standard to Protect Workers

Dear Chairman Thomas and Members of the Board:

Thank you for providing us with the opportunity to provide comments. We are grateful to the Board and Division staff for their hard work in drafting the temporary emergency standard and this first iteration of the permanent standard. We appreciate that the standard is based on the Air Quality Index (AQI), that it clarifies employer obligations, and provides basic protections for workers while exposed to fine particulate matter (PM 2.5) in wildfire smoke. As we write, the Apple Fire, the first major wildfire of the season, has burned over 20,000 acres in Riverside and San Bernardino counties. Hidden Valley has also experienced several days when the AQI for PM 2.5 exceeded 150 due to wildfire smoke, underscoring the need for a permanent standard.

We appreciate that the proposed revisions to the regulation are very minor and do not weaken the proposal. We understand time is of the essence and look forward to engaging the agency in the future on the following key substantial changes to strengthen the standard including, reducing

the threshold trigger for the standard:

(1) From AQI for PM 2.5 of 151 to 101 to ensure that sensitive groups do not have to wait until the air quality has reached unhealthy levels to get minimum protections under the standard; and

(2) From AQI for PM 2.5 of 501 to 301 for respiratory protection requiring fit test and medical evaluation.

With respect to the current draft, if any further revisions are made, we suggest the following slight revision in Appendix B part (h) for clarity:

(h) How to properly put on, ~~and~~ use, and maintain or replace the respirators supplied by the employer.

We suggest this change because the section covers how to determine when to change respirator cartridges and replace filtering facepiece respirators but we do not think the change is essential if no other revisions are needed.

In comments on the proposed regulations we recommended some revisions to the Spanish translation of Appendix B and hope these changes can still be made.

We recognize that the Board and Division decided it was too difficult to broaden the scope of the regulation during the allotted time for this proposed draft of the permanent regulation. However, we are disappointed that none of the revisions we proposed to improve clarity and enforceability have been made. We look forward to seeing detailed explanations in the Final Statement of Reasons for why the following changes were not made:

- We recommended the following revision to improve enforceability:
(a)(1) (B) ~~The employer should~~ It is reasonably anticipated that employees may be exposed to wildfire smoke.
- We recommended that the regulation include a requirement for providing prompt access to medical treatment, as detailed in Appendix B and that the employer have and explain a plan for evacuation if needed. The language we proposed is similar to the requirement in the Maria Isabel Vasquez Jimenez Heat Illness Prevention Standard (“outdoor heat regulation”) Title 8 section 3395(f)(2):

(e)(1)(C)

The right to obtain medical treatment without fear of reprisal and the employer’s procedures for responding to signs and symptoms of wildfire smoke exposure including but not limited to how first aid measures and emergency medical services will be provided.

- We recommended that the regulation should specify that training must be in-person and completed before an employee begins other work tasks where PM 2.5 air levels are unhealthy

for sensitive groups due to wildfire smoke. As written currently, workers must wait until the beginning of their shift and when PM 2.5 air levels are unhealthy for all to receive basic training. This training must be done before exposing workers to unhealthy air levels. This is particularly important and preventive measures must be taken to ensure that workers receive the information they need BEFORE an actual fire occurs.

- Training should also require a brief pre-shift meeting each day, modeled after the outdoor heat regulation, for review on days when PM 2.5 air levels exceed the threshold. Required content of training should be included in the regulation as well as the appendix:

(f) Training and instruction. As required by section 3203, the employer shall provide employees with effective in-person training and instruction at the beginning of the first shift when the AQI is equal to or greater than 100/150 in a language easily understood by employees. At a minimum, this shall cover:

- 1) Health effects of wildfire smoke exposure and health conditions that can increase sensitivity to wildfire smoke.
- 2) The right to obtain prompt medical treatment and the employer's procedures for responding to signs and symptoms of wildfire smoke exposure including but not limited to how first aid measures and emergency medical services will be provided.
- 3) The employer's procedures for checking the AQI for PM 2.5 and informing employees when the level exceeds 100 and how they can check the AQI.
- 4) The employer's methods for protecting employees from wildfire smoke exposure
- 5) Benefits and limitations of using a respirator, including how to put on a respirator, determine when the respirator or filters need to be replaced, how to obtain a replacement respirator, how facial hair can prevent a seal and advice to ask a healthcare provider about any preexisting medical conditions that may be aggravated by working in smoke or wearing a respirator;
- 6) The employer's two way communication system for i) alerting employees when the air quality is harmful and what protective measures are available and ii) encouraging employees to inform an employer or supervisor, without fear of reprisal, if they think air quality is getting worse or if they are suffering any symptoms which may be due to air quality.

This training shall contain the information in Appendix B.

At the start of each shift when the AQI is greater than 100/150, a brief meeting shall be conducted to review wildfire smoke exposure prevention measures and encourage use of respirators.

- We recommended, at minimum, that the regulation include a clear requirement for replacement of disposable filtering facepiece respirators at the beginning of each shift because soiled and deformed filtering facepiece respirators do not provide adequate protection and may be difficult to breathe through.
- We also urged that outdoor work should not be allowed within voluntary or mandatory evacuation zones except work permitted by the authority which has ordered the evacuation.

Additional protections are needed for workers assisting in evacuations, including procedures for accounting for and maintaining communication between personnel, and procedures for emergency evacuation if the employees' safety is at risk.

- We recommend changing under scope, subsection (2)(A) the language, "except when necessary to open doors to enter and exit," because it would leave retail workers in grocery stores or in other businesses with doors to enter and exit without protection of the standard. Workers in these types of employment settings still have exposure to the harmful and fine particulate matter when it seeps through while doors are open, even if there is a functioning air filtration system. We recommend that this section mirror the language in the temporary emergency standard in subsection (2)(A), as follows: "Enclosed buildings or structures in which the air is filtered by a mechanical ventilation system and the employer ensures that windows, doors, bays, and other openings are kept closed to minimize contamination by outdoor or unfiltered air."
- Furthermore, the areas in which workers live might be under mandatory or voluntary evacuation zones yet the geographic area in which they work is not under such order. While we understand that this would not come into the purview of Cal/OSHA, we ask these types of situations be taken into serious consideration when the employer is evaluating the hazard of wildfire smoke exposure and how workers need to be able to safely travel to and from work.

The COVID pandemic has heightened the need for a fully protective and enforceable wildfire smoke protection standard. As detailed in our earlier comments, there is substantial evidence that exposure to elevated levels of PM 2.5 and other pollutants increases likelihood of developing the more severe symptoms of the COVID-19 illness. Specifically, PM 2.5 exposure may increase severity of infection directly by reducing the lungs' ability to clear pathogens and indirectly by worsening underlying respiratory and cardiovascular disease.

Thank you for your consideration of these comments.

Sincerely,

Jora Trang
Chief of Staff and Equity
Worksafe

Anne Katten, MPH
Pesticide and Work Safety Project Director
California Rural Legal Assistance Foundation

Mitch Steiger
Legislative Advocate
California Labor Federation, AFL-CIO

Jeremy Smith
State Building and Construction Trades Council
of California, AFL-CIO

RECEIVED

August 10, 2020
File No. 0120000.99

AUG 12 2020

Sent via:
FedEx Delivery

OCCUPATIONAL SAFETY AND HEALTH
STANDARDS BOARD

Occupational Safety and Health – Standards Board
1017 “L” Street, PMB #254
Sacramento, California 95814-3805

**Subject: Proposed Modification to California Code of Regulations:
Title 8: New Section 5141.1 - Protection from Wildfire Smoke**

Greetings:

KERNTEC Industries, Inc. (KERNTEC) is submitting this written comment re the new and proposed subject regulation: Title 8, Section 5141.1.

It is our opinion that the title to this proposed regulation, i.e., “Protection from Wildfire Smoke” is grossly misleading and disingenuous. Moreover, the economic forecast relied upon, i.e., California Economic Forecast MR 2020-21, is grossly insufficient to predict the economic impact to economies located in the southern San Joaquin Valley.

The proposed regulation relies on the Air Quality Index (AQI) to determine when employers are required to act “... regardless of the AQI for other pollutants.” It shall be understood that elevated concentrations of non-anthropogenic airborne particulate matter (PM) abound in the southern California due to limited rainfall, limited green vegetative cover, and the arid environment. It shall also be understood that agricultural, transportation, and construction industries in California, more specifically in California’s San Joaquin Valley, also contribute airborne PM. PM is common, and in the southern San Joaquin Valley an AQI for PM2.5 of 151 or more occasionally happens, without wildfire smoke contributing to the total measured concentration of PM2.5’s. Wildfire smoke appears to be “smoke and mirrors.”

Moreover, there are times when wildfire smoke from Santa Barbara, San Luis Obispo, Monterey and Sacramento Counties travels into the San Joaquin Valley – adding concentrations of airborne PM in the Valley, and at times this PM stagnates at the southern end of the Valley in Kern County. This “smoke” is undetectable to most persons in Kern County; except for an elevated AQI as reported by the media. It is unreasonable for employers in Kern to “... reasonably anticipate that employees may be exposed to wildfire smoke” when one cannot “see” smoke.

Given that “Firefighters engaged in wildland firefighting” are exempt from this regulation [5141.1(a)(2)(E)], coupled with the proposed regulation stating that an AQI for PM2.5 is 151 or greater, REGARDLESS OF THE AQI FOR OTHER POLLUTANTS, is grossly disingenuous. This regulation should remove all references to “wildfire smoke,” and honestly claim it to be solely an AQI-based regulation, i.e., when the AQI for PM2.5 is 151 or greater.

OSH – Standards Board**August 10, 2020****File No. 0120000.99****Page 2 of 2**

The inequality of this regulation is profound. Communities in the southern San Joaquin Valley will be profoundly affected by this proposed regulation, much, much more than almost all other areas of California. San Joaquin Valley is notable with respect to stagnant air, arid conditions, strong winds, blowing dust and elevated concentrations of airborne PM. The proposed regulation will shut-down industries (e.g., agriculture, transportation, construction, etc.) that rely on outdoor commerce. Elevated airborne PM is regional, and the proposed regulation will excessively burden regional localities (e.g., Kern County) resulting in economic inequality.

Finally, the economic report relied upon by the DIR, as reported in the notice to this proposed regulation, is woefully inadequate to provide any meaningful information regarding the economic impact to economies in the San Joaquin Valley. It provides no useful information as it pertains to the economic impact of a reported AQI for PM2.5 of 151 or greater warranting limited employee exposure.

For the reasons stated above, it is requested that one of the two revisions be considered by the Board:

- 1) Remove all references to wildfire smoke, or
- 2) 5141.1(a)(1)(A) be revised to state: The current Air Quality Index (current AQI) for PM2.5 is 151 or greater immediately downwind of visible wildfire smoke; and 5141.1(a)(1)(B) The employer should reasonably anticipate that employees may be exposed to visible wildfire smoke.

Moreover, prior to promulgating this regulation, it is requested that the DIR involve stakeholders in the Valley and provide a true and accurate economic-impact study of this regulation. Said study should be specific to economies in the southern San Joaquin Valley that appear to be the most affected by the proposed regulation; when other economies in California would be unaffected.

If there are questions regarding this submittal or contents herein, please direct them to the undersigned.

Respectfully submitted,



Michael Geyer, PE, CIH, CSP
Project Director-President
KERNTEC Industries, Inc.



August 12, 2020

James Mackenzie, CSP
Principal Manager, Edison Safety - Safety Programs & Compliance
Southern California Edison
14005 Benson Ave
Chino, CA 91710

SENT VIA EMAIL to:
cshupe@dir.ca.gov

Chair David Thomas and Board Members
State of California
Department of Industrial Relations
Occupational Safety and Health Standards Board
1017 L Street, PMB #254
Sacramento, CA 95814

RE: Protection from Wildfire Smoke Proposed Permanent Regulation - 15 Day Notice

Chairman Thomas and Members of the Standards Board:

Southern California Edison (SCE) appreciates the opportunity to provide input and recommendations to the proposed Protection from Wildfire Smoke regulatory language. These comments address the proposed regulation, as well as cost estimates included in the Notice of Hearing and the Initial Statement of Reasons.

While we are aligned in the fundamental desire to protect workers, we still have concerns relating to certain aspects of this proposed regulation. SCE believes there are opportunities to simplify the approach and better align these requirements with current work practices and processes. It also appears the Division is acting too quickly and without input from the regulated community. The standard making process, as we've seen firsthand, requires due process, vetting by constituents and appropriate stakeholders, along with an accurate assessment of financial impacts. We are not aware of a financial impact analysis associated with this regulation, yet the state-wide costs appear to be significant. Our company alone has spent over one million dollars to implement the emergency regulation and we've learned of comparable or higher spend for several of our peers. The Division and Standards Board cannot appropriately convert an emergency regulation into a permanent one without more analysis than is being provided here. With that, we would respectfully request that these comments receive a thorough review and response, as we believe the comments/concerns have not been adequately addressed during previous submissions.

Specific comments, suggestions, and requests related to areas of this proposed regulation are included below. Recommended insertions are shown in underlined font and proposed deletions are shown using strikethrough font (i.e., insertions and ~~deletions~~).

General Comment - Wildfire smoke situations should be treated differently from typical workplace safety and health issues in a regulatory context. As we have seen, wildfires can be catastrophic; they seem to be occurring with increasing frequency and resulting in significantly more damage than used to be the case. It is critically important to remember that wildfire smoke exposure results from an emergency condition, wildfires themselves. As the Board knows, emergency circumstances require greater flexibility for employers and call for relief from regulatory burdens that can slow or hinder recovery efforts. One example is 8 CCR 5141(c) which provides relief from the usual hierarchy of controls during emergencies, to better allow the use of respiratory protection. We had been expecting an approach like 8 CCR 5141(c) as a guiding principle in developing the permanent regulation, rather than minor changes to the emergency regulations.

Subsection (a) Scope

A. Recommendation for (a)(1)(A):

Concern: While the AQI is a convenient tool that can be utilized through AirNow.gov to inform/educate the general public, there is no scientific/industrial hygiene basis for this value, and it does not establish occupational exposure limits. Health and Safety experts in the past have worked with Permissible Exposure Limits (PELs) for an eight-hour time-weighted average to determine employee exposure to a contaminant. The Division has not gone through a HEAC study, in a similar fashion to that of lead. The concern is reusing a threshold level for compliance that was developed for the general public, rather than occupational exposure. Moreover, if the AQI for PM2.5 is the selected metric, the level where the regulation becomes applicable should be no lower than 151. AQI PM2.5 levels below 150 are solely intended to convey warnings to sensitive population groups, including people who have heart or lung disease, older adults, children, and teenagers.

The occupational exposure limits for PM2.5 should be established as full shift Time Weighted Averages, ceiling, and/or short-term exposure limits based on health hazard assessments for particulate exposures during wildfire events, where the dose is both a function of concentration and duration. In addition, if the products of combustion of wildlands are of issue, the regulation should be based on the health risk for the constituents of wildfire smoke and on developed, vetted, and scientifically accepted by the occupational health and safety community...not the EPA. That is to say, these levels should be based on worker exposure and not public exposure.

As to the methodology to establish worker risk through the use of EPA air monitoring locations, this methodology does not enable a consistent application of the standard as these monitoring location are generally spread out over vast areas

with 50 to 100 miles between some locations. In addition, it does not take into account the thermal lift that smoke generally takes which further dilutes the concentration at worker level. The option that the rule proposes for the employer to take measurements is not practical nor timely in a quickly evolving wildfire situation.

As noted earlier in our comments, using AQI as a value for this regulation has not gone through the vetting process or stakeholder discussions that all other PEL values have undergone. This does not appear to be in line with the rigorous proceedings through which other regulations have been created.

B. Recommendation for Scope, Subsection (a)(1)(B):

Concern: Based on the Governor’s progress report and state of emergency with regard to wildfires, it seems that there is no scenario in which an employer would not “reasonably anticipate that employees may be exposed to wildfire smoke.” Industry representatives have requested that an employer be able to rely on a state or local government entity’s announcement that a wildfire emergency is underway before they would be covered by the regulation. For example, it is unclear whether the regulation is triggered in cases where the PM2.5 levels are due to a structural fire, as opposed to a wildfire, to which an employer is unaware.

We appreciate that the Division has informally provided stakeholders with the link to the Incident Information System, which has information from many sources, including USEPA, the National Oceanic and Atmospheric Administration (NOAA), and the U.S. Geological Survey (USGS). This inter-agency website is easy to use and more up-to-date than the Cal/Fire website. This governmental system could be used as an objective trigger for employers to determine whether the PM2.5 levels are due to wildfire smoke. We therefore recommend that the Incident Information System information be included in the regulation.

In addition, employers need to know when the regulation is no longer triggered. Is it just when the AQI PM2.5 is less than 151, or 300? We recommend inclusion of some statement about when the emergency that triggers the wildfire smoke protections is over.

Recommended language:

(a)(1)(B) A federal, state or local entity has issued an advisory or announcement of a wildfire emergency and notification of when the emergency no longer exists. One example of an advisory is the federal inter-agency website at: <https://inciweb.nwcg.gov/> ~~The employer should reasonably anticipate that employees may be exposed to wildfire smoke.~~

Rationale: As we have seen in recent years, wildfire smoke is unpredictable during and following an emergency. Due to wind direction and speed, as well as inversion layers, some areas relatively close to a wildfire may not experience significant smoke, while others further away will. There are many situations in which employers will not know, based on the AQI for PM2.5, whether exposure to wildfire smoke is “reasonably anticipated.” Having an official agency identify

those areas that are impacted by wildfire smoke will remove the uncertainty for employers as to whether the regulation is triggered.

C. Recommendation for (a)(2)(B):

Concern: The proposed permanent regulation presumes that all industrial vehicles have cabin air filters. DOSH staff has stated to the Board that “all vehicles have cabin air filters.” While this is true for some passenger vehicles, it is not the case for industrial vehicles or base model passenger vehicles. Our experience, as is consistent with many of our peers, is that while industrial vehicles have air filters for the engine, most do not have cabin air filters. Over 60% of our fleet does not have a cabin air filter. There are cases where the vehicles cannot be retrofitted for cabin air filters because an air filter does not fit on the dashboard. We also are informed that when cabin air is recirculated, that recirculated air is not passed through the air filter. Recirculating air is typically the option used during a wildfire event.

Recommended Language:

Enclosed air conditioned vehicles ~~in which the air is filtered by a cabin air filter and~~ when the employer ensures that windows, doors, and other openings are kept closed, except when it is necessary to open doors to enter or exit the vehicle and when the employer informs employees of the ability to use the recirculation feature to reduce air intake from the exterior of the vehicle.

Rationale: This language limits the scope of the exemption to air-conditioned vehicles and clarifies that the recirculation feature reduces air intake from the exterior of the vehicle.

D. Recommendation for (f)(3)(B):

Concern: Application of requirements in this regulation is inconsistent with other current respiratory protection standard. Because of the unique circumstances involved in wildfires, we recommend that the Board not require measurement of levels inside the respirator. Doing so is challenging for employers and creates questionable risk reduction.

Recommended Language:

(B) Where the current AQI for PM2.5 exceeds 500, ~~respirator use is required~~ respirators shall be used in accordance with section 5144. The employer shall provide respirators with an assigned protection factor, as listed in section 5144, which reduces the exposure to below an AQI for PM2.5 of 500. ~~such that the PM2.5 levels inside the respirator correspond to an AQI less than 151.~~

Rationale: The Respiratory Protection Standard (8 CCR 5144) and its federal OSHA equivalent were written for situations where there is a regular exposure to an atmospheric hazard or hazards. These hazards are to be addressed through the hierarchy of controls. Wildfire smoke above any designated trigger value is not a regular exposure and 5144 should not be applied to any emergency wildfire situations. Because the assigned protection factor for N-95s is 10, employees would use the same type of respiratory protection for an AQI of 501 as they would for an AQI of 150. The requirement for mandatory respirators obligates employers to provide fit testing and medical evaluations, which require time not available when responding to an emergency. We are not aware of the scientific justification for this requirement, and it will be virtually impossible for an employer to determine at what point it is necessary to switch to full-face or Powered Air Purifying Respirators (PAPRs) when the AQI reaches 151 for PM2.5 inside the N95 respirator. Importantly, as we have stated before, there is not a known Arc Rated respirator that can be utilized by electrical workers performing energized work necessary to clear downed power lines and restore power. This potentially makes it impossible for utilities to perform necessary work to protect the public and comply with the worker safety requirements.

Again, we appreciate and thank you for your willingness to hold meaningful dialogue that will lead to the improvement of the permanent regulatory language and the successful implementation of these changes across the state of California. We look forward to continued partnership in these efforts and to the implementation of a regulation that provides important protections for workers and is reasonable, as well as prudent in its design and implementation. The easier the regulation is to understand, the greater likelihood that employees will be able to comply, leading to a greater level of safety. We also believe that an accurate, well-vetted assessment of the compliance costs are an integral part of the Standard rulemaking process, and this part of the process has been omitted from this regulation.

If you require further information on the comments listed above, please do not hesitate to contact me at 626-633-7120 or James.Mackenzie@sce.com.

Sincerely,



James Mackenzie, CSP
Principal Manager, Edison Safety – Safety Programs & Compliance
Southern California Edison
14005 Benson Ave.
Chino, CA 91710

AFRICAN-AMERICAN FARMERS OF CALIFORNIA
CALIFORNIA APPLE COMMISSION
CALIFORNIA BLUEBERRY ASSOCIATION
CALIFORNIA BLUEBERRY COMMISSION
CALIFORNIA CITRUS MUTUAL
CALIFORNIA COTTON GINNERS AND GROWERS ASSOCIATION
CALIFORNIA FRESH FRUIT ASSOCIATION
CALIFORNIA RICE INDUSTRY ASSOCIATION
FRESNO COUNTY FARM BUREAU
GROWER-SHIPPER ASSOCIATION OF CENTRAL CALIFORNIA
MILK PRODUCERS COUNCIL
NISEI FARMERS LEAGUE
OLIVE GROWERS COUNCIL OF CALIFORNIA
WESTERN AGRICULTURAL PROCESSORS ASSOCIATION

August 12, 2020

Ms. Christina Shupe
Executive Officer
Occupational Safety and Health Standards Board
1017 L Street, PMB #254
Sacramento, CA 95814-3805

Re: **Comments on Proposed Modifications to Title 8, Section 5141.1 – Protection from Wildfire Smoke**

Dear Ms. Shupe,

On behalf of the listed agricultural organizations, we want to express our concerns with the proposed modifications to Title 8, Section 5141.1 – Protection from Wildfire Smoke. We have commented on previous versions and wish to express our continued concerns on one specific aspect of the proposed regulation. Our primary and focused concern remains the availability of the required N95 mask, and the lack of alternatives in the event of a shortage such as the one currently being experienced as a result of the Covid-19 pandemic. As of today, valid N95 masks remain difficult, if not impossible, to obtain. If you can find them, the amount you can purchase is limited and the cost has risen to as much as \$8 per mask or more!

We respectfully express these concerns simply to point out that CalOSHA must reconsider its position on this specific regulation and allow for the use of KN-95 masks or equivalent alternatives, at least until the shortage caused by the Covid-19 pandemic is officially over, and supplies have returned to normal. In the meantime, priority for N-95 masks has been given to frontline workers such as nurses and first responders, and understandably so. Unfortunately, this leaves agriculture at a true disadvantage. Most recently, the State of California was able to procure some N95 masks for agriculture, but they were specifically prescribed for pesticide use

only. These particular masks were distributed through County Ag Commissioners, and only given to farms that had valid and current pesticide applicator licenses. Again, the agricultural community does not disagree with this prioritization, as it is a valid concern and the appropriate use of the limited allocation that agriculture was going to receive. The safety of our farmworkers handling pesticides is of paramount concern.

In August and September, the harvest of many of our crops takes off and so do the number of employees. According to the State of California's own employment data¹, the annual average number of employees in agriculture in the San Joaquin Valley is 210,000 workers. How do we meet that demand on the event of a wildfire, especially if it is spread over multiple days? Additional options for face masks, such as KN 95 masks, are needed until such time as normal supplies of N95 masks can be compiled.

Thank you for the opportunity to comment on the proposed changes, and for taking the time to evaluate our concerns. Should you have any questions, please contact me at (559)252-0684 or via email at roger@ccgga.org.

Sincerely,

African-American Farmers of California
California Apple Commission
California Blueberry Association
California Blueberry Commission
California Citrus Mutual
California Cotton Ginners and Growers Association
California Fresh Fruit Association
California Rice Industry Association
Fresno County Farm Bureau
Grower-Shipper Association of Central California
Milk Producers Council
Nisei Farmers League
Olive Growers Council of California
Western Agricultural Processors Association

¹ "Annual Average Employment Data (1990 – Current), State of California Employment Development Department, August 11, 2020, <https://www.labormarketinfo.edd.ca.gov/data/ca-agriculture.html>.



Centro Laboral de Graton

G r a t o n D A Y L A B O R C e n t e r

CENTER: 2981 BOWEN STREET • MAIL: P.O. BOX 42 • GRATON CA 95444 • 707/829-1864

August 12, 2020

Chairman David Thomas
Occupational Safety and Health Standards Board
2520 Venture Oaks Way, Suite 350
Sacramento, CA 95833
EMAIL: oshsb@dir.ca.gov

Sent via email

Re: Revisions to the Proposed Permanent Wildfire Smoke Standard to Protect Workers

Dear Chairman Thomas and Members of the Board:

On behalf of the Graton Day Labor Center, I want to thank you for the chance to provide comments in this process of finalizing critical safeguards for workers throughout California who are exposed to smoke from wildfires. The Graton Day Labor Center represents day laborers and domestic workers, many of whom also work seasonally in agriculture, in Sonoma County. As frontline workers, Sonoma County's immigrant workforce has been decimated by wildfires in our area, performing essential jobs with minimal access to basic health and safety protections. Workers who cycle in and out of relationship with employers are not well-informed or empowered to exert workplace health and safety standards, especially in informal, short-term and low-wage employment arrangements.

We would be remiss to assume that good intentions by employers are the driving force behind workers' health and dignity. In order to address immense chasm in health and socio-economic indicators in California and raise the floor for frontline workers, we encourage you to strengthen regulations as they relate to outdoor worker during wildfires, by strengthening standards for provision of respiratory masks as well trainings and fit tests, and ultimately invest further in working Californians' well-being.

In order to protect the workforce that we advocate for, we urge the following changes:

(1) Reduce the threshold for this standard from 151 Air Quality Index (AQI) for the fine and harmful particulate matter found in wildfire smoke (PM2.5) to 101 to protect sensitive populations, such as workers who already have occupational asthma or other occupational illnesses. Many of our members are approaching old age, and therefore have pre-existing conditions and are more prone to co-morbidities and subsequent health risks. The nature of their short and casual employment relationships is such that, often the employers they work with are not providing proper PPE or adequate notice as wildfire smoke poses a threat to their health. A lower AQI for sensitive populations would literally save lives. If you keep the threshold as it is, it will directly impact and further discriminate against people who don't speak English as a first language, have low literacy levels, are not well informed as to their rights and often remain silent due to fears associated with their legal status.

(2) Reduce the threshold for respiratory protection with fit test and medical evaluation from 501 AQI for PM2.5 to 301 to protect workers **before** the levels rise to beyond hazardous. 301 is *already* an extremely hazardous level in which to work. If the rate is not lowered, we will be giving employers carte blanche to continue to send workers into toxic zones that can be sentences for illness or even death. Sonoma County's low-wage and largely undocumented workforce deserves to have their health take precedence over the resources it would cost an employer (respiratory masks, fit tests, training, disseminating material), in extenuating circumstances, to protect the people that work for them

We agree with the recommendations detailed in the August 12th, 2020 comment letter submitted by Worksafe, California Rural Legal Assistance Foundation, the California Labor Federation, and the State Building & Construction Trades Council and reiterate them here. Employers must:

- Provide an in-person training to employees, who must complete it before beginning any work tasks where the AQI for PM 2.5 is higher than 101 due to wildfire smoke;
- Require pre-shift meetings for review each day modeled on the outdoor heat illness prevention regulation; and
- Ensure prompt access to medical treatment and plan for evacuation if needed, without fear of retaliation.

Furthermore, the standard must contain requirements:

- For the replacement of disposable filtering facepiece respirators, at minimum, at the beginning of each shift;
- That employers take measures to “*reasonably anticipate*” that workers may be exposed to wildfire smoke so that the appropriate safety and preventative wildfire smoke control measures can be implemented;
- To prohibit work in voluntary or mandatory evacuation zones except work permitted by the authority which has ordered the evacuation;
- To ensure protections of workers in enclosed structures with proper ventilation and exits and entrances, such as grocery store and other retail workers; and
- To reduce the threshold for respiratory protection with fit test and medical evaluation from 501 AQI for PM2.5 to 301, to protect workers **before** the levels rise to beyond hazardous.

Finally, the coronavirus pandemic has heightened the need for a fully protective and enforceable wildfire smoke protection standard. PM 2.5 exposure may increase the severity of a COVID-19 infection *directly* by reducing the lungs’ ability to clear pathogens and *indirectly* by worsening underlying respiratory and cardiovascular disease. It is imperative that the standard adequately protect workers through the changes suggested above.

Thank you for your consideration of these comments.

Sincerely,

Gabriel Machabanski
Associate Director
Centro Laboral de Graton -- Graton Day Labor Center



August 11, 2020

Chairman David Thomas
Occupational Safety and Health Standards Board
2520 Venture Oaks Way, Suite 350
Sacramento, CA 95833
EMAIL: oshsb@dir.ca.gov

Re: Revisions to the Proposed Permanent Wildfire Smoke Standard to Protect Workers

Dear Chairman Thomas and Members of the Board:

On behalf of the California Alliance for Retired Americans (CARA) I am providing to provide comments to finalize key protections for workers who are exposed to wildfire smoke.

CARA is California's largest grassroots senior and disability advocacy organization, representing over 1,000,000 seniors and their families through our 270 affiliated organizations. Many of our members and their families have been affected by the wildfirws in California. Many of their family members are firefighters and other workers who have been affected by these fires.

In order to protect the workforce that we advocate for, we urge the following changes:

- (1) Reduce the threshold for this standard from 151 Air Quality Index (AQI) for the fine and harmful particulate matter found in wildfire smoke (PM2.5) to 101 to protect sensitive populations, such as workers who already have occupational asthma or other occupational illnesses, CARA represents domestic workers who are low-wage and vulnerable workers, many with pre-existing occupational health concerns, who would be exposed to this hazard. Many of these workers are neither provided with the appropriate PPE nor are they given timely warnings by their employees about wildfire smoke hazards. Keeping this trigger at a higher threshold means that they are more likely to be exposed longer without adequate or effective warning.

- (2) Reduce the threshold for respiratory protection with fit test and medical evaluation from 501 AQI for PM2.5 to 301 to protect workers **before** the levels rise to beyond hazardous.

We agree with the recommendations detailed in the August 12th, 2020 comment letter submitted by Worksafe, California Rural Legal Assistance Foundation, the California Labor Federation, and the State Building & Construction Trades Council and reiterate them here.

Employers must:

- Provide an in-person training to employees, who must complete it before beginning any work tasks where the AQI for PM 2.5 is higher than 101 due to wildfire smoke;
- Require pre-shift meetings for review each day modeled on the outdoor heat illness prevention regulation; and
- Ensure prompt access to medical treatment and plan for evacuation if needed, without fear of retaliation.

Furthermore, the standard must contain requirements:

- For the replacement of disposable filtering facepiece respirators, at minimum, at the beginning of each shift;
- That employers take measures to “*reasonably anticipate*” that workers may be exposed to wildfire smoke so that the appropriate safety and preventative wildfire smoke control measures can be implemented;
- To prohibit work in voluntary or mandatory evacuation zones except work permitted by the authority which has ordered the evacuation;
- To ensure protections of workers in enclosed structures with proper ventilation and exits and entrances, such as grocery store and other retail workers; and
- To reduce the threshold for respiratory protection with fit test and medical evaluation from 501 AQI for PM2.5 to 301, to protect workers **before** the levels rise to beyond hazardous.

Finally, the coronavirus pandemic has heightened the need for a fully protective and enforceable wildfire smoke protection standard. PM 2.5 exposure may increase the severity of a COVID-19 infection *directly* by reducing the lungs’ ability to clear pathogens and *indirectly* by worsening underlying respiratory and cardiovascular disease. It is imperative that the standard adequately protect workers through the changes suggested above.

Thank you for your consideration of these comments.

Sincerely,



Hene Kelly
CARA Legislative Director
415-533-5244

From: [VICTOR ESPARZA](#)
To: [DIR OSHSB](#)
Subject: RE: REMINDER: 15-DAY NOTICE: PROTECTION FROM WILDFIRE SMOKE (COMMENTS DUE TOMORROW)
Date: Tuesday, August 11, 2020 2:43:02 PM

CAUTION: [External Email]

This email originated from outside of our DIR organization. Do not click links or open attachments unless you recognize the sender and know the content is expected and is safe. If in doubt reach out and check with the sender by phone.

I hope that board would make the strong permanent standard set to expire in jan permanent protection from wildfire smoke standard to protect workers that have no voice and no power and afraid of employers. I am retire from local 12 and our union member where afraid

Sent from [Mail](#) for Windows 10

From: [Christina Shupe](#)
Sent: Tuesday, August 11, 2020 9:00 AM
To: vesparzasafetyman@hotmail.com
Subject: REMINDER: 15-DAY NOTICE: PROTECTION FROM WILDFIRE SMOKE (COMMENTS DUE TOMORROW)

15-DAY NOTICE - COMMENTS DUE TOMORROW 8/12/2020



Occupational Safety and Health Standards Board

NOTICE OF PROPOSED MODIFICATION TO CALIFORNIA CODE OF REGULATIONS

TITLE 8: New Section 5141.1
of the General Industry Safety Orders

Protection from Wildfire Smoke

Written comments on these modifications or document relied upon
must be received by **5:00 p.m. on August 12, 2020** by mail, email or fax:

MAIL

Occupational Safety and Health Standards Board
1017 L Street, PMB #254
Sacramento, CA 95814-3805

EMAIL

oshsb@dir.ca.gov

FAX

(916) 274-5743

Please confine your comments to the modification of the text
and the additional document. This proposal will be scheduled
for adoption at a future business meeting of the Standards Board.

Access the [15-Day Notice for Protection from Wildfire Smoke](#).

For additional information on Board activities, please visit the [OSHSB website](#).

Join Our Mailing List

Occupational Safety and Health Standards Board | (916)274-5721
1017 L Street, PMB #254, Sacramento, CA 95814-3805 | www.dir.ca.gov/oshsb

OSHSB | 1017 L Street, PMB #254, Sacramento, CA 95814-3805

[Unsubscribe vesparzasafetyman@hotmail.com](mailto:vesparzasafetyman@hotmail.com)

[Update Profile](#) | [Our Privacy Policy](#) | [About our service provider](#)

Sent by oshsb@dir.ca.gov powered by



[Try email marketing for free today!](#)

SECOND 15-DAY NOTICE

DEPARTMENT OF INDUSTRIAL RELATIONS
Occupational Safety and Health Standards Board
1017 L Street, PMB #254
Sacramento, CA 95814-3805
Tel: (916) 274-5721 Fax: (916) 274-5743
Website address www.dir.ca.gov/oshsb



NOTICE OF PROPOSED MODIFICATION TO
CALIFORNIA CODE OF REGULATIONS

TITLE 8: New Section 5141.1
of the General Industry Safety Orders

Protection from Wildfire Smoke

Pursuant to Government Code Section 11346.8(c), the Occupational Safety and Health Standards Board (Standards Board) gives notice of the opportunity to submit written comments on the above-named standards in which modifications are being considered as a result of public comments and/or Board staff consideration.

On May 21, 2020, the Standards Board held a Public Hearing to consider revisions to Title 8, Section 5141.1 of the General Industry Safety Orders. The Standards Board received oral and written comments on the proposed revisions. On July 23, 2020, the Standards Board gave notice of additional revisions to the proposed regulation, and further written comments were received. The standards have been modified as a result of these comments and Board consideration. Modifications are now proposed for subsection (f)(4)(A).

A copy of the full text of the standard, as amended on July 23, 2020, with the modifications clearly indicated, is attached for your information. Anything that has been added is indicated by a bold double underline, and anything that has been removed is indicated by a bold double strikethrough.

Pursuant to Government Code Section 11347.1, notice is also given of the opportunity to submit comments concerning the addition to the rulemaking file of the following document relied upon by the Standards Board:

ADDITIONAL DOCUMENT RELIED UPON

- State of California Employment Development Department, "Industry Employment & Labor Force – by Annual Average," dated March 27, 2020, available at [https://www.labormarketinfo.edd.ca.gov/file/indhist/cal\\$haw.xls](https://www.labormarketinfo.edd.ca.gov/file/indhist/cal$haw.xls) (Historical Annual Average Data, Not Seasonally Adjusted, California 1990-2019)

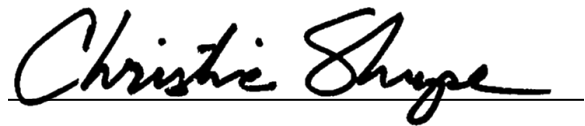
Any written comments on these modifications or document relied upon must be received by 5:00 p.m. on *September 25, 2020* at the Occupational Safety and Health Standards Board, 1017 L Street, PMB #254, Sacramento, California 95814-3805 or submitted by fax to (916) 274-5743 or e-mailed to oshsb@dir.ca.gov. Please confine your comments to the modification of the text and

the additional document. This proposal will be scheduled for adoption at a future business meeting of the Standards Board.

The Standards Board's rulemaking files on the proposed action are open to public inspection BY APPOINTMENT Monday through Friday, from 8:00 a.m. to 4:30 p.m., at the Standards Board's office at 2520 Venture Oaks Way, Suite 350, Sacramento, California 95833. Appointments can be scheduled via email at oshsb@dir.ca.gov or by calling (916) 274-5721.

Inquiries concerning the proposed changes may be directed to the Executive Officer, Christina Shupe, at (916) 274-5721.

OCCUPATIONAL SAFETY AND HEALTH
STANDARDS BOARD

A handwritten signature in black ink that reads "Christina Shupe". The signature is written in a cursive style and is positioned above a solid horizontal line.

Christina Shupe, Executive Officer

Date: *September 10, 2020*

PROPOSED MODIFICATIONS
(Deleted regulatory language is shown in bold double strikethrough
and new regulatory language is shown in bold double underline.)

**STANDARDS PRESENTATION
TO
CALIFORNIA OCCUPATIONAL SAFETY AND HEALTH STANDARDS BOARD**

TITLE 8, DIVISION 1, CHAPTER 4

Subchapter 7. General Industry Safety Orders
Group 16. Control of Hazardous Substances
Article 107. Dusts, Fumes, Mists, Vapors and Gases

Add new Section 5141.1 to read:

§5141.1. Protection from Wildfire Smoke.

(a) Scope.

(1) This section applies to workplaces where:

- (A) The current Air Quality Index (current AQI) for PM_{2.5} is 151 or greater, regardless of the AQI for other pollutants; and
- (B) The employer should reasonably anticipate that employees may be exposed to wildfire smoke.

(2) The following workplaces and operations are exempt from this section:

- (A) Enclosed buildings or structures in which the air is filtered by a mechanical ventilation system and the employer ensures that windows, doors, bays, and other openings are kept closed, except when it is necessary to open doors to enter or exit.
- (B) Enclosed vehicles in which the air is filtered by a cabin air filter and the employer ensures that windows, doors, and other openings are kept closed, except when it is necessary to open doors to enter or exit the vehicle.
- (C) The employer demonstrates that the concentration of PM_{2.5} in the air does not exceed a concentration that corresponds to a current AQI of 151 or greater by measuring PM_{2.5} levels at the worksite in accordance with Appendix A.
- (D) Employees exposed to a current AQI for PM_{2.5} of 151 or greater for a total of one hour or less during a shift.
- (E) Firefighters engaged in wildland firefighting.

(3) For workplaces covered by this section, an employer that complies with this section will be considered compliant with sections 5141 and 5155 for the limited purpose of exposures to a current AQI for PM_{2.5} of 151 or greater from wildfire smoke.

**STANDARDS PRESENTATION
TO
CALIFORNIA OCCUPATIONAL SAFETY AND HEALTH STANDARDS BOARD**

TITLE 8, DIVISION 1, CHAPTER 4

(b) Definitions.

Current Air Quality Index (Current AQI). The method used by the U.S. Environmental Protection Agency (U.S. EPA) to report air quality on a real-time basis. Current AQI is also referred to as the “NowCast,” and represents data collected over time periods of varying length in order to reflect present conditions as accurately as possible.

The current AQI is divided into six categories as shown in the table below, adapted from Table 2 of Title 40 Code of Federal Regulations, Part 58, Appendix G.

<u>Air Quality Index (AQI) Categories for PM2.5</u>	<u>Levels of Health Concern</u>
<u>0 to 50</u>	<u>Good</u>
<u>51 to 100</u>	<u>Moderate</u>
<u>101 to 150</u>	<u>Unhealthy for Sensitive Groups</u>
<u>151 to 200</u>	<u>Unhealthy</u>
<u>201 to 300</u>	<u>Very Unhealthy</u>
<u>301 to 500</u>	<u>Hazardous</u>

NIOSH. The National Institute for Occupational Safety and Health of the U.S. Centers for Disease Control and Prevention. NIOSH tests and approves respirators for use in the workplace.

PM2.5. Solid particles and liquid droplets suspended in air, known as particulate matter, with an aerodynamic diameter of 2.5 micrometers or smaller.

Wildfire Smoke. Emissions from fires in “wildlands,” as defined in Title 8, section 3402, or in adjacent developed areas.

(c) Identification of harmful exposures. The employer shall determine employee exposure to PM2.5 for worksites covered by this section at the start of each shift and periodically thereafter, as needed to protect the health of employees, by any of the following methods:

(1) Check AQI forecasts and the current AQI for PM2.5 from any of the following websites: U.S. EPA AirNow, the Interagency Wildland Fire Air Quality Response Program, the U.S Forest Service, the California Air Resources Board, the local air pollution control district, or the local air quality management district; or

(2) Obtain AQI forecasts and the current AQI for PM2.5 directly from the U.S. EPA, the Interagency Wildland Fire Air Quality Response Program, the U.S. Forest Service, the California Air Resources Board, the local air pollution control district, or the local air quality management district by telephone, email, text, or other effective method; or

**STANDARDS PRESENTATION
TO
CALIFORNIA OCCUPATIONAL SAFETY AND HEALTH STANDARDS BOARD**

TITLE 8, DIVISION 1, CHAPTER 4

(3) Measure PM2.5 levels at the worksite and convert the PM2.5 levels to the corresponding AQI in accordance with Appendix A.

EXCEPTION: Subsection (c) does not apply if:

1. The employer assumes the current AQI for PM2.5 is greater than 500 and complies with subsection (f) using that assumption; or
2. In an emergency subject to subsection (f)(4), the employer assumes the current AQI for PM2.5 is 151 or greater and complies with subsection (f)(3)(A) using that assumption.

(d) Communication. As required by section 3203, the employer shall establish and implement a system for communicating wildfire smoke hazards in a language and manner readily understandable by employees, including provisions designed to encourage employees to inform the employer of wildfire smoke hazards at the worksite without fear of reprisal. The system shall include effective procedures for:

(1) Informing employees of:

- (A) The current AQI for PM2.5 as identified in subsection (c); and
- (B) Protective measures available to employees to reduce their wildfire smoke exposures.

(2) Encouraging employees to inform the employer if any of the following occurs:

- (A) Worsening air quality.
- (B) Adverse symptoms that may be the result of wildfire smoke exposure such as asthma attacks, difficulty breathing, and chest pain.

(e) Training and instruction. As required by section 3203, the employer shall provide employees with effective training and instruction in a language and manner readily understandable by employees. At a minimum, this shall contain the information in Appendix B.

(f) Control of harmful exposures to employees.

(1) Engineering Controls. The employer shall reduce employee exposure to PM2.5 to less than a current AQI of 151 by engineering controls whenever feasible, for instance by providing enclosed buildings, structures, or vehicles where the air is filtered. If engineering controls are not sufficient to reduce exposure to PM2.5 to less than a current AQI of 151, then the employer shall reduce employee exposures to the extent feasible.

**STANDARDS PRESENTATION
TO
CALIFORNIA OCCUPATIONAL SAFETY AND HEALTH STANDARDS BOARD**

TITLE 8, DIVISION 1, CHAPTER 4

(2) Administrative Controls. Whenever engineering controls are not feasible or do not reduce employee exposures to PM_{2.5} to less than a current AQI of 151, the employer shall implement administrative controls, if practicable, such as relocating work to a location where the current AQI for PM_{2.5} is lower, changing work schedules, reducing work intensity, or providing additional rest periods.

(3) Control by Respiratory Protective Equipment.

(A) Where the current AQI for PM_{2.5} is equal to or greater than 151, but does not exceed 500, the employer shall provide a sufficient number of respirators to all employees for voluntary use in accordance with section 5144 and encourage employees to use respirators. Respirators shall be NIOSH-approved devices that effectively protect the wearers from inhalation of PM_{2.5}, such as N95 filtering facepiece respirators. Respirators shall be cleaned or replaced as appropriate, stored, and maintained, so that they do not present a health hazard to users. Employers shall use Appendix B to this section in lieu of Appendix D to section 5144 for training regarding voluntary use of respirators.

NOTE: For those employees whose only use of respirators involves the voluntary use of filtering facepieces, such as N95 respirators, fit testing and medical evaluations are not required by section 5144.

(B) Where the current AQI for PM_{2.5} exceeds 500, respirator use is required. Respirators shall be used in accordance with section 5144. The employer shall provide respirators with an assigned protection factor, as listed in section 5144, such that the PM_{2.5} levels inside the respirator correspond to an AQI less than 151.

(4) Emergencies. The following applies to emergency operations, including rescue and evacuation. The following also applies to utilities, communications, and medical operations that are directly aiding emergency operations or firefighting operations.

(A) The employer shall comply with subsection (f)(3)(A) **for all AQI levels equal to or greater than 151.**

(B) Subsections (f)(1), (f)(2), and (f)(3)(B) do not apply.

NOTE: Authority cited: Section 142.3, Labor Code. Reference: Sections 142.3 and 144.6, Labor Code.

STANDARDS PRESENTATION
TO
CALIFORNIA OCCUPATIONAL SAFETY AND HEALTH STANDARDS BOARD

TITLE 8, DIVISION 1, CHAPTER 4

Add new Appendix A to new Section 5141.1 to read:

Appendix A to Section 5141.1. Protection from Wildfire Smoke
Measuring PM_{2.5} Levels at the Worksite
(Mandatory if an Employer Monitors with a Direct Reading Instrument)

- (a) An employer may use a direct-reading particulate monitor to determine PM_{2.5} levels for section 5141.1, if the employer can demonstrate that it has complied with this appendix and selected a monitor that:
- (1) Does not underestimate employee exposures to wildfire smoke; or
 - (2) May underestimate wildfire smoke exposures, but the employer has obtained information on the possible error of the monitor from the manufacturer and has accounted for the error of the monitor when determining exposures to PM_{2.5} to ensure that employee exposure levels are not underestimated.
- (b) The monitor shall be designed and manufactured to measure the concentration of airborne particle sizes ranging from an aerodynamic diameter of 0.3 micrometers or less up to and including 2.5 micrometers ($\leq 0.3\mu\text{m}$ to $2.5\mu\text{m}$).
- (c) The employer shall ensure that the monitor and all necessary monitor accessories are calibrated, maintained, and used, in accordance with the manufacturer's instructions for accurately measuring particles with an aerodynamic diameter of 0.3 micrometers or less up to and including 2.5 micrometers ($\leq 0.3\mu\text{m}$ to $2.5\mu\text{m}$). The employer may use an air monitor that measures particles less than 0.3 micrometers to greater than 2.5 micrometers ($< 0.3\mu\text{m}$ to $> 2.5\mu\text{m}$) if the employer treats the result as the PM_{2.5} level.
- (d) The employer shall use the following table to convert the PM_{2.5} concentration to the AQI for PM_{2.5}.

<u>PM_{2.5} in Micrograms per Cubic Meter ($\mu\text{g}/\text{m}^3$)</u>	<u>Air Quality Index (AQI) Categories for PM_{2.5}</u>
<u>0 to 12.0</u>	<u>0 to 50</u>
<u>12.1 to 35.4</u>	<u>51 to 100</u>
<u>35.5 to 55.4</u>	<u>101 to 150</u>
<u>55.5 to 150.4</u>	<u>151 to 200</u>
<u>150.5 to 250.4</u>	<u>201 to 300</u>
<u>250.5 to 500.4</u>	<u>301 to 500</u>

**STANDARDS PRESENTATION
TO
CALIFORNIA OCCUPATIONAL SAFETY AND HEALTH STANDARDS BOARD**

TITLE 8, DIVISION 1, CHAPTER 4

- (e) The person supervising, directing, or evaluating workplace monitoring for PM_{2.5} shall have the training or experience necessary to apply this section and to ensure the correct use of the monitor and the interpretation of the results, so that exposures are not underestimated.

NOTE: Authority cited: Section 142.3, Labor Code. Reference: Sections 142.3 and 144.6, Labor Code.

STANDARDS PRESENTATION
TO
CALIFORNIA OCCUPATIONAL SAFETY AND HEALTH STANDARDS BOARD

TITLE 8, DIVISION 1, CHAPTER 4

Add new Appendix B to new Section 5141.1 to read:

**Appendix B to Section 5141.1. Protection from Wildfire Smoke
Information to Be Provided to Employees (Mandatory)**

(a) The health effects of wildfire smoke.

Although there are many hazardous chemicals in wildfire smoke, the main harmful pollutant for people who are not very close to the fire is “particulate matter,” the tiny particles suspended in the air.

Particulate matter can irritate the lungs and cause persistent coughing, phlegm, wheezing, or difficulty breathing. Particulate matter can also cause more serious problems, such as reduced lung function, bronchitis, worsening of asthma, heart failure, and early death.

People over 65 and people who already have heart and lung problems are the most likely to suffer from serious health effects.

The smallest—and usually the most harmful—particulate matter is called PM2.5 because it has a diameter of 2.5 micrometers or smaller.

(b) The right to obtain medical treatment without fear of reprisal.

Employers shall allow employees who show signs of injury or illness due to wildfire smoke exposure to seek medical treatment, and may not punish affected employees for seeking such treatment. Employers shall also have effective provisions made in advance for prompt medical treatment of employees in the event of serious injury or illness caused by wildfire smoke exposure.

(c) How employees can obtain the current Air Quality Index (AQI) for PM2.5.

Various government agencies monitor the air at locations throughout California and report the current AQI for those places. The AQI is a measurement of how polluted the air is. An AQI over 100 is unhealthy for sensitive people and an AQI over 150 is unhealthy for everyone.

Although there are AQIs for several pollutants, Title 8, section 5141.1 only uses the AQI for PM2.5.

The easiest way to find the current and forecasted AQI for PM2.5 is to go to AirNow.gov and enter the zip code, town, or city where you will be working. The current AQI is also available at fire.AirNow.gov, an interactive map which also provides information about some fires and smoke plumes. You can also visit the website of your local air district. Employees who do not have access to the

**STANDARDS PRESENTATION
TO
CALIFORNIA OCCUPATIONAL SAFETY AND HEALTH STANDARDS BOARD**

TITLE 8, DIVISION 1, CHAPTER 4

internet can contact their employer for the current AQI. The EPA website enviroflash.info can transmit daily and forecasted AQIs by text or email for particular cities or zip codes.

(d) The requirements of Title 8, section 5141.1.

If employees may be exposed to wildfire smoke, then the employer is required to find out the current AQI applicable to the worksite. If the current AQI for PM2.5 is 151 or more, the employer is required to:

- (1) Check the current AQI at the start of each shift and periodically thereafter.
- (2) Provide training to employees.
- (3) Lower employee exposures.
- (4) Provide respirators and encourage their use.

(e) The employer's two-way communication system.

Employers shall alert employees when the air quality is harmful and what protective measures are available to employees.

Employers shall encourage employees to inform their employers if they notice the air quality is getting worse, or if they are suffering from any symptoms due to the air quality, without fear of reprisal.

The employer's communication system is:

(f) The employer's methods to protect employees from wildfire smoke.

Employers shall take action to protect employees from PM2.5 when the current AQI for PM2.5 is 151 or greater. Examples of protective methods include:

- (1) Locating work in enclosed structures or vehicles where the air is filtered.
- (2) Changing procedures such as moving workers to a place with a lower current AQI for PM2.5.
- (3) Reducing work time in areas with unfiltered air.
- (4) Increasing rest time and frequency, and providing a rest area with filtered air.
- (5) Reducing the physical intensity of the work to help lower the breathing and heart rates.

**STANDARDS PRESENTATION
TO
CALIFORNIA OCCUPATIONAL SAFETY AND HEALTH STANDARDS BOARD**

TITLE 8, DIVISION 1, CHAPTER 4

The employer's control system at this worksite is:

(g) The importance, limitations, and benefits of using a respirator when exposed to wildfire smoke.

Respirators can be an effective way to protect employee health by reducing exposure to wildfire smoke, when they are properly selected and worn. Respirator use can be beneficial even when the AQI for PM2.5 is less than 151, to provide additional protection.

When the current AQI for PM2.5 is 151 or greater, employers shall provide their workers with proper respirators for voluntary use. If the current AQI is greater than 500, respirator use is required, except in emergencies.

A respirator should be used properly and kept clean.

The following precautions shall be taken:

(1) Employers shall select respirators certified for protection against the specific air contaminants at the workplace. Respirators must be certified by NIOSH, the National Institute for Occupational Safety and Health of the U.S. Center for Disease Control and Prevention. A label or statement of certification should appear on the respirator or respirator packaging. It will list what the respirator is designed for (particulates, for example).

Surgical masks or items worn over the nose and mouth such as scarves, T-shirts, and bandannas will not provide protection against wildfire smoke. An N95 filtering facepiece respirator, shown in the image below, is the minimum level of protection for wildfire smoke.

(2) Read and understand the manufacturer's instructions on the respirator's use, care, and replacement, along with any warnings regarding the respirator's limitations. If the respirator is reusable, read and understand the instructions for cleaning and maintenance. The manufacturer's instructions must be followed except for medical evaluations, fit testing, and shaving of facial hair, which are recommended but not required for voluntary use of filtering facepiece respirators.

(3) Do not wear respirators in areas where the air contains contaminants for which the respirator is not designed. A respirator designed to filter particles will not protect employees against gases or vapors, and it will not supply oxygen.

(4) Employees should keep track of their respirator so that they do not mistakenly use someone else's respirator.

**STANDARDS PRESENTATION
TO
CALIFORNIA OCCUPATIONAL SAFETY AND HEALTH STANDARDS BOARD**

TITLE 8, DIVISION 1, CHAPTER 4

(5) Employees who have a heart or lung problem should ask their health care provider before using a respirator.

(h) How to properly put on and use the respirators provided by the employer.

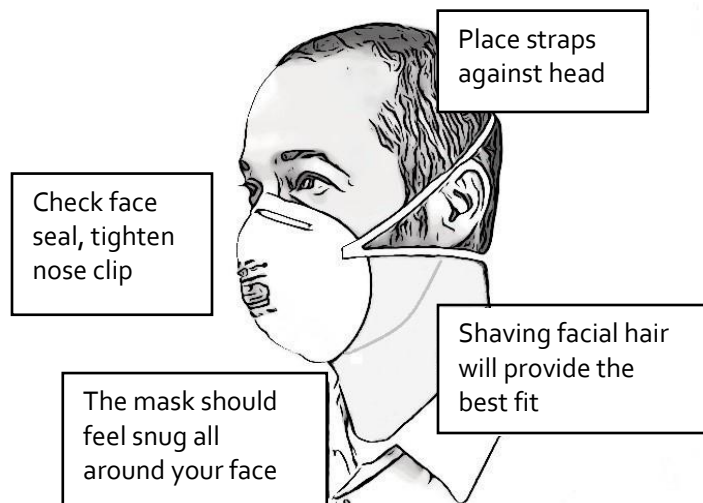
To get the most protection from a respirator, there must be a tight seal around the face. A respirator will provide much less protection if facial hair interferes with the seal. Loose-fitting powered air purifying respirators may be worn by people with facial hair since they do not have seals that are affected by facial hair.

The proper way to put on a respirator depends on the type and model of the respirator.

For those who use an N95 or other filtering facepiece respirator mask that is made of filter material:

(1) Place the mask over the nose and under the chin, with one strap placed below the ears and one strap above.

(2) Pinch the metal part (if there is one) of the respirator over the top of the nose so it fits securely.



*Drawing Showing Proper Fitting of a Filtering Facepiece Respirator
(shaving is not required for voluntary respirator use)*

**STANDARDS PRESENTATION
TO
CALIFORNIA OCCUPATIONAL SAFETY AND HEALTH STANDARDS BOARD**

TITLE 8, DIVISION 1, CHAPTER 4

For a respirator that relies on a tight seal to the face, check how well it seals to the face by following the manufacturer's instructions for user seal checks. Adjust the respirator if air leaks between the seal and the face. The more air leaks under the seal, the less protection the user receives.

Respirator filters should be replaced if they get damaged, deformed, dirty, or difficult to breathe through. Filtering facepiece respirators are disposable respirators that cannot be cleaned or disinfected. A best practice is to replace filtering facepiece respirators at the beginning of each shift.

If you have symptoms such as difficulty breathing, dizziness, or nausea, get medical help immediately.

NOTE: Authority cited: Section 142.3, Labor Code. Reference: Sections 142.3 and 144.6, Labor Code.

From: [Peter Arthur](#)
To: [DIR OSHSB](#)
Subject: RE: 2nd 15-DAY NOTICE: PROTECTION FROM WILDFIRE SMOKE
Date: Monday, September 14, 2020 7:07:52 AM
Attachments: [image002.png](#)

CAUTION: [External Email]

This email originated from outside of our DIR organization. Do not click links or open attachments unless you recognize the sender and know the content is expected and is safe. If in doubt reach out and check with the sender by phone.

Dear Sir/Madam:

Comment to:

So much is unknown to the chronic exposure to wildfire smoke (long or short-term exposure) and small particle effect in the lungs as well as the toxic and harmful combination of pollutants found in wildfire smoke. Protection of the workers' health should be at the forefront of Cal/OSHA's Wildfire Smoke directive and this includes a more strenuous approach to employee's health and safety when AQI levels reach Hazardous (AQI 301 - 500).

§5141.1. Protection from Wildfire Smoke.

(3)(A): Control by Respiratory Protective Equipment

Voluntary use of N/P95 masks seem reasonable when AQI levels are Unhealthy – Very Unhealthy (AQI 151 – 300).

Employees should be **required** to wear N/P95 masks when working in **Hazardous** levels and AQI levels exceed 301.

Fit testing and medical evaluations are not required by section 5144. Employees are required to wear respirators when AQI **exceeds Hazardous** levels (AQI > 500) in accordance with section 5144.

AQI	Levels of Health Concern	Respiratory Protection
151 - 300	Unhealthy – Very Unhealthy	Voluntary use of N/P95
301 - 500	Hazardous	Required use of N/P95
> 501	> Hazardous	Required use of respirators

If Cal/OSHA's mission is to protect workers' health and safety, then the current discretionary (voluntary) use of respiratory protection when AQI level are considered **Hazardous** clearly does not protect the worker and should be carefully considered.

Respectfully submitted,

PETER ARTHUR

EHS Specialist II

Geysers Environmental Health & Safety

CALPINE CORPORATION

Direct: (707) 431-6026

Cell: (707) 799-9347

Email: peter.arthur@calpine.com



Engage, Educate, & Empower

COMPANY CONFIDENTIALITY NOTICE: The information in this e-mail may be confidential and/or privileged and protected by work product immunity or other legal rules. No confidentiality or privilege is waived or lost by mis-transmission. If you are not the intended recipient or an authorized representative of the intended recipient, you are hereby notified that any review, dissemination, or copying of this e-mail and its attachments, if any, or the information contained herein is prohibited. If you have received this e-mail in error, please immediately notify the sender by return e-mail and delete this e-mail from your computer system.



September 21, 2020

Cal/OSHA Standards Board,

BOARD OF DIRECTORS

Lisa M. Borba, AICP
PRESIDENT

Connstance Holdaway
VICE PRESIDENT

Ernesto A. Avila, P.E.

Bette Boatman

John A. Burgh

GENERAL MANAGER

Stephen J. Welch, P.E., S.E.

In regard to the proposed modifications to the Protection from Wildfire Smoke regulations (8 CCR §5141.1), on behalf of Contra Costa Water District (CCWD), I would like to submit the following comments. As a public water utility, our agency and employees face several specific challenges when responding to events during wildfire smoke events, several of which are common to the utility industry as a whole. CCWD seeks a clear regulation that protects employees, while still allowing our agency to provide an appropriate response to these emergencies.

Below outlines several concerns and comments regarding the most recent draft from July 23, 2020, of the proposed Protection from Wildfire Smoke regulations.

1. *Addition to subsection (f)(4)(A)*

Under subsection (f)(4)(A) the addition of the phrase, “*For all AQI levels equal to or greater than 151,*” could allow for a misinterpretation of the Protection from Wildfire Smoke regulations (8 CCR §5141.1) during emergencies. This addition could be interpreted as a new inclusion of the AQI for PM10 and the other four major air pollutants the EPA calculates the AQI for. The EPA calculates the AQI for ground-level ozone, particulate matter, carbon monoxide, sulfur dioxide, and nitrogen dioxide.

Throughout the Protection from Wildfire Smoke regulations (8 CCR §5141.1) the potential for harmful exposure is defined by the AQI for PM2.5, and as exposure to wildfire smoke. We respectfully suggest that the addition be changed to, “*For all AQI levels **for PM2.5** equal to or greater than 151,*” or equivalent language that includes specific reference to AQI for PM2.5.

Thank you for your consideration,

A handwritten signature in black ink that reads "Colton Rogers".

Colton Rogers
Environmental Health and Safety Specialist
Contra Costa Water District

From: [Vince Hundley, MS, CSP](#)
To: [DIR OSHSB](#)
Subject: Protection from Wildfire Smoke
Date: Tuesday, September 15, 2020 3:17:12 PM
Attachments: [image800000.png](#)
[image582001.png](#)
[image503002.png](#)

CAUTION: [External Email]

This email originated from outside of our DIR organization. Do not click links or open attachments unless you recognize the sender and know the content is expected and is safe. If in doubt reach out and check with the sender by phone.

Dear board members and staff,

Please consider the obstacles created by requiring NIOSH Approved Respirators and consider KN95 respirators. This creates burden on top of the current challenges of obtaining N95s. I suggest the following for your consideration.

(3) Control by Respiratory Protective Equipment.

(A) Where the current AQI for PM2.5 is equal to or greater than 151, but does not exceed 500, the employer shall provide a sufficient number of respirators to all employees for voluntary use in accordance with section 5144 and encourage employees to use respirators. Respirators shall be NIOSH-approved devices that effectively protect the wearers from inhalation of PM2.5, such as N95 filtering facepiece respirators ~~with an efficiency rating of 95% or greater.~~

Sincerely,

Vince



Vince Hundley, MS, CSP | President and CEO

SMART Safety Group

Tel: (619) 491-3099

Fax: (619) 491-3095

Cell: (619) 572-1030

Email: VHundley@smartsafetygroup.com

Web: www.SMARTSafetyGroup.com

Address: 9455 Ridgehaven Ct, Ste 100, San Diego, CA 92123

PROTECTING PEOPLE, PROPERTY & PROFITS



September 25, 2020

Dean Yarbrough
Director, Edison Safety
Southern California Edison
6042 N. Irwindale Ave., Suite A
Irwindale, CA 91702

SENT VIA EMAIL to:
cshupe@dir.ca.gov

Chair David Thomas and Board Members
State of California
Department of Industrial Relations
Occupational Safety and Health Standards Board
1017 L Street, PMB #254
Sacramento, CA 95814

RE: Protection from Wildfire Smoke Proposed Permanent Regulation - Second 15-Day Notice

Chairman Thomas and Members of the Standards Board:

Southern California Edison (SCE) appreciates the opportunity to provide input and recommendations to the proposed Protection from Wildfire Smoke regulatory language. We have provided comments and proposed language revisions throughout the emergency standard process with the last comments being submitted on August 12, 2020, during the initial 15-day notice.

While we are aligned in the fundamental desire to protect workers, we still have concerns relating to certain aspects of this proposed regulation, especially with regard to the cost estimates included in the Notice of Hearing and the Initial Statement of Reasons (ISOR). The standard making process, as we've seen firsthand, requires due process, vetting by constituents and appropriate stakeholders, along with an accurate assessment of financial impacts. To date, we are not aware of a financial impact analysis associated with this regulation, yet the state-wide costs appear to be significant and that of a "major regulation", meaning the economic impact on California business enterprises and individuals would be in excess of \$50 million. With that said, if this proposed standard is a major regulation, Cal/OSHA and the Director's Office staff should prepare a standardized regulatory impact analysis (SRIA) and submit the SRIA to the Department of Finance. The

Division and Standards Board cannot appropriately convert an emergency regulation into a permanent one without more analysis than is being provided here.

SCE recognizes that the State of California has a process for promulgating regulation and believe that such a process be carried out with as much precision and factual content as possible. Our company alone has spent over one million dollars to implement the emergency regulation and we have learned of comparable or higher spend for several of our peers. These amounts do not come close to the values provided in the Notice of Public Hearing or the ISOR, which estimate an annual cost of “\$191.19 for a typical business and \$150.74 for a small business.”

The Standards Board is now proposing the inclusion of an additional document for reference, “Industry Employment & Labor Force –by Annual Average”. After initial review of this supporting document, it appears that the values related to line 146, Electric Power Generation, Trans & Distribution, are underestimated. SCE alone has over 12,000 employees, with other utilities in California sharing similar employee counts, making the 18,200 employee count shown in the reference document seem rather low.

Once again, we understand the need for a permanent Wildfire Smoke regulation and support this decision for a permanent regulation but maintain that the Board and DOSH have not taken into consideration the true cost of the requirements during this process. With that, we would respectfully request that these comments receive a thorough review and response, as we believe our concerns surrounding the cost analysis and values that appear to be underestimated have not been adequately addressed during previous submissions.

We appreciate and thank you for your willingness to hold meaningful dialogue that will lead to the improvement of the permanent regulatory language and the successful implementation of these changes across the state of California. We look forward to continued partnership in these efforts and to the implementation of a regulation that provides important protections for workers and is reasonable, as well as prudent in its design and implementation. The easier the regulation is to understand, the greater likelihood that employees will be able to comply, leading to a greater level of safety. We also believe that an accurate, well-vetted assessment of the compliance costs are an integral part of the Standard rulemaking process, and this part of the process has been omitted from this regulation.

If you require further information on the comments listed above, please do not hesitate to contact me at 626-633-4836 or Dean.Yarbrough@sce.com.

Sincerely,

Dean Yarbrough

Dean Yarbrough
Director, Edison Safety
Southern California Edison
6042 N. Irwindale Ave., Suite A
Irwindale, CA 91702

Occupational Safety and Health Standards Board

Business Meeting
Petition 580 Decision

STATE OF CALIFORNIA
DEPARTMENT OF INDUSTRIAL RELATIONS
OCCUPATIONAL SAFETY AND HEALTH STANDARDS BOARD
2520 Venture Oaks Way, Suite 350
Sacramento, California 95833
(916) 274-5721

In the Matter of a Petition by:)
)
Scott Swaaley)
CEO, MAKESafe Tools)
scott@makesafetools.com)
)

Applicant.)

PETITION FILE NO. 580

The Occupational Safety and Health Standards Board hereby adopts the attached
PROPOSED DECISION.

OCCUPATIONAL SAFETY AND HEALTH
STANDARDS BOARD

DAVID THOMAS, Chairman

BARBARA BURGEL, Member

DAVE HARRISON, Member

NOLA KENNEDY, Member

CHRIS LASZCZ-DAVIS, Member

LAURA STOCK, Member

By: _____
Christina Shupe, Executive Officer

DATE: December 17, 2020

Attachments

DEPARTMENT OF INDUSTRIAL RELATIONS
Occupational Safety and Health Standards Board
2520 Venture Oaks Way, Suite 350
Sacramento, CA 95833
Tel: (916) 274-5721 Fax: (916) 274-5743
www.dir.ca.gov/oshsb



**PROPOSED PETITION DECISION OF THE
OCCUPATIONAL SAFETY AND HEALTH STANDARDS BOARD
(PETITION FILE NO. 580)**

INTRODUCTION

The Occupational Safety and Health Standards Board (Board) received a petition on March, 17, 2020, from Scott Swaaley, CEO, MAKESafe Tools, Inc. (Petitioner). The Petitioner requests the Board to amend Title 8, Section 2530.43, to clarify the existing anti-restart (AR) standard as well as add current federal Occupational Safety and Health Administration (OSHA) language to Title 8, Section 4001 to better align with federal OSHA requirement (1910.213(b)(3)).

Labor Code Section 142.2 permits interested persons to propose new or revised regulations concerning occupational safety and health and requires the Board to consider such proposals, and render a decision no later than six months following receipt. This time frame has been extended 120 days, by Governor Gavin Newsom's Executive Orders N-63-20, and N-71-20, in recognition of the State of Emergency caused by COVID-19.

Further, as required by Labor Code Section 147, any proposed occupational safety or health standard received by the Board from a source other than the Division of Occupational Safety and Health (Division) must be referred to the Division for evaluation. The Division has 60 days after receipt to submit an evaluation regarding the proposal; this timeline, running concurrently with the Board's timeline as described above, has also been extended 120 days pursuant to Executive Orders N-63-20 and N-71-20.

SUMMARY

The Petitioner requests the Board take one or more of the following courses of action to resolve his concern:

- Work with Nationally Recognized Testing Laboratories (NRTLs) to withdraw Underwriters Laboratory (UL) Listings for AR devices currently listed under UL244A (Appliance Controls) and work with manufacturers to transition these products into UL508 compliance.
- Publish a general notice to businesses that such products present a safety hazard and clarify other options for mitigating against unintentional restarts (UL508 listed products, UL508A control panels, etc.).

- Require manufacturers of AR devices that are not NRTL listed for safe use with motors and machinery to explicitly state such on their literature and labeling.
- Clarify the existing Cal/OSHA AR standard (Title 8, Section 2530.43) and better align with the federal OSHA requirement (29 Code of Federal Regulations (CFR) Section 1910.213(b)(3)) by adding current federal OSHA language to Title 8 Section 4001 - Machine Power Control: “On applications where injury to the operator might result if motors were to restart after power failures, provision shall be made to prevent machines from automatically restarting upon restoration of power.”

DIVISION’S EVALUATION

The Division’s evaluation report dated November 20, 2020, concludes the Petitioner’s proposed amendment of Title 8 Section 4001 is not necessary to “align” Title 8 with federal OSHA regulations. Title 8 subsection 4296(q) (see text in part 4.0 of the Division evaluation) is already identical to 29 CFR subsection 1910.213(b)(3). Both the federal and Title 8 subsections apply only to woodworking equipment.

The Division also concludes the proposed change is not necessary because the hazards created by the restarting of motors regulated by Section 4001 are currently addressed by Section 4002, which requires guarding of hazardous moving parts of machinery and equipment. Therefore, the automatic restarting of motors after power failure would not create a hazard for components of machinery if guarded as required by Section 4002. Additionally, Title 8 Section 3314 requires the locking and/or tagging of machinery and equipment power sources during cleaning, repairing, servicing, setting-up, and adjusting operations

The Petitioner’s concern regarding the use of AR devices that are not approved for use with industrial machinery is already addressed by Title 8 regulations. Pursuant to Title 8 subsection 2305.4(a) (see text in part 4.0 of the Division evaluation) of the Low-Voltage Safety Orders, all conductors and equipment must be approved for their use by a nationally recognized testing laboratory or other entity with registered engineering or demonstrated competence to perform such evaluation.

Pursuant to both Title 8 Sections 2530.43 and 4296(q), machinery that cannot injure a worker when automatically restarting is not required to be equipped with an AR device. An example of this type of machinery is an electric motor running a buffing wheel with a soft cloth attachment for polishing. Despite the fast spinning wheel, a worker who makes contact with the soft buffing cloth would not be injured. The opposite extreme would be a table saw.

Additionally, Title 8 Section 2530.43 only requires low-voltage electric motors to have anti-restart functionality for shutdown due to overloading. The Division’s research shows that during the 2001 rulemaking, the Board concluded that the requirements of Section 2530.43 were adopted nearly verbatim from Section 430-43 of the 1999 edition of NFPA 70. This section more clearly states that motors are not to restart following overload tripping and hence it was the intent of Title 8 Section 2530.43 to apply to the restarting of motors due to overload conditions.

Unlike Title 8 Section 2530.43, subsection 4296(q) applies to the restarting of machinery when power is restored after power failures. However, as this subsection is included in Article 59, the requirement applies only to woodworking machinery equipment. Therefore, other types of machinery such as metal working machines and power operated presses are not required to have an AR device. The Division notes that such equipment also has the potential to cause injury upon restarting when power is restored following a power failure but is not currently addressed by Title 8 regulations.

The Division finds that several of the requests within the Petitioner's application are not within the scope of Cal/OSHA's jurisdiction, such as work with NRTLs and manufactures to withdraw consensus standard listings and notices to the public regarding hazards, and would be better directed to the Cal/OSHA Consultation Service or Communications and Publications Units as appropriate. Also, the Petitioner's request to require manufacturers of AR devices to state explicitly when their devices are not rated for industrial machinery does not fall within the scope of Cal/OSHA's jurisdiction. Pursuant to California Labor Code Section 6300, Cal/OSHA may only exercise jurisdiction when an employer-employee relationship exists.

The Division notes that manufacturers produce products that can be sold to parties or entities who are not employers. Therefore, explicitly dictating the content of the manufacturer's documentation would be acting in excess of Cal/OSHA's authority to enforce Title 8 regulations.

The Division recommends the Petition be DENIED. However, they support convening an advisory committee to determine if employee safety could be enhanced by the requirement for AR devices on other machinery not currently addressed by Title 8 regulations.

BOARD STAFF'S EVALUATION

After investigation, Board staff understands the Petitioner's primary concerns to be as follows:

- 1) Some AR devices are built to a UL standard for appliances, yet marketed for use in industrial applications. Devices intended for use with appliances are more likely to fail during industrial use, increasing the potential for employee injury.
- 2) Cal/OSHA requirements for AR devices found in the LVEISO (as opposed to the General Industry Safety Orders (GISO)), which may be difficult to find for some employers. Furthermore, because the Cal/OSHA regulations lack the word "machines," adding the word, as is done in a federal OSHA AR requirement for woodworking equipment, may alert additional employers to the need for such protections in their workplace.

Board staff believe Petitioner has a valid concern regarding inappropriate UL listing and labeling in regard to employee safety and health, stating that "machines that are not built to the correct specifications can pose serious hazards in a workplace, including death and fire". This could lead employers seeking to comply with Cal/OSHA's AR device requirements to be misled by mismatched UL markings.

Board staff notes, however, that federal OSHA, not Cal/OSHA, has authority over NRTLs, and opines that it is unlikely that federal OSHA would be able to regulate manufacturers from selling products built to inappropriate UL standards, especially when many manufacturers are located in foreign countries. Board staff concludes that the Petitioner's concern, though valid, is unlikely to be resolved by any Board regulatory action.

Board staff finds that Petitioner's second concern, regarding the location of the AR device requirement in the LVESO, may also be valid, but could apply to any Cal/OSHA requirement located outside of the GISO. Additionally, the Petitioner's suggestion that the LVESO requirement include the word "machines," similar to the federal OSHA woodworking requirement may not be a necessary amendment. Board staff points to the National Electric Code (NEC), NFPA 70, 2020 Ed. and LVESO Section 2530.43(b), noting that neither includes the word "machines".

Finally, Board staff was informed by a Division representative that Section 2530.43(b) has been cited one time since 2014. The minimal citation history could indicate general compliance with the performance standard requirement. Furthermore, because the regulatory language used closely resembles the dominant consensus standard on the topic (i.e. the NEC), staff is hesitant to recommend amending the language without substantive evidence of a deficiency in the status quo.

Board staff recommends the Petition be DENIED.

DISCUSSION

Both the Division and Board staff agree that the safety concerns at issue in Petitioner's request are addressed elsewhere in Title 8 and are therefore unnecessary, or concern matters that are outside Cal/OSHA's jurisdiction and the jurisdiction of the Board's authority.

Petitioner's requests that the Board direct Cal/OSHA to work with NRTLs to withdraw consensus standards, publish notices, and require explicit statements in product literature and labeling are outside the jurisdiction of this Board. Further, Petitioner's request to better "align" Title 8 with federal OSHA regulations is unnecessary, as Title 8 subsection 4296(q) is identical to 29 CFR subsection 1910.213(b)(3). The Board also notes that the safety concern the Petitioner raises related to automatic restart after power failure are addressed by Sections 4002 (Moving Parts of Machinery or Equipment) and 3314 (Lockout/Tagout).

While the Division makes note of its support for convening an Advisory Committee to determine if employee safety could be enhanced by the requirement for AR devices on other machinery not currently addressed by Title 8 regulations, this matter is outside the scope of the Petition. The Division is encouraged to pursue the convening of an Advisory Committee with Board staff through established channels.

CONCLUSION AND ORDER

Having considered Petition 580, and evaluations of it by the Division and Board staff, the Board hereby DENIES the Petition.

OCCUPATIONAL SAFETY AND HEALTH
STANDARD BOARD

PETITION FILE NO. 580

BOARD STAFF EVALUATION

Submitted by: David Kernazitskas, MSPH, CIH, CSP

Senior Safety Engineer

November 30, 2020

INTRODUCTION

Petition File No. 580 (Petition) was submitted by Scott Swaaley, CEO, MAKESafe Tools, Inc. (Petitioner) on March 17, 2020. The Petition seeks amendments to Cal/OSHA requirements for anti-restart (AR) devices.

REQUESTED ACTION

The Petitioner requests the Board take one or more of the following courses of action to resolve his concern:

- Work with Nationally Recognized Testing Laboratories (NRTLs) to withdraw Underwriters Laboratory (UL) Listings for AR devices currently listed under UL244A (Appliance Controls) and work with manufacturers to transition these products into UL508 compliance.
- Publish a general notice to businesses that such products present a safety hazard and clarify other options for mitigating against unintentional restarts (UL508 listed products, UL508A control panels, etc.).
- Require manufacturers of AR devices that are not NRTL listed for safe use with motors and machinery to explicitly state such on their literature and labeling.
- Clarify the existing Cal/OSHA AR standard (Title 8, Section 2530.43) and better align with the federal OSHA requirement (29 Code of Federal Regulations (CFR) Section 1910.213(b)(3)) by adding current federal OSHA language to Title 8 Section 4001 - Machine Power Control: "On applications where injury to the operator might result if motors were to restart after power failures, provision shall be made to prevent machines from automatically restarting upon restoration of power."

PETITIONER'S ASSERTIONS

The Petitioner asserts:

- "California businesses are required by standard...to prevent the unintentional restart of motors and motor operated machinery."
- AR devices are required to be listed by Nationally Recognized Testing Laboratories (NRTL). The proper NRTL standard for industrial motor controls is UL508 "Industrial Control Equipment."
- A client experienced a high failure rate of AR devices on machines. Upon further investigation, the devices were listed as "Appliance Controls" (UL 244A), which are not appropriate for motor-operated machines.

- The “miscategorization of AR motor controls as ‘Appliance Controls’ is prevalent throughout the industry and represents a significant hazard to machine operators.”

STAFF EVALUATION

Staff spoke with the Petitioner on May 15, 2020, to discuss the Petition. The Petitioner explained that if a piece of machinery, such as a grinder, were in use when the power was disconnected, it could pose a hazard if it automatically restarted when the power was restored. He described several pieces of machinery that could present a hazard if they activated when power was restored.

Referring to one of his clients, he said that an employer purchased several AR devices for use in a facility. The employer said while performing monthly testing of the devices, one to three of the devices failed each month. Upon further investigation, the Petitioner concluded that the AR devices were built to a UL standard for appliances, instead of the more-appropriate UL standard for industrial equipment.

In a related concern, the Petitioner said that existing requirements for AR devices may be difficult to find in Cal/OSHA regulations due to their being located in the Low-Voltage Electrical Safety Orders (LVESO). He suggested that because AR devices provide employee protections similar to machine guarding and lock-out/tag-out regulations, perhaps a reference to the LVESO requirements nearer to those sections would make it easier for employers to find the requirements.

He also said that referring to machinery or equipment in the LVESO requirements as is done in the federal requirement for woodworking machinery could make it easier for employers to understand their responsibilities to provide AR protection to employees. Existing LVESO requirements mention motors, but not machinery. He opined that if an employer did not equate a motor to other machinery or equipment, the employer could erroneously conclude that the requirement did not apply to his/her operation.

Finally, he said that unscrupulous manufacturers may be marketing the cheaper devices designed for appliances to employers looking for devices for industrial applications. He said that requiring manufacturers to market their products more clearly could help to address his concerns.

In summary, staff understands the Petitioner’s primary concerns to be as follows:

- 1) Some AR devices are being built to a UL standard for appliances, yet marketed for use in industrial applications. Devices intended for use with appliances are more likely to fail during industrial use, increasing the potential for employee injury.
- 2) Cal/OSHA requirements for AR devices are found in the LVESO (as opposed to the General Industry Safety Orders (GISO)), which may be difficult to find for some employers. Furthermore, because the Cal/OSHA regulations lack the word “machines,” adding the word, as is done in a federal OSHA AR requirements for woodworking equipment, may alert additional employers to the need for such protections in their workplace.

Relevant Standards

Federal Standards

Federal OSHA regulations do not include a general requirement for AR devices in motors or machines in all equipment where an automatic restart could pose a hazard. The standard mentioned by the Petitioner, 29 CFR Section 1910.213 “Woodworking Machinery Requirements”, is only applicable to woodworking machinery. Federal OSHA standard Section 1910.213(b)(3) reads:

On applications where injury to the operator might result if motors were to restart after power failures, provision shall be made to prevent machines from automatically restarting upon restoration of power.

Another federal regulation found in 29 CFR Section 1910.217 “Mechanical Power Presses” applies only to power presses. Section 1910.217(b)(8)(iii) reads:

“All mechanical power press controls shall incorporate a type of drive motor starter that will disconnect the drive motor from the power source in event of control voltage or power source failure, and require operation of the motor start button to restart the motor when voltage conditions are restored to normal.”

A federal letter of interpretation discussing AR devices¹ explains “all electric equipment used in the workplace [is] generally required to be listed and labeled by a [NRTL].” The letter further explains that certain equipment-specific ANSI standards may require AR devices to be installed during manufacture. OSHA provision 29 CFR Section 1910.303(b)(2) requires that “listed or labeled equipment shall be used or installed in accordance with any instructions included in the listing or labeling,” which would require AR devices to be present when called for by the NRTL or ANSI standard.

California Standards

As pointed out by the Petitioner, California requirements for AR devices are found in LVESO Section 2530.43(b) “Automatic Restarting,” which reads: “A motor that can restart automatically after shutdown shall not be installed if its automatic restarting can result in injury to persons.” The LVESO “apply to all electrical installations and electrical equipment operating or intended to operate on systems of 600 volts, nominal, or less.” (Title 8, Section 2305.2 [Scope and Application].)

California also has a regulation specific to woodworking machinery. Section 4296(q) provides:

On machinery and equipment where injury might result if motors were to automatically restart after power failures, provision shall be made to prevent machines and equipment from automatically starting upon restoration of power.

¹ “Requirements for protecting against the automatic restart of low-voltage light-duty woodworking and metalworking equipment following an unscheduled electrical outage.” Standard Interpretation, dated January 31, 2005. <https://www.osha.gov/laws-regs/standardinterpretations/2005-01-31>. Accessed 6/8/20.

Exception: Portable power tools intended to be handheld during use.

Note: For the purpose of subsection (q), the term "provision" means electrical or mechanical device, or administrative procedures.

Finally, Section 3203 "Injury and Illness Prevention Program" (IIPP) requires employers to address hazards and potential hazards in the workplace. The IIPP could be generally applied to require employers to use AR devices in addition to Section 2530.43(b).

Consensus Standards

As mentioned in the federal standard interpretation letter, a variety of consensus standards exist for specific types of machinery that require AR devices to be installed. Additionally, some NRTL requirements for labeling and listing of machinery dictate the design and manufacture of such devices.

National Fire Protection Association (NFPA) 79, Electrical Standard for Industrial Machinery, 2018 Ed., in subsection 7.5.3 "Restarting" reads: "*Upon restoration of the voltage or upon switching on the machine supply circuit, automatic or unintentional restarting of the machine shall be prevented when such a restart causes a hazardous condition.*"

National Electric Code (NEC), NFPA 70, 2020 Ed., in subsection 430.43 "Automatic Restarting" reads:

A motor overload device that can restart a motor automatically after overload tripping shall not be installed unless approved for use with the motor it protects. A motor overload device that can restart a motor automatically after overload tripping shall not be installed if automatic restarting of the motor can result in injury to persons.

The American National Standards Institute (ANSI) publishes several equipment specific standards which require installation of AR devices. Examples include ANSI B11.8-2001 American National Standard — "Safety Requirements for Manual Milling, Drilling, and Boring Machines with or without Automatic Control" and ANSI B11.10-2003 American National Standard for Machine Tools — "Safety Requirements for Metal Sawing Machines with or without Automatic Control."

NRTLs are regulated by federal OSHA. According to OSHA²:

OSHA's Nationally Recognized Testing Laboratory (NRTL) Program recognizes private sector organizations to perform certification for certain products to ensure that they meet the requirements of both the construction and general industry OSHA electrical standards. Each NRTL has a scope of test standards that they are recognized for, and each NRTL uses its own unique registered certification mark(s) to designate product conformance to the applicable product safety test standards. After certifying a product, the NRTL authorizes the manufacturer to apply a registered certification mark to the product. If the certification is done under the NRTL program, this mark signifies that the

² OSHA's Nationally Recognized Testing Laboratory (NRTL) Program. <https://www.osha.gov/dts/otpca/nrtl/>. Accessed 6/23/20.

NRTL tested and certified the product, and that the product complies with the requirements of one or more appropriate product safety test standards.

Underwriters Laboratories is a NRTL founded in 1894 with world-wide facilities “for the testing, certification, and quality assessment of products, systems, and services.” UL publishes a handbook entitled “Guide Information for Electrical Equipment – The White Book,” which provides general information “for UL’s Electrical Construction Equipment and Hazardous Locations Equipment product categories.” According to the handbook, appliance control standards, including UL 244A, cover “household-type appliances, such as portable luminaires, audio/video equipment, etc....These controls are intended only for nonindustrial appliances.”³

Position of Division

The Division report dated November 20, 2020, recommends denying the Petition, though it supports the convening of “an advisory committee to determine if employee safety could be enhanced by the requirement for anti-restart devices on other machinery not currently addressed by Title 8 regulations.”

Analysis

The Petitioner has a valid concern regarding inappropriate UL listing and labeling in regard to employee safety and health. Machines that are not built to the correct specifications can pose serious hazards in a workplace, including death and fire. Foreseeably, employers seeking to comply with Cal/OSHA’s AR device requirements can be misled by mismatched UL markings.

Although, federal OSHA, not Cal/OSHA, has authority over NRTLs, it is unlikely that federal OSHA would be able to regulate manufacturers from selling products built to inappropriate UL standards, especially when many manufacturers are located in foreign countries. The Petitioner’s concern, though valid, is unlikely to be resolved by any Board regulatory action.

The Petitioner’s second concern, regarding the location of the AR device requirement in the LVESO, may also be valid, but could apply to any Cal/OSHA requirement located outside of the GISO. Additionally, the Petitioner’s suggestion that the LVESO requirement include the word “machines,” similar to the federal OSHA woodworking requirement may not be a necessary amendment.

As shown previously, the language used in the NEC regarding AR devices is similar to the existing Cal/OSHA language with neither using the word “machines.” For comparison, the requirements are listed below with added emphasis:

National Electric Code (NEC), NFPA 70, 2020 Ed.:

A motor overload device that can restart a motor automatically after overload tripping shall not be installed unless approved for use with the motor it protects. A motor

³ Guide Information for Electrical Equipment – The White Book 2015-2016. <https://legacy-uploads.ul.com/wp-content/uploads/2014/09/UL-White-Book.pdf>. Title page, pp. 73-74. Accessed 6/23/20.

overload device that can restart a motor automatically after overload tripping shall not be installed if automatic restarting of the motor can result in injury to persons.

LVESO Section 2530.43(b):

A motor that can restart automatically after shutdown shall not be installed if its automatic restarting can result in injury to persons.

Board staff was informed by a DOSH representative that Section 2530.43(b) has been cited one time since 2014. The minimal citation history could indicate general compliance with the performance standard requirement, countering the Petitioner's concern that employers may not be aware of their responsibilities with respect to AR devices. Furthermore, because the regulatory language used closely resembles the dominant consensus standard on the topic (i.e. the NEC), staff is hesitant to recommend amending the language without substantive evidence of a deficiency in the status quo.

STAFF RECOMMENDATION

Consistent with the foregoing discussion, Board staff does not believe that the Petitioner's request is necessary and recommends that Petition File No. 580 be DENIED.

State of California
Department of Industrial Relations
Division of Occupational Safety and Health
Memorandum

Date: November 20, 2020

To: Christina Shupe, Executive Officer
Occupational Safety and Health Standards Board
2520 Venture Oaks Way, Suite 350
Sacramento, CA 95833

From: Eric Berg, Deputy Chief of Health *Eric Berg*
Division of Occupational Safety and Health

Subject: Evaluation of Petition No. 580 to amend title 8 section 4001.

1.0 INTRODUCTION

On April 2, 2020 the Division of Occupational Safety and Health (Cal/OSHA) received a petition from Scott Swaaley (petitioner) of Makesafe Tools, Inc. The petitioner requests Cal/OSHA take several actions regarding the use of anti-restart devices on machinery and equipment.

Labor Code Section 142.2 permits interested persons to propose new or revised standards concerning occupational safety and health, and requires the Occupational Safety and Health Standards Board (Standards Board) to consider such proposals. California Labor Code section 147 requires the Standards Board to refer to Cal/OSHA for evaluation of any proposed occupational safety and health standard.

2.0 INFORMATION ON PETITIONER AND POWER TOOL BRAKE DEVICE

The petitioner is the CEO of Makesafe Tools Inc. that engages in the manufacturing and sales of a product known as the "Power Tool Brake" (Figure 1). The Power Tool Brake is an electric device measuring approximately 7x5x2-inches that is connected between an electrical power outlet and a piece of machinery or equipment. The petitioner began sales of the Power Tool Brake in 2018 after discovering some industrial machinery that was being provided with anti-restart devices rated for residential electrical appliances. The main function of the Power Tool Brake is preventing electric machinery and equipment from automatically restarting when power is restored following a power failure. Devices such as the Power Tool Brake are commonly referred to as anti-restart devices and function by requiring the manual operation of an electrical switch to continue operating machinery and equipment when electrical power is restored.



Figure 1. Makesafe Tools Inc. – “Power Tool Brake” anti-restart device.

3.0 PETITIONER’S REQUESTS AND BASIS FOR AMENDMENT OF TITLE 8 REGULATIONS

The petitioner requests the following in the petition application.

3.1 Proposed Change to Title 8 Section 4001

The petitioner requests that title 8 section 2530.43 of the Low-Voltage Electrical Orders be better aligned with federal OSHA regulations. To this end, the petitioner proposes that the language of title 29 Code of Federal Regulations subsection 1910.213(b)(3) be incorporated into California Code of Regulations title 8 section 4001 of the General Safety Orders. The current requirements of title 8 subsections 2540.43, 4001 and 29 CFR subsection 1910.213(b) are as follows:

California Code of Regulations Title 8 Industrial Relations

* * * * *

Subchapter 5. Electrical Safety Orders
 Group 1. Low-Voltage Electrical Safety Orders
 Article 56. Motors, Motor Circuits and Controllers
 §2530.43. Automatic Restarting.

- (a) A motor-running overload device that can restart a motor automatically after overload tripping shall not be installed unless approved for use with the motor it protects.
- (b) A motor that can restart automatically after shutdown shall not be installed if its automatic restarting can result in injury to persons.

* * * * *

Subchapter 7. General Industry Safety Orders
 Group 6. Power Transmission Equipment, Prime Movers, Machines and Machine Parts
 Article 41. Prime Movers and Machinery

§4001. Machine Power Control.
 All machines shall be equipped with adequate means whereby the operator of the machine or other person can disconnect the power promptly in case of emergency.

Code of Federal Regulations Title 29 – Labor

* * * * *

1910 Subpart O

Machinery and Machine Guarding

1910.213 Woodworking Machinery Requirements

* * * * *

(b)(3) On applications where injury to the operator might result if motors were to restart after power failures, provision shall be made to prevent machines from automatically restarting upon restoration of power.

* * * * *

The petitioner did not specify in their petition how the language of 29 CFR 1910.213(b)(3) should be incorporated into title 8 and simply stated that the current federal language should be added to title 8 section 4001.

3.2 Requests Not Related to Changes of Title 8 Regulations

In addition to the change of title 8 section 4001 described in section 3.1 of this evaluation, the petitioner also requests that Cal/OSHA take the following action:

1. Work with Nationally Recognized Test Laboratories (NRTL) and anti-restart device manufacturers to withdraw listings by Underwriter’s Laboratory (UL) for anti-restart devices currently listed under UL244A for appliance controls and transition these products into UL508 anti-restart devices for industrial applications.
2. Publish a general notice for businesses that anti-restart devices listed under UL244A present a safety hazard if used on industrial machinery with higher voltage and current ratings and include in the notice available options for mitigating unintentional restarts.
3. Require manufacturers of anti-restart devices that are not NRTL listed for safe use with industrial motors and machinery to explicitly state such on the device’s product literature and labeling.

3.3 Petitioner’s Bases for Requests

The basis for the petitioner’s requests is the potential hazards of utilizing anti-restart devices that are not appropriately listed by a NRTL or approved for the end use. After a customer of MakeSafe Tools, Inc informed the petitioner of a high failure rate of anti-restart devices that had been purchased from other companies, the petitioner identified that many anti-restart devices on the market are listed or approved for use with appliances but not industrial machinery.

The petitioner argues that the lower fire ratings of devices intended for residential appliances can lead to failure from overheating when it is used with industrial machinery which have large electrical motors that operate with higher voltages and currents resulting in excessive heat. The petitioner asserts that certain anti-restart devices currently being used were sold to end users under an Underwriters Laboratory (UL) listing that are not correctly categorized.

The result of using incorrectly listed UL equipment, the petitioner explained, is failure from overheating and possible fire. In a telephone conversation with Cal/OSHA staff, the petitioner stated that the following anti-restart devices illustrated in Figures 1 and 2 below are rated for appliances but are marketed for use with industrial motors.



Figure 2. JDS Products Inc. – “Sensing-Saf-Start” anti-restart device.



Figure 3. Safe Start Systems – “Safetygate Professional” anti-restart device.

4.0 ADDITIONAL APPLICABLE TITLE 8 REGULATIONS

Section 2305.4 of the title 8 Low-Voltage Electrical Safety Orders includes the requirement and definition for the low-voltage electrical systems to be approved for their use.

Subchapter 5. Electrical Safety Orders
 Group 1. Low-Voltage Electrical Safety Orders
 Article 2. Administration

§2305.4. Approvals.

The conductors and equipment required or permitted by these orders shall be acceptable only if approved.

(a) When the term "approved" is used in these orders, it shall refer to products, materials, devices, systems, or installations that have been approved, listed, labeled, or certified as conforming to applicable governmental or other nationally recognized standards, or applicable scientific principles. The approval, listing, labeling, or certification of conformity, shall be based upon an evaluation performed by a nationally recognized testing laboratory recognized pursuant to 29 CFR §1910.7, which is incorporated by reference; or by a person, firm, or entity with appropriate registered engineering competence or by a person, firm, or entity, independent of the manufacturer or supplier of the product, with demonstrated competence in the field of such evaluation.

* * * * *

Title 8 subsection 4002(a) requires all hazardous parts of machinery and equipment other than the point of operation to be guarded.

Subchapter 7. General Industry Safety Orders
 Group 6. Power Transmission Equipment, Prime Movers, Machines and Machine Parts
 Article 41. Prime Movers and Machinery

§4002. Moving Parts of Machinery or Equipment.

(a) All machines, parts of machines, or component parts of machines which create hazardous revolving, reciprocating, running, shearing, punching, pressing, squeezing, drawing, cutting, rolling, mixing or similar action, including pinch points and shear points, not guarded by the frame of the machine(s) or by location, shall be guarded.

* * * * *

Title 8 subsection 4296(q) is already identical to the federal OSHA regulation 29 CFR 1910.213, which the petitioner requests be added to title 8 section 4001.

Subchapter 7. General Industry Safety Orders
Group 8. Points of Operation and Other Hazardous Parts of Machinery
Article 59. Woodworking Machines and Equipment
§4296. General.

* * * * *

(q) On machinery and equipment where injury might result if motors were to automatically restart after power failures, provision shall be made to prevent machines and equipment from automatically starting upon restoration of power.

Exception: Portable power tools intended to be handheld during use.

Note: For the purpose of subsection (q), the term "provision" means electrical or mechanical device, or administrative procedures.

5.0 APPLICABLE CONSENSUS STANDARDS

5.1 Underwriters Laboratory (UL)

Underwriters Laboratory (UL) includes requirements for electronic controls including anti-restart devices for appliances and industrial equipment in their 244A and 508 standards respectively. The scopes of the third edition of UL 244A and eighth edition of UL 508 are listed below. Neither of these standards are included by reference in title 8 regulations and were not obtained for this evaluation.

Standard for Safety Solid-State Controls for Appliances UL 244A

1 Scope

1.1 These requirements cover component electronic controls intended to be factory installed on or in appliances and other utilization equipment rated 600 V or less, used in ordinary dry locations as defined in the National Electrical Code, NFPA 70, and that comply with the requirements for such appliances and equipment.

1.2 For a control covered by this standard, it is assumed that:

- a) No voltage greater than 600 V above ground will be present in a control,
- b) An isolation transformer, if provided, will generally furnish power at a lower potential than the primary voltage, and
- c) The output of the control will not be located in a circuit operating at greater than 600 V above ground in the end-use product.

If conditions other than these are provided, consideration shall be given to the need for additional requirements.

1.3 A control covered by this standard is a single device or a series of separate components with interconnecting wiring employing one or more input

power and possibly signal ports, solid-state circuitry, and one or more output switching components to directly control all or a portion of the end-use product load. Included are controls that respond directly or indirectly to changes in temperature, humidity, or pressure to affect operation of an appliance, function as an electronic timer, or electronically store or process information by virtue of a memory system.

1.4 These requirements cover controls intended for connection only to a low-voltage circuit of limited power supplied by a primary battery or by a Class 2 transformer, where a failure of such a control would result a risk of fire, electric shock, or injury to persons in the end-use product.

1.5 These requirements do not cover a control intended for installation in or on refrigeration or air conditioning equipment that is used in industrial applications or in hazardous locations as defined in the National Electrical Code, NFPA 70. Such equipment is covered in the Standard for Temperature-Indicating and -Regulating Equipment, UL 873. Compliance with the Standard for Automatic Electrical Controls for Household and Similar Use, Part 1: General Requirements, UL 60730-1, and/or the applicable Part 2 standard from the UL 60730 series fulfills these requirements.

1.5 revised March 4, 2010. UL 873 will be withdrawn on October 19, 2016.

1.6 These requirements do not cover controls for use where exposed to oil, grease vapors, lint, other contaminants, or high humidity in the end application.

1.7 These requirements address the potential risks unique to the electronic nature of a control. Equipment or components employing an electronic feature shall also comply with the basic requirements contained in the applicable end-product or component standard. These requirements are intended to supplement applicable end-product or component standards and are not intended to serve as the sole basis for investigating all risks associated with a control. For example, requirements for the means of enclosing live parts, mechanical assembly of components, corrosion protection, use of polymeric materials, evaluation of internal wiring and connections within the control, calibration, and similar requirements, are not included in this standard.

Standard for Safety Industrial Control Equipment UL 508 - 2018

1 Scope

1.1 These requirements cover industrial control devices, and devices accessory thereto, for starting, stopping, regulating, controlling, or protecting electric motors. These requirements also cover industrial control devices or systems that store or process information and are provided with an output motor control function(s). This equipment is for use in ordinary locations in accordance with the National Electrical Code, NFPA 70. These requirements do not include requirements for the evaluation of equipment intended for use in functional safety applications.

1.2 These requirements cover devices rated 1500 volts or less. Industrial control equipment covered by these requirements is intended for use in an ambient temperature of 0 - 40°C (32 - 104°F) unless specifically indicated for use in other conditions.

1.3 Examples of industrial control devices described in 1.1 are:

- a) Manual, magnetic, and solid-state starters and controllers.
- b) Thermal, magnetic, and solid-state overload relays.
- c) Pushbutton stations, including selector switches and pilot lights.
- d) Control circuit switches and relays.

- e) Float, flow, pressure, and vacuum-operated switches.
- f) Resistors and rheostats.
- g) Proximity switches.
- h) Time-delay relays and switches.
- i) Resistors and rheostats intended for industrial heating and lighting, including those for motor generator fields.
- j) Control devices intended for industrial heating and lighting.
- k) Solid-state time-delay relays.
- l) Programmable controllers.
- m) Numerical control systems.
- n) Lighting dimmer systems and controls.
- o) Mercury-tube switches.
- p) Definite purpose controllers.
- q) Solid-state logic controllers.
- r) Industrial microprocessor/computer systems.
- s) Variable voltage autotransformer.
- t) Motor starting autotransformer.

5.2 NFPA 70 NATIONAL ELECTRIC CODE (NEC)

The National Fire Protection Association (NFPA) includes requirements for automatic restarting devices in the NFPA 70 National Electric Code (NEC) standard. The 2017 edition of NFPA 70 includes requirements for overload and automatic restarting devices in sections 430.31 and 430.34 of Part III of the standard. NFPA 70 is not included by reference in title 8 regulations.

Part III. Motor and Branch-Circuit Overload Protection

Section 430.31 General. Part III specifies overload devices intended to protect motors, motor-control apparatus, and motor branch circuit conductors against excessive heating due to motor overloads and failure to start.

* * * * *

Section 430.43 Automatic Restarting. A motor overload device that can restart a motor automatically after overload tripping shall not be installed unless approved for use with the motor it protects. A motor overload device that can restart automatically after overload tripping shall not be installed if automatic restarting of the motor can result in injury to persons.

6.0 RULE MAKING HISTORY

In 1999, Dave Jacobs of JDS Products Inc. filed a petition (file #397) with the Standards Board to revise section 2530.43 regarding automatic restarting of motors on machines and equipment. JDS Products Inc. is a manufacturer and vendor of an anti-restart device. In petition file number 397, the petitioner requested to separate section 2530.43 into two subsections to provide clarification that a motor may not be allowed to restart if it could injure employees. The petition was granted and a revision was processed as a change without regulatory effect under Section 100 of the California Administrative Procedure Act.

During the rule making process for petition file #397, the Standards Board staff discovered title 8 regulations were not as effective as CFR 1910.213(b)(3). CFR 1910.213(b)(3) was promulgated by Fed-OSHA in the 1970's after recognizing the hazard in the woodworking machinery. The intent of CFR 1910.213(b)(3) was to prevent machines from automatically restarting upon restoration of power if such

restoration might cause operator injury. The Standards Board promulgated title 8 section 4296(q) to be as effective as federal regulations and became operative on October 5, 2001.

7.0 ANALYSIS

7.1 Change to Title 8 Section 4001 is Unnecessary

The petitioner's proposed amendment of title 8 section 4001 is not necessary to "align" title 8 with federal OSHA regulations. Title 8 subsection 4296(q) (see text in part 4.0 of this evaluation) is already identical to 29 CFR subsection 1910.213(b)(3). Both the federal and title 8 subsections apply only to woodworking equipment.

Additionally, the proposed change to title 8 section 4001 is not necessary because the hazards created by the restarting of motors regulated by section 4001 are currently addressed by other title 8 orders.

Section 4001 resides in Group 6 of the General Industry Safety Orders and applies to power transmission equipment, prime movers and parts of machinery other than the point of operation. Title 8 section 4002 of the Group 6 orders currently requires the guarding of hazardous moving parts of machinery and equipment.

Therefore, the automatic restarting of motors after power failure would not create a hazard for components of machinery included in the Group 6 orders if guarded as required by section 4002. Additionally, title 8 section 3314 requires the locking and/or tagging of machinery and equipment power sources during cleaning, repairing, servicing, setting-up, and adjusting operations. As a result, the proposed amendment to section 4001 is not necessary.

7.2 Title 8 Regulations Currently Require Approval of Anti-restart Devices

The petitioner's concern regarding the use of anti-restart devices that are not approved for use with industrial machinery is already addressed by title 8 regulations. Pursuant to title 8 subsection 2305.4(a) (see text in part 4.0 of this evaluation) of the Low-Voltage Safety Orders, all conductors and equipment must be approved for their use by a nationally recognized testing laboratory or other entity with registered engineering or demonstrated competence to perform such evaluation.

7.3 Anti-Restart Devices are not Required for All Electric Motors

Electric motors are used extensively in all segments of industry. Currently, title 8 regulations do not require all industrial electric motors to be equipped with an anti-restart device. Pursuant to both title 8 sections 2530.43 and 4296(q), machinery that cannot injure a worker when automatically restarting is not required to be equipped with an anti-restart device. An example of this type of machinery is an electric motor running a buffing wheel with a soft cloth attachment for polishing. Despite the fast spinning wheel, a worker who makes contact with the soft buffing cloth would not be injured. The opposite extreme would be a table saw. The blades of some table saws spin at very high revolutions per minute making it indiscernible that the blade is moving. Coupled with a quietly running electrical motor,

a table saw in this situation can seriously injure an operator who unknowingly makes contact with the running saw blade or if material flies or the work piece kicks back, striking the operator.

Additionally, title 8 section 2530.43 only requires low-voltage electric motors to have anti-restart functionality for shutdown due to overloading. During the 2001 rulemaking for Petition #397 discussed in part 7 of this evaluation, the Standards Board concluded that the requirements of section 2530.43 was adopted nearly verbatim from section 430-43 of the 1999 edition of NFPA 70. This section more clearly states that motors are not to restart following overload tripping and hence it was the intent of title 8 section 2530.43 to apply to the restarting of motors due to overload conditions.

Unlike title 8 section 2530.43, subsection 4296(q) applies to the restarting of machinery when power is restored after power failures. However, as this subsection is included in Article 59, the requirement applies only to woodworking machinery equipment. Therefore, other types of machinery such as metal working machines and power operated presses are not required to have an anti-restart device. Such equipment also has the potential to cause injury upon restarting when power is restored following a power failure but is not currently addressed by title 8 regulations.

7.4 Some of the Petitioner's Requests Fall Outside of the Petition Process and the Jurisdiction of Cal/OSHA

Several of the requests within the petitioner's application, discussed in part 3.2 of this evaluation, are not germane to the petition process or are not within the scope of Cal/OSHA's jurisdiction. The petitioner's requests for Cal/OSHA to work with NRTLs and manufacturers to withdraw consensus standard listings does not propose any change to title 8 regulations. This request would be better directed to the Cal/OSHA Consultation Service. Likewise, the petitioner's request to publish notices to the public regarding the hazards related to the misuse of anti-restart devices does not include any petition for new or amended regulation and would be better addressed by Cal/OSHA Communications and Publications Units.

The petitioner's request to require manufacturers of anti-restart devices to state explicitly when their devices are not rated for industrial machinery does not fall within the scope of Cal/OSHA's jurisdiction. Pursuant to California Labor Code section 6300, Cal/OSHA may only exercise jurisdiction when an employer-employee relationship exists.

Although most manufacturers are also employers, the products they manufacture can be sold to parties or entities who are not employers. Therefore, explicitly dictating the content of the manufacturer's documentation would be acting in excess of Cal/OSHA's authority to enforce title 8 regulations.

8.0 CONCLUSION

Cal/OSHA recommends that the petition be denied. However, Cal/OSHA supports convening an advisory committee to determine if employee safety could be enhanced by the requirement for anti-restart devices on other machinery not currently addressed by title 8 regulations.

cc: Yancy Yap
Jason Denning

MAKESAFE TOOLS

DATE: March 17, 2020
TO: Occupational Safety and Health Standards Board
FROM: Scott Swaaley, CEO, MAKESafe Tools, Inc.
SUBJECT: Petition for Public Notice and Strengthening of CAL/OSHA Requirements Regarding Anti-Restart Devices

Hello Standards Board,

After sharing my thoughts on this issue with CAL/OSHA safety engineers at the Bay Area Safety Symposium on March 4th, 2020 and the San Diego ASSP PDC event on March 11th, 2020, they both encouraged me to bring this issue to the attention of the safety board. At their suggestion, I am submitting this written petition in advance of my public comment at the March 19, 2020 meeting.

Executive Summary *(Why this should matter to CAL/OSHA)*

California businesses are required by standard (and encouraged by local CAL/OSHA engineers) to prevent the unintentional restart of motors and motor operated machinery. Additionally, any engineering control installed by a business for this purpose is required to be listed by a Nationally Recognized Test Lab. Lastly, OSHA is responsible for overseeing all NRTLs. Given these facts, even a well-intentioned and well-informed business is likely to identify any UL Listed anti-restart device as a safe engineering control. However, for the reasons outlined in this petition, that well-intentioned business can be led astray by miscategorized NRTL listings and is put at risk by the unintentional creation of secondary fire and point-of-operation hazards. Now that this has come to our attention, it is imperative that we act to educate businesses, clarify CAL/OSHA requirements, and work with NRTLs and manufacturers to remedy the issue of unsafe motor controls.

Background *(How I discovered the problem)*

This issue first came to my attention when a customer informed me about the high failure rate of their recently purchased anti-restart devices. This particular aerospace customer had purchased approximately 70 commercially available anti-restart devices for pedestal bench grinders and was performing functional tests on a monthly basis. During their monthly tests, between one and three devices were discovered to have failed each month. A few weeks later I mentioned this to a CAL/OSHA safety engineer at the Pacific Coast Safety Fest in July of 2019 who jokingly referred to these types of anti-restart devices as "smoke boxes" (referring to their tendency to fail, smolder, and smoke). Having expertise in both machine guarding and electrical engineering, I decided to investigate further and purchased a few of these devices. As you'll see in the following discussion, my accidental discovery and subsequent investigation of this issue led to the identification of the root cause of these failures. My investigation also suggests a growing industry trend to adopt these seemingly innocuous but ultimately hazardous devices. However, with swift educational and legislative efforts, we can remedy this problem and work to keep machine operators safe across the industry.

Initial Investigation & Improper NRTL Standards

The first thing I noticed when disassembling one of these devices was that the integral switching device (the relay) was extremely undersized for the purpose. Unsure of how this product could have received a Nationally Recognized Test Lab (NRTL) listing, I looked further into their UL listing and discovered that these devices are NRTL Listed as "Appliance Controls" (UL 244A,) by UL. As far as any well-intentioned business can tell from manufacturer literature and specification sheets, these are "UL Listed" anti-restart devices meant for use on industrial machinery yet they are not tested or approved for use on any type of motor. To quote the standard directly, "[Appliance Controls] are not intended for controlling motor-operated appliances...". Further investigation shows that this miscategorization of anti-restart motor controls as "Appliance controls" is prevalent throughout the industry and represents a significant hazard to machine operators.

Proper NRTL Standards

The relevant standard for industrial motor controls is UL508 - "Industrial Control Equipment". This standard takes into account the hazards associated with motor controls and puts into place multiple performance and labeling requirements to mitigate the hazards described above. All switching devices used to control motors and motor-operated machinery should be listed and/or recognized by an NRTL under this standard. However, the devices being discussed here somehow bypassed this standard entirely.

Hazards

By allowing these anti-restart devices to be listed by an NRTL as 'Appliance Controls', well-intentioned business with the intent to comply may be exposed to additional hazards, including:

- **Risk of electrical fire:** excessive starting currents and inductive arcing (described in appendix) on under-rated switching devices can lead to overheating, smoldering, and fire.
- **Failure of engineering controls:** these devices are installed in order to prevent accidental restarts yet excessive starting currents and inductive arcing (described in appendix) can lead to contacts permanently welding into the closed ("ON") position - thereby completely negating the safety function.

Product Examples - Misleading Listing Categories

This petition describes products that are UL Listed as 'Appliance Controls' but marketed and sold for use with motors and motor operated machinery as an industrial control. Examples of these products are available upon request.

Potential Courses of Action

The intent of this petition is for CAL/OSHA to recognize the hazardous conditions described above and to take one or more of the following actions:

- Work with NRTLs to withdraw UL Listings for anti-restart devices currently listed under UL244A (Appliance Controls) and work with manufacturers to transition these products into UL508 compliance.

- Publish a general notice to businesses that such products present a safety hazard and clarify other options for mitigating against unintentional restarts (UL508 listed products, UL508A control panels, etc.).
- Require manufacturers of anti-restart devices that are not NRTL listed for safe use with motors and machinery to explicitly state such on their literature and labeling.
- Clarify the existing CAL/OSHA anti-restart standard (§2530.43) and better align with FED Osha requirement (1910.213(b)(3)) by doing the following:
 - Add current FED OSHA language to Title 8 section 4001 - Machine Power Control: “On applications where injury to the operator might result if motors were to restart after power failures, provision shall be made to prevent machines from automatically restarting upon restoration of power.”

Thank you for your attention to this matter and please let me know if you have any questions.

Sincerely,



Scott Swaaley
CEO, MAKESafe Tools
scott@makesafetools.com
(415) 937-1808

Appendix

Engineering Significance

Motors are a specialized type of electrical load known as an inductive load. This is significant in this analysis for two primary reasons, detailed below.

Startup Currents: Motors have extremely high starting currents. A 1.5 HP single-phase 120V motor, for example, has a full load current rating of 20 amps. During the first few seconds of starting, a motor of this size can pull between 5 and 7 times the full load current - up to 140A. This additional current creates a tremendous amount of heat and devices not designed or rated to handle this current will overheat, smolder, and fail.

Inductive Loads: Every time a motor is switched off, the stored electromagnetic energy in the motor creates a voltage spike in an attempt to maintain current flow. This voltage spike results in an electric arc inside the switching device itself, not unlike the arc created during welding. This arc is highly destructive and its occurrence in underrated devices can lead to the accelerated deterioration of electrical contacts, high resistance connections, high temperatures, smoldering, and failure.

Typical failure modes include: permanent welding of the switching device in the closed (“ON”) position, smoldering, and fire.

Relevant OSHA Standards

Accidental restart refers to the unintentional restarting of a machine after the loss of power. It is sometimes also referred to as “anti-restart” or “low-voltage dropout”. This function is required by multiple standards, including:

- CAL/OSHA §2530.43. Automatic Restarting: “(a) A motor-running overload device that can restart a motor automatically after overload tripping shall not be installed unless approved for use with the motor it protects. (b) A motor that can restart automatically after shutdown shall not be installed if its automatic restarting can result in injury to persons.”
- FED OSHA 1910.213(b)(3): “On applications where injury to the operator might result if motors were to restart after power failures, provision shall be made to prevent machines from automatically restarting upon restoration of power.”
- NFPA 79, 7.5.3 Restarting: “Upon restoration of the voltage or upon switching on the incoming supply, automatic or unintentional restarting of the machine shall be prevented when such a restart causes a hazardous condition”
- NEC 430.43 Automatic Restarting: “A motor overload device that can restart a motor automatically after overload tripping shall not be installed if automatic restarting of the motor can result in injury to persons.”

Additionally, OSHA requires all electrical equipment to be approved for its intended use by a Nationally Recognized Test Lab. Relevant standards include:

- FED OSHA 1910.303(a) Approval. “The conductors and equipment required or permitted by this subpart shall be acceptable only if approved, as defined in §1910.399.”
- FED OSHA 1910.303(b)(2) Installation and use. “Listed or labeled equipment shall be installed and used in accordance with any instructions included in the listing or labeling.”

- FED OSHA, Standard Interpretations (August 24, 1993): “The requirement mandating that electrical equipment be "approved" is set forth at 29 CFR 1910.303(a). Also, OSHA Standard 29 CFR 1910.303(b)(2) requires that "approved" equipment be used in conformance with its approval.”

Occupational Safety and Health Standards Board

Business Meeting
Variance Consent Calendar

AMENDED
CONSENT CALENDAR—PROPOSED VARIANCE DECISIONS
DECEMBER 17, 2020, MONTHLY BUSINESS MEETING
OF THE OCCUPATIONAL SAFETY AND HEALTH STANDARDS BOARD

A. CITY OF LOS ANGELES, LOS ANGELES WORLD AIRPORTS — HEARD NOVEMBER 20, 2020

OSHSB FILE NUMBER	APPLICANT NAME	SAFETY ORDERS	PROPOSED DECISION
16-V-069M1	City of Los Angeles, Los Angeles World Airports	Elevator	GRANT

B. CITY OF LOS ANGELES, LOS ANGELES WORLD AIRPORTS — HEARD NOVEMBER 20, 2020

OSHSB FILE NUMBER	APPLICANT NAME	SAFETY ORDERS	PROPOSED DECISION
16-V-071M1	City of Los Angeles, Los Angeles World Airports	Elevator	GRANT

C. CITY OF LOS ANGELES, LOS ANGELES WORLD AIRPORTS — HEARD NOVEMBER 20, 2020

OSHSB FILE NUMBER	APPLICANT NAME	SAFETY ORDERS	PROPOSED DECISION
16-V-072M1	City of Los Angeles, Los Angeles World Airports	Elevator	GRANT

D. CITY OF LOS ANGELES, LOS ANGELES WORLD AIRPORTS — HEARD NOVEMBER 20, 2020

OSHSB FILE NUMBER	APPLICANT NAME	SAFETY ORDERS	PROPOSED DECISION
16-V-073M1	City of Los Angeles, Los Angeles World Airports	Elevator	GRANT

E. SJ 50 WEST SF LLC — HEARD NOVEMBER 20, 2020

OSHSB FILE NUMBER	APPLICANT NAME	SAFETY ORDERS	PROPOSED DECISION
17-V-425M1	SJ 50 West SF LLC	Elevator	GRANT

F. SANTA MONICA BREEZE, LLC — HEARD NOVEMBER 20, 2020

OSHSB FILE NUMBER	APPLICANT NAME	SAFETY ORDERS	PROPOSED DECISION
18-V-183M1	Santa Monica Breeze, LLC	Elevator	GRANT

G. TB ORANGE I APARTMENTS LLC — HEARD NOVEMBER 20, 2020

OSHSB FILE NUMBER	APPLICANT NAME	SAFETY ORDERS	PROPOSED DECISION
19-V-164M1	TB Orange I Apartments LLC	Elevator	GRANT

H. KAISER FOUNDATION HOSPITALS — HEARD NOVEMBER 20, 2020

OSHSB FILE NUMBER	APPLICANT NAME	SAFETY ORDERS	PROPOSED DECISION
19-V-320M1	Kaiser Foundation Hospitals	Elevator	GRANT

I. 5050 PICO, LLC — HEARD NOVEMBER 20, 2020

OSHSB FILE NUMBER	APPLICANT NAME	SAFETY ORDERS	PROPOSED DECISION
19-V-388M1	5050 Pico, LLC	Elevator	GRANT

J. PATTON EQUITIES — HEARD OCTOBER 22, 2020

OSHSB FILE NUMBER	APPLICANT NAME	SAFETY ORDERS	PROPOSED DECISION
20-V-128	Patton Equities LLC	Elevator	GRANT

K. CHAPMAN UNIVERSITY— HEARD NOVEMBER 20, 2020

OSHSB FILE NUMBER	APPLICANT NAME	SAFETY ORDERS	PROPOSED DECISION
20-V-154M1	Chapman University	Elevator	GRANT

L. NASH-HOLLAND T&C RESIDENTIAL INVESTORS, LLC — HEARD NOVEMBER 20, 2020

OSHSB FILE NUMBER	APPLICANT NAME	SAFETY ORDERS	PROPOSED DECISION
20-V-224M1	Nash Holland T&C Residential Investors, LLC	Elevator	GRANT

M. KONE MONOSPACE 500 ELEVATORS with Retractable Platform Guard (Group IV) — HEARD NOVEMBER 20, 2020

OSHSB FILE NUMBER	APPLICANT NAME	SAFETY ORDERS	PROPOSED DECISION
20-V-256	250 Cambridge Associates, LLC	Elevator	GRANT

N. KONE MONOSPACE 500 ELEVATORS— HEARD NOVEMBER 20, 2020

OSHSB FILE NUMBER	APPLICANT NAME	SAFETY ORDERS	PROPOSED DECISION
20-V-303	The Board of Trustees of the Leland Stanford Junior University	Elevator	GRANT
20-V-351	HPMU4 LA, LLC	Elevator	GRANT
20-V-358	Allied 38631 Fremont, L.P.	Elevator	GRANT
20-V-371	303 Austin Street, LLC	Elevator	GRANT
20-V-372	230 7th Street, LLC	Elevator	GRANT
20-V-410	556 SC Partners LLC	Elevator	GRANT

O. SCHINDLER MODEL 3300 ELEVATORS (GROUP IV)— HEARD NOVEMBER 20, 2020

OSHSB FILE NUMBER	APPLICANT NAME	SAFETY ORDERS	PROPOSED DECISION
20-V-347	Satellite Affordable Housing Associates	Elevator	GRANT

P. TRIPLE SEVEN PROPERTIES — HEARD NOVEMBER 20, 2020

OSHSB FILE NUMBER	APPLICANT NAME	SAFETY ORDERS	PROPOSED DECISION
20-V-350	Triple Seven Properties, Inc	Elevator	GRANT

Q. MITSUBISHI ELEVATORS (GROUP IV)— HEARD NOVEMBER 20, 2020

OSHSB FILE NUMBER	APPLICANT NAME	SAFETY ORDERS	PROPOSED DECISION
20-V-353	SJ 50 West SF LLC	Elevator	GRANT
20-V-354	Rabin Management Company, LLC	Elevator	GRANT

R. OTIS GEN2S ELEVATORS (GROUP IV)— HEARD NOVEMBER 20, 2020

OSHSB FILE NUMBER	APPLICANT NAME	SAFETY ORDERS	PROPOSED DECISION
20-V-359	Aaron P. Peltz	Elevator	GRANT
20-V-360	SchoolsFirst Federal Credit Union	Elevator	GRANT
20-V-361	VP Duboce Triangle LLC	Elevator	GRANT
20-V-362	City of Burlingame	Elevator	GRANT
20-V-363	Pico Fax LP	Elevator	GRANT
20-V-364	Olympic-Barrington Partnership	Elevator	GRANT
20-V-365	LMC Costa Mesa Holdings, LP	Elevator	GRANT
20-V-366	LMC Costa Mesa Holdings, LP	Elevator	GRANT
20-V-367	San Francisco Public Utilities Commission	Elevator	GRANT
20-V-368	JSF Carson Street EX, LLC	Elevator	GRANT

**S. OTIS ELEVATOR (GROUP IV) GEN2(O) AND/OR GEN2L ALTERATIONS—
HEARD NOVEMBER 20, 2020**

OSHSB FILE NUMBER	APPLICANT NAME	SAFETY ORDERS	PROPOSED DECISION
20-V-369	Workday, Inc.	Elevator	GRANT

STATE OF CALIFORNIA
DEPARTMENT OF INDUSTRIAL RELATIONS
OCCUPATIONAL SAFETY AND HEALTH STANDARDS BOARD
2520 Venture Oaks Way, Suite 350
Sacramento, California 95833
(916) 274-5721

In the Matter of Application to Modify)
Permanent Variance by:)
)
City of Los Angeles, Los Angeles World)
Airports (LAWA))
)
_____)

OSHSB FILE No. 16-V-069M1
Proposed Decision Dated: November 23, 2020

DECISION

The Occupational Safety and Health Standards Board hereby adopts the attached PROPOSED DECISION by Christina Shupe, Hearing Officer.

DAVID THOMAS, Chairman

OCCUPATIONAL SAFETY AND HEALTH
STANDARDS BOARD

BARBARA BURGEL, Member

Date of Adoption: December 17, 2020

DAVID HARRISON, Member

THE FOREGOING VARIANCE DECISION WAS ADOPTED ON THE DATE INDICATED ABOVE. IF YOU ARE DISSATISFIED WITH THE DECISION, A PETITION FOR REHEARING MAY BE FILED BY ANY PARTY WITH THE STANDARDS BOARD WITHIN TWENTY (20) DAYS AFTER SERVICE OF THE DECISION. YOUR PETITION FOR REHEARING MUST FULLY COMPLY WITH THE REQUIREMENTS OF CALIFORNIA CODE OF REGULATIONS, TITLE 8, SECTIONS 427, 427.1 AND 427.2.

NOLA KENNEDY, Member

CHRIS LASZCZ-DAVIS, Member

LAURA STOCK, Member

Note: A copy of this Decision must be posted for the Applicant's employees to read, and/or a copy thereof must be provided to the employees' Authorized Representatives.

BEFORE THE
OCCUPATIONAL SAFETY AND HEALTH STANDARDS BOARD
DEPARTMENT OF INDUSTRIAL RELATIONS
STATE OF CALIFORNIA

In the Matter of Application to Modify Permanent Variance by: City of Los Angeles, Los Angeles World Airports	OSHSB File No.: 16-V-069M1 <u>PROPOSED DECISION</u> Hearing Date: November 20, 2020
--	---

A. Procedural Matters

1. City of Los Angeles, Los Angeles World Airports (Applicant) has applied for modification of a Decision and Order of the Occupational Safety and Health Standards Board (Board), adopted on June 16, 2016 (In the Matter of Application for Permanent Variance by City of Los Angeles, Los Angeles World Airports, OSHSB Permanent Variance File No. 16-V-069).
2. This proceeding is conducted in accordance with Labor Code Section 143, and California Code of Regulations, title 8, section 401, et. seq.*
3. This hearing was held on November 20, 2020, in Sacramento, California, via teleconference, by delegation of the Occupational Safety and Health Standards Board (“Board”), with Hearing Officer Christina Shupe, both presiding and hearing the matter on its merit, as a basis of proposed decision to be advanced to the Board for its consideration, in accordance with section 426.
4. At the hearing, Wolter Geesink with Otis Elevator Company, and Dan Leacox of Leacox & Associates, appeared on behalf of the Applicant; Mark Wickens and David Morris appeared on behalf of the Division of Occupational Safety and Health (“Division”), and Senior Engineer Michael Nelmidia appeared on behalf of Board staff acting in a technical advisory role apart from the Board.
5. At the hearing, oral evidence was received and by stipulation of all parties, documents were accepted into evidence: Application to modify Permanent Variance in File No. 16-V-069M1 (Application) as Exhibit PD-1, Notice of Hearing in this matter as PD-2, Board staff Pending Application Memorandum as PD-3, Division Review of Application as PD-4, Review Draft 1 Proposed Decision as PD-5; and official notice taken of the Board’s files, records, recordings and decisions regarding conveyances. At the close of the hearing on November 20, 2020, the record was closed, and the matter taken under submission by the Hearing Officer.

* Unless otherwise noted, all references are to California Code of Regulations, title 8.

B. Findings

Based on the record of this proceeding, the Board makes the following findings of fact:

1. Applicant requests modification of conditions placed upon the Board’s grant of variance from certain Elevator Safety Order requirements in the matter of OSHSB Permanent Variance No. 16-V-069, as applicable to six (6) escalators located at 380 W. World Way, Los Angeles, California.

2. The six (6) escalators are identified as follows:

- C9ES-01
- C9ES-02
- C9ES-03
- C9ES-04
- C11ES-01
- C11ES-02

3. Pursuant to the existing permanent variance, each of the subject escalators utilize a “sleep mode” function, in variance from elevator safety order incorporated ASME A17.1-2004 consensus standard section 6.1.4.1 and 6.1.6.4. More detailed analysis of these requirements, and finding of the Board supporting grant of the subject variance, are set out in the Board’s Decision No. 16-V-069, which is incorporated by reference here.

4. Applicant presently requests modification of condition F(1)(i)i. of Decision No. 16-V-069.

5. Decision No. 16-V-069, section F, condition (1)(i) reads as follows:

(F) Decision and Order

(1) The Applicant may intentionally vary the escalator speed and install proximity sensors for traffic detection subject to the following:

[...]

(i) The passenger sensors (detectors) at each end of the escalator must be verified by the control system for proper operation in the following manner:

i. If any of the passenger detection sensors remains tripped for at least 5 minutes but no more than 10 minutes, then the control system shall generate a fault to indicate which sensor is faulted

while causing the escalator to exit the Sleep Mode and remain at the normal run speed until the faulted sensor begins to function properly.

- ii. If one of the paired sensors at either end of the escalator does not trip while the other paired sensor trips at least five times but no more than ten times, the control system shall generate a fault to indicate which sensor is faulted while causing the escalator to exit the Sleep Mode and remain at the normal run speed until the faulted sensor begins to function properly.
6. Modification of Condition 1(i)i. is requested to allow Applicant to vary the criteria for testing of escalator sleep mode sensor functionality.
 7. It is the position of the Applicant that the upper time, prescribed by the element of the subject variance condition (section F, condition (1)(i)i.), were understandably intended as safety parameters, whereas the lower limits were essentially performance characteristics, not serving to assure safety.
 8. Applicant requests that the minimum time interval requirement in the first subpart of condition F(1)(i) be modified. Applicant's position is that the current sensor system technology it hopes to utilize will provide equal or greater safety, given the newer technology's ability to more consistently respond to proximate human movement with appropriately safe changes in escalator speed.
 9. Division and Board staff representatives supported the grant of the requested variance modification, subject to conditions stated in the Decision and Order below, as providing safety and occupational safety and health equivalent to or superior to that provided by the Elevator Safety Order requirements from which the modified variance is being sought.
 10. The OSHSB has granted comparable condition revisions in similar escalator sleep mode matters. This matter concerns passenger detection sensor functionality present in a controller manufactured Virginia Controls, LLC.

C. Basis of Decision

The preceding procedural elements, legal authority, and factual findings, as supported by documentary evidence of record and hearing testimony in the matter, lead the Board to conclude that the Applicant has complied with the statutory and regulatory requirements that must be met before an application for a permanent variance may be granted and that a preponderance of the evidence establishes that the Applicant's proposals, combined with the conditions set forth in the Decision and Order, will provide employment and a place of

employment that are as safe and healthful as those that would prevail if the Applicant complied with the safety orders at issue.

D. Decision and Order

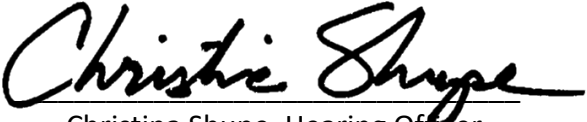
Applicant Los Angeles World Airports is hereby conditionally GRANTED modification of the existing Decision and Order of the Board in the matter of OSHSB Permanent Variance File No. 16-V-069, to the limited extent of below-specified modification of condition F(1)(i)i. of that preexisting Decision and Order, subject to all below specified conditions:

1. Section F, subpart (1)(i)i. of the Permanent Variance Decision and Order of the Board, in the Matter of OSHSB File No. 16-V-069, shall be modified to comprise in its entirety the following:
 - (i) The passenger sensors (detectors) at each end of the escalator must be verified by the control system for proper operation in the following manner:
 - i. If one of the paired passenger detection sensors is disconnected from the control system, the control system shall, without intentional delay, generate a fault while causing the escalator to exit the Sleep Mode and remain at the normal run speed until the reconnected sensor begins to function properly.
2. The Division shall be notified when each subject conveyance is ready for inspection to determine compliance with the permanent variance pursuant to this Decision and Order. Each subject conveyance shall have been inspected by the Division to determine compliance with this Decision and Order, and a Permit to Operate shall have been issued and in effect, before the conveyance is placed in service.
3. The Applicant shall notify its employees or their authorized representative(s), or both, of this order in the same way that the Applicant was required to notify them of the docketed application for permanent variance per sections 411.2 and 411.3.
4. This Decision and Order shall remain in effect unless modified or revoked upon application by the Applicant, affected employee(s), the Division of Occupational Safety and Health, or by the Board on its own motion, in the procedural manner prescribed per the Board's regulations.
5. The preexisting Permanent Variance in OSHSB File No. 16-V-069, being presently modified only as specified above, is otherwise unchanged and remains in full force and effect, as hereby incorporated by reference into this Decision and Order, in the matter of OSHSB File No. 16-V-069M1.

Proposed Variance Decision
OSHSB File No. 16-V-069M1
Hearing Date: November 20, 2020

Pursuant to section 426, subdivision (b), the foregoing duly completed Proposed Decision is hereby submitted to the Occupational Safety and Health Standards Board for consideration of adoption.

DATED: November 23, 2020


Christina Shupe, Hearing Officer

STATE OF CALIFORNIA
DEPARTMENT OF INDUSTRIAL RELATIONS
OCCUPATIONAL SAFETY AND HEALTH STANDARDS BOARD
2520 Venture Oaks Way, Suite 350
Sacramento, California 95833
(916) 274-5721

In the Matter of Application to Modify)
Permanent Variance by:)
)
City of Los Angeles, Los Angeles World)
Airports (LAWA))
)
_____)

OSHSB FILE No. 16-V-071M1
Proposed Decision Dated: November 24, 2020

DECISION

The Occupational Safety and Health Standards Board hereby adopts the attached PROPOSED DECISION by Christina Shupe, Hearing Officer.

DAVID THOMAS, Chairman

OCCUPATIONAL SAFETY AND HEALTH
STANDARDS BOARD

BARBARA BURGEL, Member

Date of Adoption: December 17, 2020

DAVID HARRISON, Member

THE FOREGOING VARIANCE DECISION WAS ADOPTED ON THE DATE INDICATED ABOVE. IF YOU ARE DISSATISFIED WITH THE DECISION, A PETITION FOR REHEARING MAY BE FILED BY ANY PARTY WITH THE STANDARDS BOARD WITHIN TWENTY (20) DAYS AFTER SERVICE OF THE DECISION. YOUR PETITION FOR REHEARING MUST FULLY COMPLY WITH THE REQUIREMENTS OF CALIFORNIA CODE OF REGULATIONS, TITLE 8, SECTIONS 427, 427.1 AND 427.2.

NOLA KENNEDY, Member

CHRIS LASZCZ-DAVIS, Member

LAURA STOCK, Member

Note: A copy of this Decision must be posted for the Applicant's employees to read, and/or a copy thereof must be provided to the employees' Authorized Representatives.

BEFORE THE
OCCUPATIONAL SAFETY AND HEALTH STANDARDS BOARD
DEPARTMENT OF INDUSTRIAL RELATIONS
STATE OF CALIFORNIA

In the Matter of Application to Modify Permanent Variance by: City of Los Angeles, Los Angeles World Airports	OSHSB File No.: 16-V-071M1 <u>PROPOSED DECISION</u> Hearing Date: November 20, 2020
--	---

A. Procedural Matters

1. City of Los Angeles, Los Angeles World Airports (Applicant) has applied for modification of a Decision and Order of the Occupational Safety and Health Standards Board (Board), adopted on June 16, 2016 (In the Matter of Application for Permanent Variance by City of Los Angeles, Los Angeles World Airports, OSHSB Permanent Variance File No. 16-V-071).
2. This proceeding is conducted in accordance with Labor Code Section 143, and California Code of Regulations, title 8, section 401, et. seq.*
3. This hearing was held on November 20, 2020, in Sacramento, California, via teleconference, by Occupational Safety and Health Standards Board (“Board”), with Hearing Officer Christina Shupe, both presiding and hearing the matter on its merit, as a basis of proposed decision to be advanced to the Board for its consideration, in accordance with California Code of Regulations, Title 8, section 426.
4. At the hearing, Wolter Geesink with Otis Elevator Company, and Dan Leacox of Leacox & Associates, appeared on behalf of the Applicant; Mark Wickens and David Morris appeared on behalf of the Division of Occupational Safety and Health (“Division”); and Michael Nelmidia appeared on behalf of Board staff in a technical advisory role apart from the Board.
5. At the hearing, oral evidence was received and by stipulation of all parties, documents were accepted into evidence: Application to modify Permanent Variance in File No. 16-V-071M1 (Application) as Exhibit PD-1, Notice of Hearing in this matter as PD-2, Board staff Pending Application Memorandum as PD-3, Division Review of Application as PD-4, Review Draft 1 Proposed Decision as PD-5; and official notice taken of the Board’s files, records, recordings and decisions regarding conveyances. At the close of the hearing on November 20, 2020, the record was closed, and the matter taken under submission by the Hearing Officer.

* Unless otherwise noted, all references are to California Code of Regulations, title 8.

B. Findings

Based on the record of this proceeding, the Board makes the following findings of fact:

1. Applicant requests modification of conditions placed upon the Board's grant of variance from certain Elevator Safety Order requirements in the matter of OSHSB Permanent Variance No. 16-V-071, as applicable to five (5) escalators located at 400 W. World Way, Los Angeles, California.
2. The five (5) escalators are identified as follows:
 - T4C-ES-17
 - T4C-ES-18
 - T4C-ES-19
 - T4C-ES-20
 - T4C-ES-21
3. Pursuant to the existing permanent variance, each of the subject escalators utilize a "sleep mode" function, in variance from elevator safety order incorporated ASME A17.1-2004 consensus standard section 6.1.4.1 and 6.1.6.4. More detailed analysis of these requirements, and finding of the Board supporting grant of the subject variance, are set out in the Board's Decision No. 16-V-071, which is incorporated by reference here.
4. Applicant presently requests modification of condition F(1)(i)i. of Decision No. 16-V-071.
5. Decision No. 16-V-071, section F, condition (1)(i) reads as follows:

(F) Decision and Order

(1) The Applicant may intentionally vary the escalator speed and install proximity sensors for traffic detection subject to the following:

[...]

- (i) The passenger sensors (detectors) at each end of the escalator must be verified by the control system for proper operation in the following manner:
 - i. If any of the passenger detection sensors remains tripped for at least 5 minutes but no more than 10 minutes, then the control system shall generate a fault to indicate which sensor is faulted while causing the escalator to exit the Sleep Mode and remain

at the normal run speed until the faulted sensor begins to function properly.

- ii. If one of the paired sensors at either end of the escalator does not trip while the other paired sensor trips at least five times but no more than ten times, the control system shall generate a fault to indicate which sensor is faulted while causing the escalator to exit the Sleep Mode and remain at the normal run speed until the faulted sensor begins to function properly.
6. Modification of Condition 1(i)i. is requested to allow Applicant to vary the criteria for testing of escalator sleep mode sensor functionality.
 7. It is the position of the Applicant that the upper time, prescribed by the element of the subject variance condition (section F, condition (1)(i)i.), were understandably intended as safety parameters, whereas the lower limits were essentially performance characteristics, not serving to assure safety.
 8. Applicant requests that the minimum time interval requirement in the first subpart of condition F(1)(i) be modified. Applicant's position is that the current sensor system technology it hopes to utilize will provide equal or greater safety, given the newer technology's ability to more consistently respond to proximate human movement with appropriately safe changes in escalator speed.
 9. Division and Board staff representatives supported the grant of the requested variance modification, subject to conditions stated in the Decision and Order below, as providing safety and occupational safety and health equivalent to or superior to that provided by the Elevator Safety Order requirements from which the modified variance is being sought.
 10. The OSHSB has granted comparable condition revisions in similar escalator sleep mode matters. This matter concerns passenger detection sensor functionality present in a controller manufactured Virginia Controls, LLC.

C. Basis of Decision

The preceding procedural elements, legal authority, and factual findings, as supported by documentary evidence of record and hearing testimony in the matter, lead the Board to conclude that the Applicant has complied with the statutory and regulatory requirements that must be met before an application for a permanent variance may be granted and that a preponderance of the evidence establishes that the Applicant's proposals, combined with the conditions set forth in the Decision and Order, will provide employment and a place of employment that are as safe and healthful as those that would prevail if the Applicant complied with the safety orders at issue.

D. Decision and Order

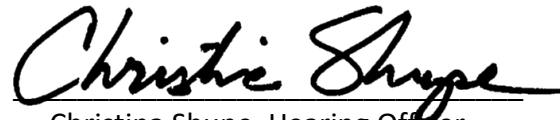
Applicant Los Angeles World Airports is hereby conditionally GRANTED modification of the existing Decision and Order of the Board in the matter of OSHSB Permanent Variance File No. 16-V-071, to the limited extent of below-specified modification of condition F(1)(i)i. of that preexisting Decision and Order, subject to all below specified conditions:

1. Section F, subpart (1)(i)i. of the Permanent Variance Decision and Order of the Board, in the Matter of OSHSB File No. 16-V-071, shall be modified to comprise in its entirety the following:
 - (i) The passenger sensors (detectors) at each end of the escalator must be verified by the control system for proper operation in the following manner:
 - i. If one of the paired passenger detection sensors is disconnected from the control system, the control system shall, without intentional delay, generate a fault while causing the escalator to exit the Sleep Mode and remain at the normal run speed until the reconnected sensor begins to function properly.
2. The Division shall be notified when each subject conveyance is ready for inspection to determine compliance with the permanent variance pursuant to this Decision and Order. Each subject conveyance shall have been inspected by the Division to determine compliance with this Decision and Order, and a Permit to Operate shall have been issued and in effect, before the conveyance is placed in service.
3. The Applicant shall notify its employees or their authorized representative(s), or both, of this order in the same way that the Applicant was required to notify them of the docketed application for permanent variance per sections 411.2 and 411.3.
4. This Decision and Order shall remain in effect unless modified or revoked upon application by the Applicant, affected employee(s), the Division of Occupational Safety and Health, or by the Board on its own motion, in the procedural manner prescribed per the Board's regulations.
5. The preexisting Permanent Variance in OSHSB File No. 16-V-071, being presently modified only as specified above, is otherwise unchanged and remains in full force and effect, as hereby incorporated by reference into this Decision and Order, in the matter of OSHSB File No. 16-V-071M1.

Proposed Variance Decision
OSHSB File No. 16-V-071M1
Hearing Date: November 20, 2020

Pursuant to section 426, subdivision (b), the foregoing duly completed Proposed Decision is hereby submitted to the Occupational Safety and Health Standards Board for consideration of adoption.

DATED: November 24, 2020


Christina Shupe, Hearing Officer

STATE OF CALIFORNIA
DEPARTMENT OF INDUSTRIAL RELATIONS
OCCUPATIONAL SAFETY AND HEALTH STANDARDS BOARD
2520 Venture Oaks Way, Suite 350
Sacramento, California 95833
(916) 274-5721

In the Matter of Application to Modify)
Permanent Variance by:)
)
City of Los Angeles, Los Angeles World)
Airports (LAWA))
)
_____)

OSHSB FILE No. 16-V-072M1
Proposed Decision Dated: November 24, 2020

DECISION

The Occupational Safety and Health Standards Board hereby adopts the attached PROPOSED DECISION by Christina Shupe, Hearing Officer.

DAVID THOMAS, Chairman

OCCUPATIONAL SAFETY AND HEALTH
STANDARDS BOARD

BARBARA BURGEL, Member

Date of Adoption: December 17, 2020

DAVID HARRISON, Member

THE FOREGOING VARIANCE DECISION WAS ADOPTED ON THE DATE INDICATED ABOVE. IF YOU ARE DISSATISFIED WITH THE DECISION, A PETITION FOR REHEARING MAY BE FILED BY ANY PARTY WITH THE STANDARDS BOARD WITHIN TWENTY (20) DAYS AFTER SERVICE OF THE DECISION. YOUR PETITION FOR REHEARING MUST FULLY COMPLY WITH THE REQUIREMENTS OF CALIFORNIA CODE OF REGULATIONS, TITLE 8, SECTIONS 427, 427.1 AND 427.2.

NOLA KENNEDY, Member

CHRIS LASZCZ-DAVIS, Member

LAURA STOCK, Member

Note: A copy of this Decision must be posted for the Applicant's employees to read, and/or a copy thereof must be provided to the employees' Authorized Representatives.

BEFORE THE
OCCUPATIONAL SAFETY AND HEALTH STANDARDS BOARD
DEPARTMENT OF INDUSTRIAL RELATIONS
STATE OF CALIFORNIA

<p>In the Matter of Application to Modify Permanent Variance by:</p> <p style="text-align:center">City of Los Angeles, Los Angeles World Airports</p>	<p>OSHSB File No.: 16-V-072M1</p> <p style="text-align:center"><u>PROPOSED DECISION</u></p> <p>Hearing Date: November 20, 2020</p>
---	--

A. Procedural Matters

1. City of Los Angeles, Los Angeles World Airports (Applicant) has applied for modification of a Decision and Order of the Occupational Safety and Health Standards Board (Board), adopted on June 16, 2016 (In the Matter of Application for Permanent Variance by City of Los Angeles, Los Angeles World Airports, OSHSB Permanent Variance File No. 16-V-072).
2. This proceeding is conducted in accordance with Labor Code Section 143, and California Code of Regulations, title 8, section 401, et. seq.*
3. This hearing was held on November 20, 2020, in Sacramento, California, via teleconference, by Occupational Safety and Health Standards Board (“Board”), with Hearing Officer Christina Shupe, both presiding and hearing the matter on its merit, as a basis of proposed decision to be advanced to the Board for its consideration, in accordance with California Code of Regulations, title 8, section 426.
4. At the hearing, Wolter Geesink with Otis Elevator Company, and Dan Leacox of Leacox & Associates, appeared on behalf of the Applicant; Mark Wickens and David Morris appeared on behalf of the Division of Occupational Safety and Health (“Division”); and Michael Nelmidia appeared on behalf of Board staff in a technical advisory role apart from the Board.
5. At the hearing, oral evidence was received and by stipulation of all parties, documents were accepted into evidence: Application to modify Permanent Variance in File No. 16-V-072M1 (Application) as Exhibit PD-1, Notice of Hearing in this matter as PD-2, Board staff Pending Application Memorandum as PD-3, Division Review of Application as PD-4, Review Draft 1 Proposed Decision as PD-5; and official notice taken of the Board’s files, records, recordings and decisions regarding conveyances. At the close of the hearing on November 20, 2020, the record was closed, and the matter taken under submission by the Hearing Officer.

* Unless otherwise noted, all references are to California Code of Regulations, title 8.

B. Findings

Based on the record of this proceeding, the Board makes the following findings of fact:

1. Applicant requests modification of conditions placed upon the Board's grant of variance from certain Elevator Safety Order requirements in the matter of OSHSB Permanent Variance No. 16-V-072, as applicable to seven (7) escalators located at 500 W. World Way, Los Angeles, California.

2. The seven (7) escalators are identified as follows:

T5-ES-06
T5-ES-07
T5-ES-08
T5-ES-09
T5-ES-15
T5-ES-16
T5-ES-17

3. Pursuant to the existing permanent variance, each of the subject escalators utilize a "sleep mode" function, in variance from elevator safety order incorporated ASME A17.1-2004 consensus standard section 6.1.4.1 and 6.1.6.4. More detailed analysis of these requirements, and finding of the Board supporting grant of the subject variance, are set out in the Board's Decision No. 16-V-072, which is incorporated by reference here.

4. Applicant presently requests modification of condition F(1)(i)i. of Decision No. 16-V-072.

5. Decision No. 16-V-072, section F, condition (1)(i) reads as follows:

(F) Decision and Order

(1) The Applicant may intentionally vary the escalator speed and install proximity sensors for traffic detection subject to the following:

[...]

(i) The passenger sensors (detectors) at each end of the escalator must be verified by the control system for proper operation in the following manner:

i. If any of the passenger detection sensors remains tripped for at least 5 minutes but no more than 10 minutes, then the control system shall generate a fault to indicate which sensor is faulted

while causing the escalator to exit the Sleep Mode and remain at the normal run speed until the faulted sensor begins to function properly.

- ii. If one of the paired sensors at either end of the escalator does not trip while the other paired sensor trips at least five times but no more than ten times, the control system shall generate a fault to indicate which sensor is faulted while causing the escalator to exit the Sleep Mode and remain at the normal run speed until the faulted sensor begins to function properly.
6. Modification of condition 1(i)i. is requested to allow Applicant to vary the criteria for testing of escalator sleep mode sensor functionality.
 7. It is the position of the Applicant that the upper time, prescribed by the element of the subject variance condition (section F, condition (1)(i)i.), were understandably intended as safety parameters, whereas the lower limits were essentially performance characteristics, not serving to assure safety.
 8. Applicant requests that the minimum time interval requirement in the first subpart of condition F(1)(i) be modified. Applicant's position is that the current sensor system technology it hopes to utilize will provide equal or greater safety, given the newer technology's ability to more consistently respond to proximate human movement with appropriately safe changes in escalator speed.
 9. Division and Board staff representatives supported the grant of the requested variance modification, subject to conditions stated in the Decision and Order below, as providing safety and occupational safety and health equivalent to or superior to that provided by the Elevator Safety Order requirements from which the modified variance is being sought.
 10. The OSHSB has granted comparable condition revisions in similar escalator sleep mode matters. This matter concerns passenger detection sensor functionality present in a controller manufactured Virginia Controls, LLC.

C. Basis of Decision

The preceding procedural elements, legal authority, and factual findings, as supported by documentary evidence of record and hearing testimony in the matter, lead the Board to conclude that the Applicant has complied with the statutory and regulatory requirements that must be met before an application for a permanent variance may be granted and that a preponderance of the evidence establishes that the Applicant's proposals, combined with the conditions set forth in the Decision and Order, will provide employment and a place of

employment that are as safe and healthful as those that would prevail if the Applicant complied with the safety orders at issue.

D. Decision and Order

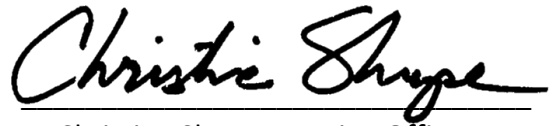
Applicant Los Angeles World Airports is hereby conditionally GRANTED modification of the existing Decision and Order of the Board in the matter of OSHSB Permanent Variance File No. 16-V-072, to the limited extent of below-specified modification of condition F(1)(i)i. of that preexisting Decision and Order, subject to all below specified conditions:

1. Section F, subpart (1)(i)i. of the Permanent Variance Decision and Order of the Board, in the Matter of OSHSB File No. 16-V-072, shall be modified to comprise in its entirety the following:
 - (i) The passenger sensors (detectors) at each end of the escalator must be verified by the control system for proper operation in the following manner:
 - i. If one of the paired passenger detection sensors is disconnected from the control system, the control system shall, without intentional delay, generate a fault while causing the escalator to exit the Sleep Mode and remain at the normal run speed until the reconnected sensor begins to function properly.
2. The Division shall be notified when each subject conveyance is ready for inspection to determine compliance with the permanent variance pursuant to this Decision and Order. Each subject conveyance shall have been inspected by the Division to determine compliance with this Decision and Order, and a Permit to Operate shall have been issued and in effect, before the conveyance is placed in service.
3. The Applicant shall notify its employees or their authorized representative(s), or both, of this order in the same way that the Applicant was required to notify them of the docketed application for permanent variance per sections 411.2 and 411.3.
4. This Decision and Order shall remain in effect unless modified or revoked upon application by the Applicant, affected employee(s), the Division of Occupational Safety and Health, or by the Board on its own motion, in the procedural manner prescribed per the Board's regulations.
5. The preexisting Permanent Variance in OSHSB File No. 16-V-072, being presently modified only as specified above, is otherwise unchanged and remains in full force and effect, as hereby incorporated by reference into this Decision and Order, in the matter of OSHSB File No. 16-V-072M1.

Proposed Variance Decision
OSHSB File No. 16-V-072M1
Hearing Date: November 20, 2020

Pursuant to section 426, subdivision (b), the foregoing duly completed Proposed Decision is hereby submitted to the Occupational Safety and Health Standards Board for consideration of adoption.

DATED: November 24, 2020

A handwritten signature in black ink that reads "Christina Shupe". The signature is written in a cursive style with a horizontal line underneath the name.

Christina Shupe, Hearing Officer

STATE OF CALIFORNIA
DEPARTMENT OF INDUSTRIAL RELATIONS
OCCUPATIONAL SAFETY AND HEALTH STANDARDS BOARD
2520 Venture Oaks Way, Suite 350
Sacramento, California 95833
(916) 274-5721

In the Matter of Application to Modify Permanent Variance by:)	OSHSB FILE No. 16-V-073M1
)	Proposed Decision Dated: November 24, 2020
)	
City of Los Angeles, Los Angeles World Airports (LAWA))	
)	
)	DECISION
)	

The Occupational Safety and Health Standards Board hereby adopts the attached PROPOSED DECISION by Christina Shupe, Hearing Officer.

DAVID THOMAS, Chairman

OCCUPATIONAL SAFETY AND HEALTH
STANDARDS BOARD

BARBARA BURGEL, Member

Date of Adoption: December 17, 2020

DAVID HARRISON, Member

THE FOREGOING VARIANCE DECISION WAS ADOPTED ON THE DATE INDICATED ABOVE. IF YOU ARE DISSATISFIED WITH THE DECISION, A PETITION FOR REHEARING MAY BE FILED BY ANY PARTY WITH THE STANDARDS BOARD WITHIN TWENTY (20) DAYS AFTER SERVICE OF THE DECISION. YOUR PETITION FOR REHEARING MUST FULLY COMPLY WITH THE REQUIREMENTS OF CALIFORNIA CODE OF REGULATIONS, TITLE 8, SECTIONS 427, 427.1 AND 427.2.

NOLA KENNEDY, Member

CHRIS LASZCZ-DAVIS, Member

LAURA STOCK, Member

Note: A copy of this Decision must be posted for the Applicant's employees to read, and/or a copy thereof must be provided to the employees' Authorized Representatives.

BEFORE THE
OCCUPATIONAL SAFETY AND HEALTH STANDARDS BOARD
DEPARTMENT OF INDUSTRIAL RELATIONS
STATE OF CALIFORNIA

<p>In the Matter of Application to Modify Permanent Variance by:</p> <p style="text-align:center">City of Los Angeles, Los Angeles World Airports</p>	<p>OSHSB File No.: 16-V-073M1</p> <p style="text-align:center"><u>PROPOSED DECISION</u></p> <p>Hearing Date: November 20, 2020</p>
---	--

A. Procedural Matters

1. City of Los Angeles, Los Angeles World Airports (Applicant) has applied for modification of a Decision and Order of the Occupational Safety and Health Standards Board (Board), adopted on June 16, 2016 (In the Matter of Application for Permanent Variance by City of Los Angeles, Los Angeles World Airports, OSHSB Permanent Variance File No. 16-V-073).
2. This proceeding is conducted in accordance with Labor Code Section 143, and California Code of Regulations, title 8, section 401, et. seq.*
3. This hearing was held on November 20, 2020, in Sacramento, California, via teleconference, by Occupational Safety and Health Standards Board (“Board”), with Hearing Officer Christina Shupe, both presiding and hearing the matter on its merit, as a basis of proposed decision to be advanced to the Board for its consideration, in accordance with California Code of Regulations, title 8, section 426.
4. At the hearing, Wolter Geesink with Otis Elevator Company, and Dan Leacox of Leacox & Associates, appeared on behalf of the Applicant; Mark Wickens and David Morris appeared on behalf of the Division of Occupational Safety and Health (“Division”); and Michael Nelmidia appeared on behalf of Board staff in a technical advisory role apart from the Board.
5. At the hearing, oral evidence was received and by stipulation of all parties, documents were accepted into evidence: Application to modify Permanent Variance in File No. 16-V-073M1 (Application) as Exhibit PD-1, Notice of Hearing in this matter as PD-2, Board staff Pending Application Memorandum as PD-3, Division Review of Application as PD-4, Review Draft 1 Proposed Decision as PD-5; and official notice taken of the Board’s files, records, recordings and decisions regarding conveyances. At the close of the hearing on November 20, 2020, the record was closed, and the matter taken under submission by the Hearing Officer.

* Unless otherwise noted, all references are to California Code of Regulations, title 8.

B. Findings

Based on the record of this proceeding, the Board makes the following findings of fact:

1. Applicant requests modification of conditions placed upon the Board’s grant of variance from certain Elevator Safety Order requirements in the matter of OSHSB Permanent Variance No. 16-V-073, as applicable to six (6) escalators located at 700 W. World Way, Los Angeles, California.

2. The six (6) escalators are identified as follows:

- T7-ES-09
- T7-ES-10
- T7-ES-11
- T7-ES-12
- T7-ES-13
- T7-ES-14

3. Pursuant to the existing permanent variance, each of the subject escalators utilize a “sleep mode” function, in variance from elevator safety order incorporated ASME A17.1-2004 consensus standard section 6.1.4.1 and 6.1.6.4. More detailed analysis of these requirements, and finding of the Board supporting grant of the subject variance, are set out in the Board’s Decision No. 16-V-073, which is incorporated by reference here.

4. Applicant presently requests modification of condition F(1)(i)i. of Decision No. 16-V-073.

5. Decision No. 16-V-073, section F, condition (1)(i) reads as follows:

(F) Decision and Order

(1) The Applicant may intentionally vary the escalator speed and install proximity sensors for traffic detection subject to the following:

[...]

(i) The passenger sensors (detectors) at each end of the escalator must be verified by the control system for proper operation in the following manner:

i. If any of the passenger detection sensors remains tripped for at least 5 minutes but no more than 10 minutes, then the control system shall generate a fault to indicate which sensor is faulted while causing the escalator to exit the Sleep Mode and remain

at the normal run speed until the faulted sensor begins to function properly.

- ii. If one of the paired sensors at either end of the escalator does not trip while the other paired sensor trips at least five times but no more than ten times, the control system shall generate a fault to indicate which sensor is faulted while causing the escalator to exit the Sleep Mode and remain at the normal run speed until the faulted sensor begins to function properly.
6. Modification of Condition 1(i)i. is requested to allow Applicant to vary the criteria for testing of escalator sleep mode sensor functionality.
 7. It is the position of the Applicant that the upper time, prescribed by the element of the subject variance condition (section F, condition (1)(i)i.), were understandably intended as safety parameters, whereas the lower limits were essentially performance characteristics, not serving to assure safety.
 8. Applicant requests that the minimum time interval requirement in the first subpart of condition F(1)(i) be modified. Applicant's position is that the current sensor system technology it hopes to utilize will provide equal or greater safety, given the newer technology's ability to more consistently respond to proximate human movement with appropriately safe changes in escalator speed.
 9. Division and Board staff representatives supported the grant of the requested variance modification, subject to conditions stated in the Decision and Order below, as providing safety and occupational safety and health equivalent to or superior to that provided by the Elevator Safety Order requirements from which the modified variance is being sought.
 10. The OSHSB has granted comparable condition revisions in similar escalator sleep mode matters. This matter concerns passenger detection sensor functionality present in a controller manufactured Virginia Controls, LLC.

C. Basis of Decision

The preceding procedural elements, legal authority, and factual findings, as supported by documentary evidence of record and hearing testimony in the matter, lead the Board to conclude that the Applicant has complied with the statutory and regulatory requirements that must be met before an application for a permanent variance may be granted and that a preponderance of the evidence establishes that the Applicant's proposals, combined with the conditions set forth in the Decision and Order, will provide employment and a place of employment that are as safe and healthful as those that would prevail if the Applicant complied with the safety orders at issue.

D. Decision and Order

Applicant Los Angeles World Airports is hereby conditionally GRANTED modification of the existing Decision and Order of the Board in the matter of OSHSB Permanent Variance File No. 16-V-073, to the limited extent of below-specified modification of condition F(1)(i)i. of that preexisting Decision and Order, subject to all below specified conditions:

1. Section F, subpart (1)(i)i. of the Permanent Variance Decision and Order of the Board, in the Matter of OSHSB File No. 16-V-073, shall be modified to comprise in its entirety the following:
 - (i) The passenger sensors (detectors) at each end of the escalator must be verified by the control system for proper operation in the following manner:
 - i. If one of the paired passenger detection sensors is disconnected from the control system, the control system shall, without intentional delay, generate a fault while causing the escalator to exit the Sleep Mode and remain at the normal run speed until the reconnected sensor begins to function properly.
2. The Division shall be notified when each subject conveyance is ready for inspection to determine compliance with the permanent variance pursuant to this Decision and Order. Each subject conveyance shall have been inspected by the Division to determine compliance with this Decision and Order, and a Permit to Operate shall have been issued and in effect, before the conveyance is placed in service.
3. The Applicant shall notify its employees or their authorized representative(s), or both, of this order in the same way that the Applicant was required to notify them of the docketed application for permanent variance per sections 411.2 and 411.3.
4. This Decision and Order shall remain in effect unless modified or revoked upon application by the Applicant, affected employee(s), the Division of Occupational Safety and Health, or by the Board on its own motion, in the procedural manner prescribed per the Board's regulations.
5. The preexisting Permanent Variance in OSHSB File No. 16-V-073, being presently modified only as specified above, is otherwise unchanged and remains in full force and effect, as hereby incorporated by reference into this Decision and Order, in the matter of OSHSB File No. 16-V-073M1.

Proposed Variance Decision
OSHSB File No. 16-V-073M1
Hearing Date: November 20, 2020

Pursuant to section 426, subdivision (b), the foregoing duly completed Proposed Decision is hereby submitted to the Occupational Safety and Health Standards Board for consideration of adoption.

DATED: November 24, 2020


Christina Shupe, Hearing Officer

STATE OF CALIFORNIA
DEPARTMENT OF INDUSTRIAL RELATIONS
OCCUPATIONAL SAFETY AND HEALTH STANDARDS BOARD
2520 Venture Oaks Way, Suite 350
Sacramento, California 95833
(916) 274-5721

In the Matter of Application to Modify)
Permanent Variance by:)
)
SJ 50 West SF LLC)
)
_____)

OSHSB FILE No. 17-V-425M1
Proposed Decision Dated: November 24, 2020

DECISION

The Occupational Safety and Health Standards Board hereby adopts the attached PROPOSED DECISION by Christina Shupe, Hearing Officer.

DAVID THOMAS, Chairman

OCCUPATIONAL SAFETY AND HEALTH
STANDARDS BOARD

Date of Adoption: December 17, 2020

BARBARA BURGEL, Member

DAVID HARRISON, Member

NOLA KENNEDY, Member

CHRIS LASZCZ-DAVIS, Member

LAURA STOCK, Member

THE FOREGOING VARIANCE DECISION WAS ADOPTED ON THE DATE INDICATED ABOVE. IF YOU ARE DISSATISFIED WITH THE DECISION, A PETITION FOR REHEARING MAY BE FILED BY ANY PARTY WITH THE STANDARDS BOARD WITHIN TWENTY (20) DAYS AFTER SERVICE OF THE DECISION. YOUR PETITION FOR REHEARING MUST FULLY COMPLY WITH THE REQUIREMENTS OF CALIFORNIA CODE OF REGULATIONS, TITLE 8, SECTIONS 427, 427.1 AND 427.2.

Note: A copy of this Decision must be posted for the Applicant's employees to read, and/or a copy thereof must be provided to the employees' Authorized Representatives.

BEFORE THE
 OCCUPATIONAL SAFETY AND HEALTH STANDARDS BOARD
 DEPARTMENT OF INDUSTRIAL RELATIONS
 STATE OF CALIFORNIA

In the Matter of Application to Modify Permanent Variance by: SJ 50 West SF LLC	OSHSB File No.: 17-V-425M1 <u>PROPOSED DECISION</u> Hearing Date: November 20, 2020
---	---

A. The following person or entity (“Applicant”) has applied for a modification of permanent variance from provisions of the Elevator Safety Orders, found at Title 8 of the California Code of Regulations, for subject elevators identified herein:

Preexisting OSHSB File No.	Preexisting Variance Holder of Record
17-V-425	Divco West

B. This proceeding is conducted in accordance with Labor Code Section 143, and California Code of Regulations, title 8, section 401, et. seq.

C. Procedural Matters:

1. This hearing was held on November 20, 2020, in Sacramento, California, via teleconference, by Occupational Safety and Health Standards Board (“Board”), with Hearing Officer Christina Shupe, both presiding and hearing the matter on its merit, as a basis of proposed decision to be advanced to the Board for its consideration, in accordance with California Code of Regulations, title 8, section 426.
2. At the hearing, Carolina Castaneda, appeared on behalf of Applicant, Mitsubishi Elevator, Mark Wickens and David Morris appeared on behalf of the Division of Occupational Safety and Health (“Division”); and Michael Nelmidia appeared on behalf of Board staff acting in a technical advisory role apart from the Board.
3. Documentary and oral evidence was received at the hearing, and by stipulation of all parties, documents were admitted into evidence: modification of permanent variance application per Section A table as Exhibit PD-1, Notice of Hearing as Exhibit PD-2, Board staff Pending Application Memorandum as PD-3, Division evaluation as PD-4, Review Draft Proposed Decision as PD-5, and official notice taken of the Board’s files, records, recordings and decisions concerning conveyances. On November 20, 2020, the hearing and record closed, and the matter was taken under submission by the Hearing Officer.

D. Based on the record of this hearing, the Board makes the following findings of fact:

1. The Applicant requests modification of Board records to change from “Divco West” to “SJ 50 West SF LLC”, the variance holder of record of previously granted Permanent Variance No. 17-V-425.
2. Application Section 3, declared to be wholly truthful under penalty of perjury by the Applicant signatory, states facts upon which to reasonably find that presently SJ 50 West SF LLC is the owner of the property at the variance location of record in OSHSB File No. 17-V-425.
3. The Division has evaluated the request for modification (see Exhibit PD-4), finds no issue with it, and recommends that the application for modification be granted subject to the same conditions of the Decision and Order in OSHSB Permanent Variance File No. 17-V-425.
4. The Board finds the above Section D.2, referenced declaration to be credible, uncontroverted, and consistent with available, sufficient facts, and of no bearing upon the finding of equivalent occupational health and safety upon which Grant of preexisting Permanent Variance 17-V-425 was, in significant part, based.

E. Decision and Order:

1. Variance application SJ 50 West SF LLC is conditionally GRANTED, as specified below, such that henceforth the permanent variance holder of record in OSHSB File Nos. 17-V-425, and 17-V-425M1, shall be:

SJ 50 West SF LLC

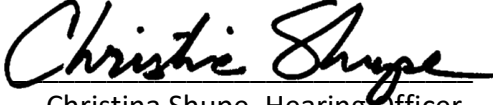
2. Permanent Variance No. 17-V-425 only being modified as to the variance holder of record, otherwise is unchanged and remaining in full force and effect, as hereby incorporated by reference into the present Decision and Order.
3. The Applicant shall notify its employees or their authorized representative(s), or both, of this order in the same way and to the same extent that employees and authorized representatives are to be notified of docketed permanent variance applications pursuant to California Code of Regulations, Title 8, Sections 411.2 and 411.3.
4. This Decision and Order shall remain in effect unless modified or revoked upon

Proposed Variance Decision
OSHSB File No.: 17-V-425M1
Hearing Date: November 20, 2020

application by the Applicant, affected employee(s), the Division, or by the Board on its own motion, in the manner prescribed for its issuance or per duly adopted superseding procedural rules.

Pursuant to California Code of Regulations, Title 8, Section 426(b), the above, duly completed Proposed Decision, is hereby submitted to the Occupational Safety and Health Standards Board for consideration of adoption.

Dated: November 24, 2020


Christina Shupe, Hearing Officer

STATE OF CALIFORNIA
DEPARTMENT OF INDUSTRIAL RELATIONS
OCCUPATIONAL SAFETY AND HEALTH STANDARDS BOARD
2520 Venture Oaks Way, Suite 350
Sacramento, California 95833
(916) 274-5721

In the Matter of Application to Modify)
Permanent Variance by:)
)
Santa Monica Breeze, LLC)
)
)
_____)

OSHSB FILE No. 18-V-183M1
Proposed Decision Dated: November 24, 2020

DECISION

The Occupational Safety and Health Standards Board hereby adopts the attached PROPOSED DECISION by Christina Shupe, Hearing Officer.

DAVID THOMAS, Chairman

OCCUPATIONAL SAFETY AND HEALTH
STANDARDS BOARD

Date of Adoption: December 17, 2020

BARBARA BURGEL, Member

DAVID HARRISON, Member

NOLA KENNEDY, Member

CHRIS LASZCZ-DAVIS, Member

LAURA STOCK, Member

THE FOREGOING VARIANCE DECISION WAS ADOPTED ON THE DATE INDICATED ABOVE. IF YOU ARE DISSATISFIED WITH THE DECISION, A PETITION FOR REHEARING MAY BE FILED BY ANY PARTY WITH THE STANDARDS BOARD WITHIN TWENTY (20) DAYS AFTER SERVICE OF THE DECISION. YOUR PETITION FOR REHEARING MUST FULLY COMPLY WITH THE REQUIREMENTS OF CALIFORNIA CODE OF REGULATIONS, TITLE 8, SECTIONS 427, 427.1 AND 427.2.

Note: A copy of this Decision must be posted for the Applicant's employees to read, and/or a copy thereof must be provided to the employees' Authorized Representatives.

BEFORE THE
 OCCUPATIONAL SAFETY AND HEALTH STANDARDS BOARD
 DEPARTMENT OF INDUSTRIAL RELATIONS
 STATE OF CALIFORNIA

In the Matter of Application to Modify Permanent Variance by: <p style="text-align: center;">Santa Monica Breeze, LLC</p>	OSHSB File No.: 18-V-183M1 <p style="text-align: center;"><u>PROPOSED DECISION</u></p> Hearing Date: November 20, 2020
--	---

A. The following person or entity (“Applicant”) has applied for a modification of permanent variance from provisions of the Elevator Safety Orders, found at Title 8 of the California Code of Regulations, for each elevator having the specified preexisting variance location address of record:

Preexisting OSHSB File No.	Applicant Name	Preexisting Variance Address of Record
18-V-183	Santa Monica Breeze, LLC	11401 W. Santa Monica Boulevard Los Angeles, CA

B. This proceeding is conducted in accordance with Labor Code Section 143, and California Code of Regulations, Title 8, Section 401, et. seq.

C. Procedural Matters:

1. This hearing was held on November 20, 2020, in Sacramento, California, via teleconference, by Occupational Safety and Health Standards Board (“Board”), with Hearing Officer Christina Shupe, both presiding and hearing the matter on its merit, as a basis of proposed decision to be advanced to the Board for its consideration, in accordance with California Code of Regulations, title 8, section 426.
2. At the hearing, Wolter Geesink with Otis Elevator Company, and Dan Leacox of Leacox & Associates, appeared on behalf of the Applicant; Mark Wickens and David Morris appeared on behalf of the Division of Occupational Safety and Health (“Division”); and Michael Nelmidia appeared on behalf of Board staff in a technical advisory role apart from the Board.
3. Documentary and oral evidence was received at the hearing, and by stipulation of all parties, documents were admitted into evidence: the subject modification of permanent variance application captioned above as Exhibit PD-1, Notice of Hearing as Exhibit PD-2, Board staff Pending Application(s) for Permanent Variance Opinion Letter as PD-3, Division evaluation as PD-4, Review Draft 1 Proposed Decision as PD-5, and official notice taken of the Board’s rulemaking records and variance decisions concerning the safety order provisions from which variance has been requested. On November 20,

Proposed Variance Decision

OSHSB File No. 18-V-183M1

Hearing Date: November 20, 2020

2020, the hearing and record closed, and the matter was taken under submission by the Hearing Officer.

D. Based on the record of this hearing, the Board makes the following findings of fact:

1. The Applicant requests modification of the address of the unchanging variance location specified within Board records for each elevator the subject of previously granted Permanent Variance 18-V-183.
2. Application Section 3, declared to be wholly truthful under penalty of perjury by Application signatory, states facts upon which reasonably may be based a finding that the address, specified in the records of the Board, at which Permanent Variance 18-V-183 is in effect, in fact is more completely, and correctly the different address information specified in below subsection D.5.
3. The Division has evaluated the request for modification of variance location address, finds no issue with it, and recommends that the application for modification be granted subject to the same conditions of the Decision and Order in OSHSB Permanent Variance File No. 18-V-183.
4. The Board finds the above subpart D.2 referenced declaration to be credible, uncontroverted, and consistent with available, sufficient facts, and of no bearing as to the finding of equivalent occupational health and safety upon which Grant of preexisting Permanent Variance 18-V-183 was, in part, based.
5. The Board finds the correct address by which to designate the location of each elevator the subject of Permanent Variance No. 18-V-183, to be:

1539 S. Purdue Avenue
Los Angeles, CA

E. Decision and Order:

1. Permanent Variance Application No. 18-V-183M1 is conditionally GRANTED, thereby modifying Board records, such that, without change in variance location, each elevator being the subject of Permanent Variance Nos. 18-V-183, and 18-V-183M1, shall have the following address designation:

1539 S. Purdue Avenue
Los Angeles, CA

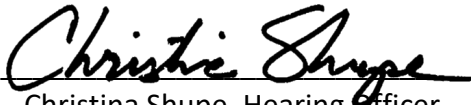
2. Permanent Variance No. 18-V-183, being only modified as to the subject location address specified in above Decision and Order Section 1, is otherwise unchanged and

Proposed Variance Decision
OSHSB File No. 18-V-183M1
Hearing Date: November 20, 2020

remaining in full force and effect, as hereby incorporated by reference into this Decision and Order of Permanent Variance No. 18-V-183M1.

Pursuant to California Code of Regulations, Title 8, Section 426(b), the above, duly completed Proposed Decision, is hereby submitted to the Occupational Safety and Health Standards Board for consideration of adoption.

Dated: November 24, 2020


Christina Shupe, Hearing Officer

STATE OF CALIFORNIA
DEPARTMENT OF INDUSTRIAL RELATIONS
OCCUPATIONAL SAFETY AND HEALTH STANDARDS BOARD
2520 Venture Oaks Way, Suite 350
Sacramento, California 95833
(916) 274-5721

In the Matter of Application to Modify)
Permanent Variance by:)
)
TB Orange I Apartments LLC)
)
_____)

OSHSB FILE No. 19-V-164M1
Proposed Decision Dated: November 24, 2020

DECISION

The Occupational Safety and Health Standards Board hereby adopts the attached PROPOSED DECISION by Christina Shupe, Hearing Officer.

DAVID THOMAS, Chairman

OCCUPATIONAL SAFETY AND HEALTH
STANDARDS BOARD

Date of Adoption: December 17, 2020

BARBARA BURGEL, Member

DAVID HARRISON, Member

NOLA KENNEDY, Member

CHRIS LASZCZ-DAVIS, Member

LAURA STOCK, Member

THE FOREGOING VARIANCE DECISION WAS ADOPTED ON THE DATE INDICATED ABOVE. IF YOU ARE DISSATISFIED WITH THE DECISION, A PETITION FOR REHEARING MAY BE FILED BY ANY PARTY WITH THE STANDARDS BOARD WITHIN TWENTY (20) DAYS AFTER SERVICE OF THE DECISION. YOUR PETITION FOR REHEARING MUST FULLY COMPLY WITH THE REQUIREMENTS OF CALIFORNIA CODE OF REGULATIONS, TITLE 8, SECTIONS 427, 427.1 AND 427.2.

Note: A copy of this Decision must be posted for the Applicant's employees to read, and/or a copy thereof must be provided to the employees' Authorized Representatives.

BEFORE THE
 OCCUPATIONAL SAFETY AND HEALTH STANDARDS BOARD
 DEPARTMENT OF INDUSTRIAL RELATIONS
 STATE OF CALIFORNIA

<p>In the Matter of Application to Modify Permanent Variance by:</p> <p style="text-align: center;">TB Orange I Apartments LLC</p>	<p>OSHSB File No.: 19-V-164M1</p> <p style="text-align: center;"><u>PROPOSED DECISION</u></p> <p>Hearing Date: November 20, 2020</p>
--	--

A. The following person or entity (“Applicant”) has applied for a modification of permanent variance from provisions of the Elevator Safety Orders, found at Title 8 of the California Code of Regulations, for each elevator having the specified preexisting variance location address of record:

Preexisting OSHSB File No.	Applicant Name	Preexisting Variance Address of Record
19-V-164	TB Orange I Apartments LLC	1099 Town & Country Road Orange, CA

B. This proceeding is conducted in accordance with Labor Code Section 143, and California Code of Regulations, Title 8, Section 401, et. seq.

C. Procedural Matters:

1. This hearing was held on November 20, 2020, in Sacramento, California, via teleconference, by Occupational Safety and Health Standards Board (“Board”), with Hearing Officer Christina Shupe, both presiding and hearing the matter on its merit, as a basis of proposed decision to be advanced to the Board for its consideration, in accordance with California Code of Regulations, Title 8, Section 426.
2. At the hearing, Daniel May, with KONE, Inc., appeared on behalf of the Applicant, Mark Wickens and David Morris appeared on behalf of the Division of Occupational Safety and Health (“Division”); and Michael Nelmida appeared on behalf of Board staff in a technical advisory role apart from the Board.
3. Documentary and oral evidence was received at the hearing, and by stipulation of all parties, documents were admitted into evidence: the subject modification of permanent variance application captioned above as Exhibit PD-1, Notice of Hearing as Exhibit PD-2, Board staff Pending Application(s) for Permanent Variance Opinion Letter as PD-3, Division evaluation as PD-4, Review Draft 1 Proposed Decision as PD-5, and official notice taken of the Board’s files, records, recordings and decisions concerning the Elevator Safety Order requirements from which variance shall issue. On November 20,

2020, the hearing and record closed, and the matter was taken under submission by the Hearing Officer.

D. Based on the record of this hearing, the Board makes the following findings of fact:

1. The Applicant requests modification of the address of the unchanging variance location specified within Board records for each elevator the subject of previously granted Permanent Variance 19-V-164.
2. Application Section 3, declared to be wholly truthful under penalty of perjury by Application signatory, states facts upon which reasonably may be based a finding that the address, specified in the records of the Board, at which Permanent Variance 19-V-164 is in effect, in fact is more completely, and correctly the different combination of addresses specified in below subsection D.5.
3. The Division has evaluated the request for modification of variance location address, finds no issue with it, and recommends that the application for modification be granted subject to the same conditions of the Decision and Order in OSHSB Permanent Variance File No. 19-V-164.
4. The Board finds the above subpart D.2 referenced declaration to be credible, uncontroverted, and consistent with available, sufficient facts, and of no bearing as to the finding of equivalent occupational health and safety upon which Grant of preexisting Permanent Variance 19-V-164 was, in part, based.
5. The Board finds the correct address by which to designate the location of each elevator the subject of Permanent Variance No. 19-V-164, to be:

1055 West Town and Country Road
Orange, CA

E. Decision and Order:

1. Permanent Variance Application No. 19-V-164M1 is conditionally GRANTED, thereby modifying Board records, such that, without change in variance location, each elevator being the subject of Permanent Variance Nos. 19-V-164, and 19-V-164M1, shall have the following address designation:

1055 West Town and Country Road
Orange, CA

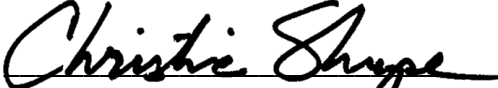
2. Permanent Variance No. 19-V-164, being only modified as to the subject location address specified in above Decision and Order Section 1, is otherwise unchanged and

Proposed Variance Decision
OSHSB File No. 19-V-164M1
Hearing Date: November 20, 2020

remaining in full force and effect, as hereby incorporated by reference into this Decision and Order of Permanent Variance No. 19-V-164M1.

Pursuant to California Code of Regulations, Title 8, Section 426(b), the above, duly completed Proposed Decision, is hereby submitted to the Occupational Safety and Health Standards Board for consideration of adoption.

Dated: November 24, 2020


Christina Shupe, Hearing Officer

STATE OF CALIFORNIA
DEPARTMENT OF INDUSTRIAL RELATIONS
OCCUPATIONAL SAFETY AND HEALTH STANDARDS BOARD
2520 Venture Oaks Way, Suite 350
Sacramento, California 95833
(916) 274-5721

In the Matter of Application to Modify)
Permanent Variance by:)
)
Kaiser Foundation Hospitals)
)
_____)

OSHSB FILE No. 19-V-320M1
Proposed Decision Dated: November 24, 2020

DECISION

The Occupational Safety and Health Standards Board hereby adopts the attached PROPOSED DECISION by Christina Shupe, Hearing Officer.

DAVID THOMAS, Chairman

OCCUPATIONAL SAFETY AND HEALTH
STANDARDS BOARD

Date of Adoption: December 17, 2020

BARBARA BURGEL, Member

DAVID HARRISON, Member

NOLA KENNEDY, Member

CHRIS LASZCZ-DAVIS, Member

LAURA STOCK, Member

THE FOREGOING VARIANCE DECISION WAS ADOPTED ON THE DATE INDICATED ABOVE. IF YOU ARE DISSATISFIED WITH THE DECISION, A PETITION FOR REHEARING MAY BE FILED BY ANY PARTY WITH THE STANDARDS BOARD WITHIN TWENTY (20) DAYS AFTER SERVICE OF THE DECISION. YOUR PETITION FOR REHEARING MUST FULLY COMPLY WITH THE REQUIREMENTS OF CALIFORNIA CODE OF REGULATIONS, TITLE 8, SECTIONS 427, 427.1 AND 427.2.

Note: A copy of this Decision must be posted for the Applicant's employees to read, and/or a copy thereof must be provided to the employees' Authorized Representatives.

BEFORE THE
 OCCUPATIONAL SAFETY AND HEALTH STANDARDS BOARD
 DEPARTMENT OF INDUSTRIAL RELATIONS
 STATE OF CALIFORNIA

In the Matter of Application to Modify Permanent Variance by: <p style="text-align: center;">Kaiser Foundation Hospitals</p>	OSHSB File No.: 19-V-320M1 <p style="text-align: center;"><u>PROPOSED DECISION</u></p> Hearing Date: November 20, 2020
--	---

A. Subject Matter and Jurisdiction:

1. The above named person or entity (“Applicant”) has applied for a modification of permanent variance from provisions of the Elevator Safety Orders, found at Title 8 of the California Code of Regulations. The subject permanent variance file, and preexisting variance holder of record therein, are as follows:

Preexisting OSHSB File No.	Preexisting Variance Holder of Record
19-V-320	Kaiser Foundation Health Plan, Inc.

- B. This proceeding is conducted in accordance with Labor Code Section 143, and California Code of Regulations, Title 8, Section 401, et. seq.

C. Procedural Matters:

1. This hearing was held on November 20, 2020, in Sacramento, California, via teleconference, by Occupational Safety and Health Standards Board (“Board”), with Hearing Officer Christina Shupe, both presiding and hearing the matter on its merit, as a basis of proposed decision to be advanced to the Board for its consideration, in accordance with California Code of Regulations, Title 8, Section 426.
2. At the hearing, Wolter Geesink with Otis Elevator Company, and Dan Leacox of Leacox & Associates, appeared on behalf of the Applicant; Mark Wickens and David Morris appeared on behalf of the Division of Occupational Safety and Health (“Division”); and Michael Nelmidia appeared on behalf of Board staff in a technical advisory role apart from the Board.
3. Documentary and oral evidence was received at the hearing, and by stipulation of all parties, documents were admitted into evidence: modification of permanent variance application per Section A table as Exhibit PD-1, Notice of Hearing as Exhibit PD-2, Board staff Pending Review of Application Memo as PD-3, Division evaluation as PD-4, Review Draft 1 Proposed Decision as PD-5, and official notice taken of the Board’s rulemaking

records and variance decisions concerning the safety order provisions from which variance has been requested. On November 20, 2020, the hearing and record closed, and the matter was taken under submission by the Hearing Officer.

- D. Based on the record of this hearing, the Board makes the following findings of fact:
1. The Applicant requests modification of the variance holder specified within Board records for each elevator the subject of previously granted Permanent Variance No. 19-V-320.
 2. Application Section 3, declared to be wholly truthful under penalty of perjury by Application signatory, states that the person or entity named in Application Section 1, Kaiser Foundation Hospitals, became the owner of the conveyance(s) subject to the existing variance referenced in Application Section 2, as the term conveyance owner is defined per California Code of Regulations, Title 8, Section 403(o).
 3. The Division has evaluated the request for modification of person or entity of record holding Permanent Variance No. 19-V-320, finds no issue with it, and recommends that the application for modification be granted subject to the same conditions of the Decision and Order in OSHSB Permanent Variance File No. 19-V-320.
 4. The Board finds the Application Section 3, declaratory statements of the Applicant signatory to be credible, uncontroverted, and consistent with available, sufficient facts, and of no bearing as to the finding of equivalent occupational health and safety upon which, in substantial part, grant of preexisting Permanent Variance No. 19-V-320 was based.
 5. The Board finds the current person or entity having custody of each elevator the subject of Permanent Variance No. 19-V-320, to be in fact:

Kaiser Foundation Hospitals

E. Decision and Order:

1. Variance application 19-V-320M1 is conditionally GRANTED, as specified below, such that, within Board records, the person or entity holding Permanent Variance No. 19-V-320, and Permanent Variance No. 19-V-320M1, shall be:

Kaiser Foundation Hospitals

Proposed Variance Decision

OSHSB File No.: 19-V-320M1

Hearing Date: November 20, 2020

2. Permanent Variance No. 19-V-320, only being modified as specified in above Decision and Order Section 1, is otherwise unchanged and remaining in full force and effect, as hereby incorporated by reference into this Decision and Order of Permanent Variance No. 19-V-320M1.
3. The Applicant shall notify its employees or their authorized representative(s), or both, of this order in the same way and to the same extent that employees and authorized representatives are to be notified of docketed permanent variance applications pursuant to California Code of Regulations, Title 8, Sections 411.2 and 411.3.
4. This Decision and Order shall remain in effect unless modified or revoked upon application by the Applicant, affected employee(s), the Division, or by the Board on its own motion, in the manner prescribed for its issuance or per duly adopted superseding procedural rules.

Pursuant to California Code of Regulations, Title 8, Section 426(b), the above, duly completed Proposed Decision, is hereby submitted to the Occupational Safety and Health Standards Board for consideration of adoption.

Dated: November 24, 2020


Christina Shupe, Hearing Officer

STATE OF CALIFORNIA
DEPARTMENT OF INDUSTRIAL RELATIONS
OCCUPATIONAL SAFETY AND HEALTH STANDARDS BOARD
2520 Venture Oaks Way, Suite 350
Sacramento, California 95833
(916) 274-5721

In the Matter of Application to Modify)
Permanent Variance by:)
)
5050 Pico, LLC)
)
)
_____)

OSHSB FILE No. 19-V-388M1
Proposed Decision Dated: November 24, 2020

DECISION

The Occupational Safety and Health Standards Board hereby adopts the attached PROPOSED DECISION by Christina Shupe, Hearing Officer.

DAVID THOMAS, Chairman

OCCUPATIONAL SAFETY AND HEALTH
STANDARDS BOARD

Date of Adoption: December 17, 2020

BARBARA BURGEL, Member

DAVID HARRISON, Member

NOLA KENNEDY, Member

CHRIS LASZCZ-DAVIS, Member

LAURA STOCK, Member

THE FOREGOING VARIANCE DECISION WAS ADOPTED ON THE DATE INDICATED ABOVE. IF YOU ARE DISSATISFIED WITH THE DECISION, A PETITION FOR REHEARING MAY BE FILED BY ANY PARTY WITH THE STANDARDS BOARD WITHIN TWENTY (20) DAYS AFTER SERVICE OF THE DECISION. YOUR PETITION FOR REHEARING MUST FULLY COMPLY WITH THE REQUIREMENTS OF CALIFORNIA CODE OF REGULATIONS, TITLE 8, SECTIONS 427, 427.1 AND 427.2.

Note: A copy of this Decision must be posted for the Applicant's employees to read, and/or a copy thereof must be provided to the employees' Authorized Representatives.

BEFORE THE
 OCCUPATIONAL SAFETY AND HEALTH STANDARDS BOARD
 DEPARTMENT OF INDUSTRIAL RELATIONS
 STATE OF CALIFORNIA

In the Matter of Application to Modify Permanent Variance by: <p style="text-align: center;">5050 Pico, LLC</p>	OSHSB File No.: 19-V-388M1 PROPOSED DECISION Hearing Date: November 20, 2020
---	--

A. The following person or entity (“Applicant”) has applied for a modification of permanent variance from provisions of the Elevator Safety Orders, found at Title 8 of the California Code of Regulations, for each elevator having the below specified preexisting variance location address of record:

Preexisting OSHSB File No.	Applicant Name	Variance Address of Record	Preexisting Number of Elevators
19-V-388	5050 Pico, LLC	5050 West. Pico Blvd. Los Angeles, CA	1

B. This proceeding is conducted in accordance with Labor Code Section 143, and California Code of Regulations, title 8, section 401, et. seq.

C. Procedural Matters:

1. This hearing was held on November 20, 2020, in Sacramento, California, and via teleconference, by Occupational Safety and Health Standards Board (“Board”) with Hearing Officer Christina Shupe, both presiding and hearing the matter on its merit, as a basis of proposed decision to be advanced to the Board for its consideration, in accordance with California Code of Regulations, title 8, section 426.
2. At the hearing, Wolter Geesink with Otis Elevator, and Dan Leacox of Leacox & Associates, appeared on behalf of the Applicants’ representative, the Otis Elevator Company; Mark Wickens and David Morris appeared on behalf of the Division of Occupational Safety and Health (“Division”); and Michael Nelmidia appeared on behalf of Board staff.
3. Documentary and oral evidence was received at the hearing, and by stipulation of all parties, documents were admitted into evidence: permanent variance applications per

Section A table as Exhibit PD-1, Notice of Hearing as Exhibit PD-2, Board staff evaluation as PD-3, Division evaluation as PD-4, Review Draft 1 Proposed Decision as PD-5, and official notice taken of the Board's files, records, recordings and decisions concerning the safety order provisions from which variance has been requested. On November 20, 2020, the hearing and record closed, and the matter was taken under submission by the Hearing Officer.

D. Findings and Basis:

1. The Applicant requests modification of the quantity of elevators the subject of previously granted Permanent Variance No. 19-V-388, to increase the quantity of elevators from one (1) to two (2).
2. Application Section 3, declared to be wholly truthful under penalty of perjury by the Applicant signatory, states facts upon which to reasonably find that additional requested subject elevator is to be of the same manufacturer model type and material technical characteristics and specifications, as the existing elevator the subject of Permanent Variance No. 19-V-388.
3. The Division has evaluated the immediate request for modification of variance, finds no issue with it, and recommends that the application for modification be granted subject to the same conditions of the Decision and Order in OSHSB Permanent Variance File No. 19-V-388.
4. The Board finds the Section 2 referenced declaration to be credible, uncontroverted, and consistent with available, sufficient facts, and finds modification of Permanent Variance 19-V-388, increasing the quantity of subject elevators from one (1) to two (2), to be of no bearing upon the finding of equivalent occupational health and safety upon which Grant of preexisting Permanent Variance 19-V-388 was, in part, based.

E. Decision and Order:

1. Application for Modification of Permanent Variance, No. 19-V-388M1, is conditionally GRANTED, as specified below, such that a total of two elevators are the subject of Permanent Variance No. 19-V-388, as hereby modified.
2. Permanent Variance No. 19-V-388, being only modified as to the subject quantity of elevators specified in above Decision and Order Section 1, is otherwise unchanged and remaining in full force and effect, as hereby incorporated by reference into Modification of Permanent Variance No. 19-V-388M1.
3. The applicant shall notify its employees or their authorized representative(s), or both, of

Proposed Variance Decision
OSHSB File No.: 19-V-388M1
Hearing Date: November 20, 2020

this order in the same way that the Applicant was required to notify them of the application for permanent variance, per California Code of Regulations, Title 8, Sections 411.2 and 411.3.

4. This Decision and Order shall remain in effect unless modified or revoked upon application by the Applicant, affected employee(s), the Division, or by the Board on its own motion, in the manner prescribed for its issuance.

Pursuant to California Code of Regulations, Title 8, Section 426(b), the above, duly completed Proposed Decision, is hereby submitted to the Occupational Safety and Health Standards Board for consideration of adoption.

Dated: November 24, 2020


Christina Shupe, Hearing Officer

STATE OF CALIFORNIA
DEPARTMENT OF INDUSTRIAL RELATIONS
OCCUPATIONAL SAFETY AND HEALTH STANDARDS BOARD
2520 Venture Oaks Way, Suite 350
Sacramento, California 95833
(916) 274-5721

In the Matter of Application for Permanent Variance By:)
)
)
)
Patton Equities LLC)
)
_____)

OSHSB FILE No.: 20-V-128
Proposed Decision Dated: December 7, 2020

DECISION

The Occupational Safety and Health Standards Board hereby adopts the attached PROPOSED DECISION by Christina Shupe, Hearing Officer.

DAVID THOMAS, Chairman

OCCUPATIONAL SAFETY AND HEALTH STANDARDS BOARD

Date of Adoption: December 17, 2020

BARBARA BURGEL, Member

DAVID HARRISON, Member

NOLA KENNEDY, Member

CHRIS LASZCZ-DAVIS, Member

LAURA STOCK, Member

THE FOREGOING VARIANCE DECISION WAS ADOPTED ON THE DATE INDICATED ABOVE. IF YOU ARE DISSATISFIED WITH THE DECISION, A PETITION FOR REHEARING MAY BE FILED BY ANY PARTY WITH THE STANDARDS BOARD WITHIN TWENTY (20) DAYS AFTER SERVICE OF THE DECISION. YOUR PETITION FOR REHEARING MUST FULLY COMPLY WITH THE REQUIREMENTS OF CALIFORNIA CODE OF REGULATIONS, TITLE 8, SECTIONS 427, 427.1 AND 427.2.

Note: A copy of this Decision must be posted for the Applicant's employees to read, and/or a copy thereof must be provided to the employees' Authorized Representatives.

BEFORE THE
 OCCUPATIONAL SAFETY AND HEALTH STANDARDS BOARD
 DEPARTMENT OF INDUSTRIAL RELATIONS
 STATE OF CALIFORNIA

In the Matter of Application for Permanent Variance Regarding: Patton Equities, LLC	OSHSB File Nos.: 20-V-128 <u>PROPOSED DECISION</u> Hearing Date: October 22, 2020
---	---

A. Procedural Matters

1. The below listed Applicant (“Applicant”) has applied for permanent variance from certain provisions of the Elevator Safety Orders, found at title 8 of the California Code of Regulations¹, with respect to a conveyance, or conveyances, in the listed quantity, at the listed location:

Variance No.	Applicant Name	Variance Location Address	No. of Elevators
20-V-128	Patton Equities, LLC	340 N. Patton St. Los Angeles, CA	1

2. These proceedings are conducted in accordance with Labor Code Section 143, and section 401, et. seq.
3. This hearing was held on October 22, 2020, via Zoom teleconference, before the Occupational Safety and Health Standards Board (“Board”), with Hearing Officer Autumn Gonzalez, both presiding and hearing the matter on its merit, as a basis of proposed decision to be advanced to the Board for its consideration, in accordance with section 426 of the Board’s rules of procedure. The Hearing Panelists were Board Members Chris Laszcz-Davis and David Harrison.
4. At the hearing, Kathleen E. Finnerty of Finnerty Law Offices, Inc., Phillip Hampton, Johnny Stockstill and Charlie Thurmond of thyssenkrupp Elevator Corporation (“tkE”), appeared on behalf of Applicant; David Morris and Mark Wickens appeared on behalf of the Division of Occupational Safety and Health (“Division”), and Michael Nelmidia appeared on behalf of Board staff, in a technical advisory role apart from the Board. In response to a request submitted by IUEC Local 18 for party status in the matter, the Hearing Officer granted IUEC Local 18 party status, pursuant to section 406.1 of the Board’s procedural regulations. IUEC Local 8 was similarly granted party status. Eric

¹ Unless otherwise noted, references are to the California Code of Regulations, title 8.

McClaskey and Kevin Wright appeared on behalf of IUEC Local 8 (“IUEC”), and Frank Belio appeared on behalf of IUEC Local 18 (“IUEC”).

5. Oral evidence was received at the hearing, and by stipulation of all parties, documents were admitted into evidence: the permanent variance application as Exhibit PD-1, First Amended Variance Application as Exhibit PD-1a, Second Amended Variance Application as Exhibit PD-1b, Third Amended Variance Application as Exhibit PD-1c, and Fourth Amended Variance Application as Exhibit PD-1d, Notice of Hearing as Exhibit PD-2, Division Review of Application as Exhibit PD-3, Board Staff Review as Exhibit PD-4, Applicant’s Response to Staff Evaluation and Division Evaluation as Exhibit PD-5 (Diagram 2 on Page 5 is protected as confidential), Declaration of Phillip Hampton in support of Variance Application as Exhibit PD-6, Declaration of Johnny Stockstill in support of Variance Application as Exhibit PD-7; Declaration of Charlie Thurmond in support of Variance Application as Exhibit PD-8, and Applicant’s Amended Proposed Decision as PD-9, Division’s Memorandum “Division Post-hearing brief in the matter of permanent variance docket number 20-V-128 Patton Equities, LLC, in response to the hearing conducted on October 22, 2020” as PD-10, Board Staff, Michael Nelmidia’s email dated October 28, 2020 at 5:21 p.m. titled “RE: 10/22 Hearing for Patton Equities; Docket No.: 20-V-128” as PD-11.
6. The parties stipulated to official notice being taken of the Board’s rulemaking records, and variance decisions concerning the safety order requirements from which variance is requested.

B. Relevant Safety Orders

1. Car-Top Railing: ASME 2.14.1.7.1 (Limited to extent necessary to permit the use of an inset car-top railing)

ASME 2.14.1.7.1

A standard railing conforming to 2.10.2 shall be provided on the outside perimeter of the car top on all sides where the perpendicular distance between the edges of the car top and the adjacent hoistway enclosure exceeds 300 mm (12 in.) horizontal clearance.

2. Suspension Means: ASME 2.20.1, 2.20.2.1, 2.20.2.2.(a), 2.20.2.2(f), 2.20.3, 2.20.4, and 2.20.9. (Limited to the extent necessary to permit the use of the Elastomeric-coated Steel Belts in lieu of circular steel suspension ropes)

ASME 2.20.1:

Elevator cars shall be suspended by steel wire ropes attached to the car frame or passing around sheaves attached to the car frame specified in 2.15.1. Ropes that have previously been installed and used on another installation shall not be reused.

Only iron (low-carbon steel) or steel wire ropes, having the commercial classification "Elevator Wire Rope," or wire rope specifically constructed for elevator use, shall be used for the suspension of elevator cars and for the suspension of counterweights[.]

ASME 2.20.2.1:

The crosshead data plate required by 2.16.3 shall bear the following wire-rope data:

- (a) the number of ropes
- (b) the diameter in millimeters (mm) or inches (in.)
- (c) the manufacturer's rated breaking strength per rope in kilo Newton (kN) or pounds (lb)

ASME 2.20.2.2, subdivision (a) and 2.20.2.2, subdivision (f), in relevant parts:

A metal data tag shall be securely attached to one of the wire-rope fastenings. This data tag shall bear the following wire-rope data:

- (a) the diameter in millimeters (mm) or inches (in.)

[...]

- (f) whether the ropes were nonpreformed or preformed[.]

ASME 2.20.3:

The factor of safety of the suspension wire ropes shall be not less than shown in Table 2.20.3. Figure 8.2.7 gives the minimum factor of safety for intermediate rope speeds. The factor of safety shall be based on the actual rope speed corresponding to the rated speed of the car.

The factor of safety shall be calculated by the following formula:

$$f = (S \times N) / W$$

where

N = number of runs of rope under load. For 2:1 roping, N shall be two times the number of ropes used, etc.

S = manufacturer's rated breaking strength of one rope

W = maximum static load imposed on all car ropes with the car and its rated load at any position in the hoistway

ASME 2.20.4:

The minimum number of hoisting ropes used shall be three for traction elevators and two for drum-type elevators.

Where a car counterweight is used, the number of counterweight ropes used shall be not less than two.

The term "diameter," where used in reference to ropes, shall refer to the nominal diameter as given by the rope manufacturer.

The minimum diameter of hoisting and counterweight ropes shall be 9.5 mm (0.375 in.). Outer wires of the ropes shall be not less than 0.56 mm (0.024 in.) in diameter.

ASME 2.20.9.3.4

Cast or forged steel rope sockets, shackle rods, and their connections shall be made of unwelded steel, having an elongation of not less than 20% in a gauge length of 50 mm (2 in.), when measured in accordance with ASTM E8, and conforming to ASTM A 668, Class B for forged steel, and ASTM A27, Grade 60/30 for cast steel, and shall be stress relieved. Steels of greater strength shall be permitted, provided they have an elongation of not less than 20% in a length of 50 mm (2 in.).

3. Inspection Transfer Switch:

ASME 2.26.1.4.4(a) (Limited to the extent necessary to permit the inspection transfer switch to reside at a location other than the machine room):

When machine room inspection operation is provided, it shall conform to 2.26.1.4.1, and the transfer switch [see 2.26.1.4.1(b)] shall be

(a) located in the machine room

(b) rendered ineffective if top-of-car inspection operation, in-car inspection operation, or hoistway access operation is activated, or when a car door or hoistway door bypass switch is in the "BYPASS" position[.]

4. Redundant Means to Remove Power:

ASME 2.26.9.4 (Limited to the extent necessary to permit the exclusive use of software and circuit systems certified to SIL-3 ratings as a means to remove power from the driving machine motor and brake):

Redundant devices used to satisfy 2.26.9.3 in the determination of the occurrence of a single ground or the failure of any single magnetically operated switch, contactor or relay, or of any single solid state device, or any single device that limits the leveling or truck zone, or a software system failure, shall be checked prior to each start of the elevator from a landing, when on automatic operation. When a single ground or failure, as specified in 2.26.9.3, occurs, the car shall not be permitted to restart. Implementation of redundancy by a software system is permitted, provided that the removal of power from the driving-machine motor and brake shall not be solely dependent on software-controlled means.

5. SIL-Rated Circuitry to Inhibit Current Flow:

ASME 2.26.9.6.1 (Limited to the extent necessary to permit the use of SIL-rated circuitry in place of an electromechanical relay to inhibit current flow to the drive motor):

Two separate means shall be provided to independently inhibit the flow of alternating-current through the solid-state devices that connect the direct current power source to the alternating-current driving motor. At least one of the means shall be an electromechanical relay.

6. Seismic reset switch:

ASME 8.4.10.1.1(a)(2)(b) (Limited to the extent necessary to permit the seismic reset switch to reside at a location other than the machine room)

8.4.10.1.1 Earthquake Equipment (See Also Fig. 8.4.10.1.1) [in relevant part]

(a) All traction elevators operating at a rated speed of 0.75 m/s (150 ft/min) or more and having counterweights located in the same hoistway shall be provided with the following:

[...]

(2) seismic zone 2 or greater:

(a) a displacement switch for each elevator

(b) an identified momentary reset button or switch for each elevator, located in the control panel in the elevator machine room [see 8.4.10.1.3(i)]

C. Findings

1. The Applicant intends to utilize tkE EVO 200 machine room-less elevator, with elastomeric steel coated belts (ECSBs) as the suspension means in lieu of wire ropes at the location and in the numbers stated in Section A above.
2. Applicant will comply with the Division Circular Letter E-10-04, attached hereto as Addendum 2 and incorporated by reference. The residual strength detection device contemplated therein will be subject to approval by the Division and installed not later than November 21, 2021, as is consistent with the Decision in OSHSB No. 18-V-364 (Vivante).
3. Car Top Railing Inset: Variance from ASME A17.1-2004, section: 2.14.1.7.1—Top of Car Perimeter Railing Placement.

Applicant proposes that compliance with ASME A17.1-2013, section 2.14.1.7.1 provides equivalent safety.

The Division agreed that the proposal met the equivalent safety standard. Board staff raised no objection at hearing.

4. Requested Suspension Means Related Variance: Applicant seeks permanent variance from the following ASME A17.1-2004, sections and subsections:

Section 2.20.1—Wire rope suspension means

Section 2.20.2.1—Crosshead data plate

Subsection 2.20.2.2(a)—Wire rope data tag

Subsection 2.20.2.2(f)—ID of steel wire rope as preformed or nonpreformed

Section 2.20.3—Wire rope safety factor

Section 2.20.4—Number and diameter of wire ropes

Section 2.20.9—Suspension-Rope Fastening and all subsections therein

Applicant proposes that compliance with ASME A17.1-2013, sections 2.20.1(c) (permitting ECSBs), 2.20.2.1, 2.20.2.2.1 (data tag at fastening), 2.20.2.2.2 (data required), 2.20.3, 2.20.4 and 2.20.9 provide equivalent safety.

The Division does not support the proposed elastomeric coated steel belt (“ECSB”) suspension system as providing equivalent or superior safety absent a functioning residual strength detection device (“RSDD”) that complies with Circular Letter E-10-04 (Addendum 2). However, the Division recommends that the variance be GRANTED with conditions stated in its evaluation (Exhibit PD-3).

Board staff states that in the absence of evidence to support Applicant’s inclusion of the RSDD, it cannot provide an opinion related to the Applicant’s request, but notes residual strength monitoring as included in ASME A17.1-2010, section 2.20.8.3 and subsequent editions of this subsection are a key element when substituting wire rope with ECSBs.

IUEC opposes the variance application without a functioning RSDD of an unspecified type being installed before elevator turn over.

5. Requested Inspection Transfer Switch with Controller Placement Variance: Installation of the requisite transfer switch within a “machine room” is incompatible with the machine-room-less design of the tkE EVO 200 elevator, therefore the Applicant seeks permanent variance from the ASME Code A17.1-2004, Subsection: *2.26.1.4.4(a)—Transfer Switch Placement in Machine Room*.

Applicant proposes that compliance with ASME A17.1-2013, Subsection 2.26.1.4.4(a) provides equivalent safety.

Both Board Staff and the Division concur that Applicant’s proposal provides equivalent safety.

6. Requested TAC32T Controller to Remove Power from Motor and Brake Variance: Applicant seeks permanent variance from ASME A17.1-2004, section 2.26.9.4—Control and Operating Circuits.

Applicant proposes that compliance with ASME A17.1-2013, sections 2.26.9.3.1 and 2.26.9.3.2, provides equivalent safety to that required by ASME A17.1-2004 requirements. In addition to their respective Declarations, Applicant representatives Hampton, Thurmond and Stockstill provided testimony regarding the Applicant's redundant means of removing power using a combination of hardware and software means.

After the hearing, both the Division and Staff expressed concerns about potentially conflicting testimony having been provided regarding the software system and SIL rated devices used to establish equivalent safety. As requested by the Hearing Officer, the parties conferred to resolve any ambiguities or perceived conflict. Applicant, using Diagram 2, the Variance Application package, and the Declaration of Charlie Thurmond clarified that:

- a) Applicant seeks permanent variance from ASME Code A17.1-2004, Section: 2.26.9.4—Control and Operating Circuits, specifically the language "Implementation of redundancy by a software system is permitted, provided that removal of power from the driving-machine motor and brake shall not be solely dependent on software-controlled means". Applicant's Variance Request No. 4 is necessary in order for Applicant to use the S3I and S3O Serializers and Absolute Position Sensors in conjunction with the Safe Torque Off.
- b) Applicant utilizes some SIL-3 rated devices to monitor, process, and execute specific elements of elevator safety functions. The use of two software systems, used in conjunction to perform these safety functions is not permitted by ASME Code A17.1-2004 2.26.9.4.
- c) Specifically, Applicant's proposal includes a hardware path, a software path, and the following SIL rated devices to comply with 2.26.9.3 as shown on Diagram 2: The Absolute Position Sensor, the S3I and S3O Serializers and the Safe Torque Off.
- d) Necessity for variance from Section 2.26.9.4 is born from the conveyance's reliance upon a software 2.26.9.3 purposed device and software means of removal of power from driving motor and brake, a combination that is prohibited under ASME A17.1-2004 2.26.9.4.

Applicant further clarified that:

- a) Applicant's Variance Request No. 5 is necessary because Applicant has replaced the electro-mechanical relay required under the 2004 code with a SIL rated device recognized in the recent editions of ASME A17.1, specifically Sections 2.26.9.3.2(b) and 2.26.9.6.1(b), and specifically the Safe Torque Off depicted on Diagram 2.
- b) Applicant's proposed control system includes software systems and SIL-3 rated devices to monitor, process, and execute specific elevator safety functions. The use of these SIL-rated E/E/PES systems and circuits to perform these safety functions does not comply with existing Elevator Safety Orders; therefore, the Applicant proposes the use of SIL-rated circuitry in the motor control and brake system of the ThyssenKrupp TAC32T elevator controller. This solid-state circuitry replaces the required electro-mechanical relay.
- c) The SIL-3 rated SSOA board provides two independent mean for both the motor and brake control. For the motor the independent path is STO.
- d) The SSOA blocks command signals to the motor controller's power inverter using its safe torque off (STO) circuitry, thus preventing the generation of AC waveforms to the drive motor.

Applicant asserts that their proposed motor control system meets the requirements of ASME A17.1-2013, Section 2.26.9.3.2 and 2.26.9.6 for the use of SIL-rated circuits in this role and provides equivalent safety to the existing ESO.

7. Requested SIL-Rated System to Inhibit Current Flow to Alternating Current (AC) Drive Motor Variance: Applicant proposes to replace the electromechanical relay with a SIL-3 rated device, the device is utilizing SIL-3 rated circuits (specifically the safe torque off) not permitted by ASME Code A17.1-2004, Section 2.26.9.6.1, but allowed under ASME A17.1-2013, Section 2.26.9.6.1(b) as providing equivalent safety.

Board staff expressed concern that Applicant did not demonstrate equivalency of the STO and SBC to the electromechanical switches they replaced. The Division in its report at page 6, found that equivalent safety was shown. (PD-4, at 6.)

8. Requested Seismic Reset Switch Placement Variance: Installation of the requisite seismic reset switch within a "machine room" is incompatible with machine-room-less design of the tkE EVO 200 elevator, therefore the Applicant seeks permanent variance from ASME Code A17.1-2004 Subsection:

8.4.10.1.1(a)(2)(b)—Seismic Reset Switch Placement in Machine Room.

Applicant proposes that compliance with ASME A17.1-2013, Subsection 8.4.10.1.1(a)(2)(b) provides equivalent safety. Both Board staff and the Division concur with the conclusion.

9. The above-stated procedural prerequisites, legal authority, and factual findings, as further supported by the documentary record and hearing testimony in this matter, provide a substantive and reasonable basis of conclusion that: (1) The Applicant has complied with the statutory and regulatory requirements that must be met before an application for permanent variance may be conditionally granted, and (2) a preponderance of the evidence establishes that the Applicant's proposal, only when subject to all conditions and limitations set forth in the below Decision and Order, will provide equivalent safety and health to that which would prevail upon full compliance with the requirements of the Elevator Safety Orders from which variance is being sought.

D. Decision and Order

Applicant is hereby conditionally GRANTED Permanent Variance as specified below, and to the limited extent, as of the date the Board adopts this Proposed Decision, with respect to the Section A specified number of tkE EVO 200 elevator(s), at the specified location, each shall conditionally hold permanent variance from the following subparts of ASME A17.1-2004, currently incorporated by reference into section 3141 of the Elevator Safety Orders.

- 1) Car Top Railing: ASME section 2.14.1.7.1 (only to the extent necessary to permit an inset car top railing, if, in fact, the car top railing is inset).
- 2) Suspension Means: ASME sections 2.20.1; 2.20.2.1; 2.20.2.2, subdivision (a); 2.20.2.2, subdivision (f); 2.20.3; and sections 2.20.4. and 2.20.9 (variances from these "suspension means" provisions are only to the extent necessary to permit use of the proposed ECSBs in lieu of conventional steel suspension ropes).
- 3) Inspection Transfer Switch: ASME section 2.26.1.4.4, subdivision (a) (only to the extent necessary to allow the inspection transfer switch to reside at a location other than a machine room, if in fact, it does not reside in the machine room).
- 4) TAC32T Controller to Remove Power from Motor and Brake Variance: ASME section 2.26.9.4, to allow the installation of software redundancies (S3I and S3O

Serializers and Absolute Positioning Sensors) in conjunction with a software controlled means of removing power from the driving motor and brake (SSOA).

- 5) SIL-Rated System to Inhibit Current Flow to Alternating Current (AC) Drive Motor Variance. ASME section 2.26.9.6 *Elevators Employing AC Removal of Power* (through its proposed compliance with ASME A17.1-2013, section 2.26.9.6.1, subdivision (b) by installing the proposed SIL-3 rated circuitry in the motor control system of the tKE TAC32T elevator controller described in the Conditions to this Order) in place of electromechanical switches/relays.
- 6) Seismic Safety Switch: ASME section 8.4.10.1.1, subdivision (a)(2)(b) (only to the limited extent necessary to allow the seismic reset switch to reside elsewhere than a machine room, if in fact, it does not reside in the machine room).

E. Conditions and Limitations

Inset Car Top Railing (Variance Request No. 1):

1.0 Any and all inset car top railings shall comply with the following:

- 1.1 Serviceable equipment shall be positioned so that mechanics and inspectors do not have to stand on or climb over the railings to perform adjustments, maintenance, repairs or inspections. The Applicant shall not permit anyone to stand or climb over the car top railing.
- 1.2 The distance that the railing can be inset shall be limited to not more than six inches (6").
- 1.3 All exposed areas of the car top outside the car top railing where the distance from the railing to the edge of the car top exceeds two inches (2"), shall be beveled with metal, at an angle of not less than 75 degrees with the horizontal, from the mid or top rail to the outside of the car top, such that no person or object can stand, sit, kneel, rest, or be placed in the exposed areas.
- 1.4 The top surface of the beveled area and/or car top outside the railing, shall be clearly marked. The markings shall consist of alternating 4" diagonal red and white stripes.

- 1.5 The Applicant shall provide durable signs with lettering not less than 1/2 inch on a contrasting background on each inset railing; each sign shall state:

CAUTION
STAY INSIDE RAILING
NO LEANING BEYOND RAILING
NO STEPPING ON, OR BEYOND, RAILING

- 1.6 The Group IV requirements for car top clearances shall be maintained (car top clearances outside the railing will be measured from the car top and not from the required bevel).

Suspension Means (Variance Request No. 2):

- 2.0 The elevator suspension system shall comply to the following:

- 2.1 The elastomeric-coated steel belts (ECSBs) and their associated fastenings shall conform to the applicable requirements of ASME A17.1-2013, sections:

2.20.4.3 – Minimum Number of Suspension Members

2.20.3 – Factor of Safety

2.20.9 – Suspension Member Fastening

- 2.2 Additionally, ECSBs shall meet or exceed all requirements of ASME A17.6-2010, Standard for Elevator Suspension, Compensation, and Governor Systems, Part 3 Noncircular Elastomeric Coated Steel Suspension Members for Elevators.

- 2.3 The Applicant shall not utilize the elevator unless the manufacturer has written procedures for the installation, maintenance, inspection and testing of the ECSBs and fastenings and related monitoring and detection systems and criteria for ECSB replacement, and the Applicant shall make those procedures and criteria available to the Certified Competent Conveyance Mechanic (CCCM) at the location of the elevator, and to the Division of Occupational Safety and Health (Division) upon request.

- 2.4 ECSB mandatory replacement criteria shall include:

2.4.1. Any exposed wire, strand or cord;

2.4.2. Any wire, strand or cord breaks through the elastomeric coating;

- 2.4.3. Any evidence of rouging (steel tension element corrosion) on any part of the elastomeric coated steel suspension member;
- 2.4.4. Any deformation in the elastomeric suspension member such as, but not limited to, kinks or bends.
- 2.5 Traction drive sheaves must have a minimum diameter of 108 mm. The maximum speed of ECSBs running on 108 mm drive sheaves shall be no greater than 6.1 m/s.
- 2.6 If any one (1) ECSB needs replacement, the complete set of suspension members on the elevator shall be replaced. Exception: If a new suspension member is damaged during installation, and prior to any contemporaneously installed ECSB having been placed into service, it is permissible to replace the individual damaged suspension member. ECSBs that have been installed on another installation shall not be re-used.
- 2.7 A traction loss detection means shall be provided that conforms to the requirements of ASME A17.1-2013, Section 2.20.8.1. The means shall be tested for correct function annually in accordance with ASME A17.1-2013, Section 8.6.4.19.12.
- 2.8 A broken suspension member detection means shall be provided that conforms to the requirements of ASME A17.1-2013, Section 2.20.8.2. The means shall be tested for correct function annually in accordance with ASME A17.1-2013, Section 8.6.4.19.13(a).
- 2.9 An elevator controller integrated bend cycle monitoring system shall monitor actual ECSB bend cycles, by means of continuously counting, and storing in nonvolatile memory, the number of trips that the ECSB makes traveling, and thereby being bent, over the elevator sheaves. The bend cycle limit monitoring means shall automatically stop the car normally at the next available landing before the bend cycle correlated residual strength of any single ECSB member drops below (60%) sixty percent of full rated strength. The monitoring means shall prevent the car from restarting. Notwithstanding any less frequent periodic testing requirement per Addendum 2 (Division Circular Letter), the bend cycle monitoring system shall be tested semi-annually in accordance with the procedures required per above Conditions 2.2, and 2.3.

- 2.10 The elevator crosshead data plate shall comply with the requirements of ASME A17.1-2013, Section 2.20.2.1.
- 2.11 A suspension means data tag shall be provided that complies with the requirements of ASME A17.1-2013, Section 2.20.2.2.
- 2.12 Comprehensive visual inspections of the entire length of each and all installed suspension members, in conformity with above Conditions 2.2 and 2.3 specified criteria, shall be conducted and documented every six (6) months by a CCCM.
- 2.13 The Applicant shall be subject to the requirements per hereto attached, and inhere incorporated, Addendum 1, "Suspension Means Replacement Reporting Condition."
- 2.14 Records of all tests and inspections shall be maintenance records subject to ASME A17.1-2004, Sections 8.6.1.2, and 8.6.1.4, respectively.
- 2.15 No later than November 21, 2021 the subject elevator(s) shall be equipped with a residual strength detection device as specified per Addendum 1 to this Decision and Order (Division Circular Letter E-10-04). Prior to November 21, 2021 the Applicant shall have complied with the requirements of Addendum 3, and corrected any Division identified deficiencies in performing those requirements.

Redundant Means to Remove Power from Driving Machine Motor and Brake
(Variance Request Nos. 4 and 5)

- 3.0 The SIL-rated circuitry used to provide device/circuit redundancy and to inhibit electrical current flow in accordance with ASME A17.1-2004, Sections 2.26.9.4 and 2.26.9.6.1 shall comply with the following:
 - 3.1 The SIL-rated systems and related circuits shall consist of:
 - 3.1.1. ELGO LIMAXX33 RED Safe Magnetic Absolute Shaft Information System, labeled or marked with the SIL rating (not less than SIL 3), the name or mark of the certifying organization, and the SIL certification number (968/A 163), followed by the applicable revision number (as in 968/A 163.07/19).

- 3.1.2 Printed circuit board assembly SSOA (6300 AHE001), labeled or marked with the SIL rating (not less than SIL 3), the name or mark of the certifying organization, and the SIL certification number (968/FSP 1347), followed by the applicable revision number (as in 968/FSP 1347.00/16).
- 3.1.3 Two circuit board components (SERIALIZER S31 and SERIALIZER S30), each labeled or marked with the SIL rating (not less than SIL 3), the name or mark of the certifying organization and the SIL certification number (968/A 163 and 968/FSP 1347) followed by the applicable revision number (as in 968/A 163.07/19 and 968/FSP 1347.00/16).
- 3.1.4 The software system and related circuits shall be certified for compliance with the applicable requirements of ASME A17.1-2013, Section 2.26.4.3.2.
- 3.1.5 The access door or cover of the enclosures containing the SIL-rated components shall be clearly labeled or tagged on their exterior with the statement:

**Assembly contains SIL-rated devices.
Refer to maintenance Control Program and wiring diagrams
prior to performing work.**

- 3.1.6 Unique maintenance procedures or methods required for the inspection, testing, or replacement of the SIL-rated circuits shall be developed and a copy maintained in the elevator machine/control room/space. The procedures or methods shall include clear color photographs of each SIL-rated component, with notations identifying parts and locations.
- 3.1.7 Wiring diagrams that include part identification, SIL, and certification information shall be maintained in the elevator machine/control room/space.
- 3.1.8 A successful test of the SIL-rated circuits shall be conducted initially and not less than annually in accordance with the testing procedure. The test shall demonstrate that SIL-rated devices, safety functions, and related circuits operate as intended.

- 3.1.9 Any alterations to the SIL-rated circuits shall be made in compliance with the Elevator Safety Orders. If the Elevator Safety Orders do not contain specific provisions for the alteration of SIL-rated devices, the alterations shall be made in conformance with ASME A17.1-2013, Section 8.7.1.9.
- 3.1.10 Any replacement of the SIL-rated circuits shall be made in compliance with the Elevator Safety Orders. If the Elevator Safety Orders do not contain specific provisions for the replacement of SIL-rated devices, the replacement shall be made in conformance with ASME A17.1-2013, Section 8.6.3.14.
- 3.1.11 Any repairs to the SIL-rated circuits shall be made in compliance with the Elevator Safety Orders. If the Elevator Safety Orders do not contain specific provisions for the repair of SIL-rated devices, the repairs shall be made in conformance with ASME A17.1-2013, Section 8.6.2.6.
- 3.1.12 Any space containing SIL-rated circuits shall be maintained within the temperature and humidity range specified by tkE. The temperature and humidity range shall be posted on each enclosure containing SIL-rated software or circuits.
- 3.1.13 Field software-changes to the SIL-rated system are not permitted. Any changes to the SIL-rated system's circuitry will require recertification and all necessary updates to the documentation and diagrams required by conditions 2.4 and 2.5 above.

Inspection Transfer Switch and Seismic Reset Switch (Variance Request Nos. 3 and 6):

- 4.0 Inspection Transfer switch and Seismic Reset switch placement and enclosure shall comply with the following:
 - 4.1 If the inspection transfer switch required by ASME A17.1-2004, Section 2.26.1.4.4, does not reside in a machine room, that switch shall not reside in the elevator hoistway. The switch shall reside in the control/machinery room/space containing the elevator's control equipment in an enclosure secured by a lock openable by a Group 1 security key. The enclosure is to remain locked at all times when not in use.

Proposed Decision

OSHSB Variance File No 20-V-128

Patton Equities, LLC

Hearing Date: October 22, 2020

- 4.2 If the seismic reset switch does not reside in the machine room, that switch shall not reside in the elevator hoistway. The switch shall reside in the control/machinery room/space containing the elevator's control equipment in an enclosure secured by a lock openable by a Group 1 security key. The enclosure is to remain locked at all times when not in use.
- 5.0 The elevator shall be serviced, maintained, adjusted, tested, and inspected only by CCCM having been trained, and competent, to perform those tasks on the tkE EVO 200 elevator system in accordance with written procedures and criteria, including as required per above Conditions 1.2, and 1.3.
- 6.0 The Division shall be notified when the elevator is ready for inspection. The elevator shall be inspected by the Division, and all applicable requirements met, including conditions of this permanent variance, prior to a Permit to Operate the elevator being issued. The elevator shall not be placed in full service prior to the Permit to Operate being issued by Division.
- 7.0 The Applicant shall notify its employees or their authorized representative(s), or both, of this order in the same way and to the same extent that employees and authorized representatives are to be notified of docketed permanent variance applications pursuant to California Code of Regulations, Title 8, Sections 411.2, and 411.3.
- 8.0 This Decision and Order shall remain in effect unless modified or revoked upon application by the Applicant, affected employee(s), the Division, or by the Board on its own motion, in the manner prescribed for its issuance.

I hereby certify that the above Proposed Decision is the decision of the Hearing Panel, and the Hearing Panel recommends its adoption by the Occupational Safety and Health Standards Board as the Board's decision in this preceding.

DATED: December 11, 2020



Autumn González, Hearing Officer

ADDENDUM 1

SUSPENSION MEANS REPLACEMENT REPORTING REQUIREMENTS

Beginning on the date the Board adopts this Proposed Decision and continuing for a period of two years, the Applicant shall report to the Division within 30 days any and all replacement activity performed on the elevator(s) pursuant to the requirements of ASME A17.1-2004, Section 8.6.3 involving the suspension means or suspension means fastenings.

Further:

- (1) A separate report for each elevator shall be submitted, in a manner acceptable to the Division, to the following address (or to such other address as the Division might specify in the future): DOSH Elevator Unit, Attn: Engineering Section, 2 MacArthur Place Suite 700, Santa Ana, CA 92707.
- (2) Each such report shall contain, but not necessarily be limited to, the following information:
 - (a) The State-issued conveyance number, complete address, and OSHSB file number that identifies the permanent variance.
 - (b) The business name, complete address, telephone number, and contact person of the elevator responsible party (presumably the Applicant or the subsequent holder of this variance).
 - (c) The business name, complete address, telephone number, and Certified Qualified Conveyance Company (CQCC) certification number of the firm performing the replacement work.
 - (d) The name (as listed on certification), Certified Competent Conveyance Mechanic (CCCM) certification number, and certification expiration date of each CCCM performing the replacement work.
 - (e) The date and time the elevator was removed from normal service for suspension replacement, the date and time the replacement work commenced, the date and time the replacement work was completed, and the date and time the elevator was returned to normal service.
 - (f) A detailed description of, and clear color photographs depicting, (1) all the conditions that existed in the suspension components requiring their replacement and (2) any conditions that existed to cause damage or distress to the suspension components being replaced.
 - (g) A detailed list of all elevator components adjusted, repaired, or replaced in conjunction with the suspension component replacement.
 - (h) All information provided on the crosshead data plate per ASME A17.1-2004, Section

2.20.2.1, unless that ASME requirement is modified by the conditions of a variance that pertains to the elevator in question, in which case, the information to be reported shall be the information required by the ASME provision as modified by the variance.

- (i) For the suspension means being replaced, all information provided on the data tag required per ASME A17.1-2004, Section 2.20.2.2, unless that ASME requirement is modified by the conditions of a variance that pertains to the elevator in question, in which case, the information to be reported shall be the information required by the ASME provision as modified by the variance.
- (j) For the replacement suspension means, all information provided on the data tag required by ASME A17.1-2004, Section 2.20.2.2, unless that ASME requirement is modified by the conditions of a variance that pertains to the elevator in question, in which case, the information to be reported shall be the information required by the ASME provision as modified by the variance.
- (k) Any other information requested by the Division regarding the replacement of the suspension means or fastenings.

In addition to the submission of the report to the Division, the findings of any testing, failure analysis, or other engineering evaluations performed on any portion of the replaced suspension components, or other elevator components replaced in conjunction therewith, shall be submitted to the Division referencing the information contained in item 2(a) above.

*Proposed Decision
OSHSB Variance File No 20-V-128
Patton Equities, LLC
Hearing Date: October 22, 2020*

ADDENDUM 2

CIRCULAR LETTER E-10-04, October 6, 2010

TO: Installers, Manufacturers of Conveyances and Related Equipment and, Other Interested Parties

SUBJECT: Coated Steel Belt Monitoring

The Elevator Safety Orders require routine inspection of the suspension means of an elevator to assure its safe operation.

The California Labor Code Section 7318 allows the Division to promulgate special safety orders in the absence of regulation.

As it is not possible to see the steel cable suspension means of a Coated Steel Belt, a monitoring device which has been accepted by the Division is required on all Coated Steel Belts which will automatically stop the car if the residual strength of any belt drops below 60%. The Device shall prevent the elevator from restarting after a normal stop at a landing.

The monitoring device must be properly installed and functional. A functioning device may be removed only after a determination has been made that the residual strength of each belt exceeds 60%. These findings and the date of removal are to be conspicuously documented in the elevator machine room. The removed device must be replaced or returned to proper service within 30 days.

If upon routine inspection, the monitoring device is found to be in a non-functional state, the date and findings are to be conspicuously documented in the elevator machine room.

If upon inspection by the Division, the monitoring device is found to be non-functional or removed, and the required documentation is not in place, the elevator will be removed from service.

If the device is removed to facilitate belt replacement, it must be properly installed and functional before the elevator is returned to service.

A successful test of the device's functionality shall be conducted once a year.

This circular does not preempt the Division from adopting regulations in the future, which may address the monitoring of Coated Steel Belts or any other suspension means.

Proposed Decision
OSHSB Variance File No 20-V-128
Patton Equities, LLC
Hearing Date: October 22, 2020

This circular does not create an obligation on the part of the Division to permit new conveyances utilizing Coated Steel Belts.

Debra Tudor
Principal Engineer
DOSH-Elevator Unit HQ

ADDENDUM 3

(A) A Residual Strength Detection Device (RSDD) shall continuously monitor all Elastomeric Coated Steel Belt suspension members (ECSB), automatically stopping the car if the residual strength of any belt drops below 60%. The RSDD shall prevent the elevator from restarting after a normal stop at a landing. The RSDD shall device shall apply a form of electrical current and/or signal through the entire length of the steel tension elements of the ECSB and measure the current and/or signal on its return. The values measured shall be continuously compared to values that have been correlated to the remaining residual strength of the ECSB through testing. The required RSDD shall not rely upon giant magnetoresistance technology, or other magnetic measurement means, for residual strength detection or monitoring.

The RSDD must be properly installed and functional. A functioning device may be removed only after a determination has been made that the residual strength of each belt exceeds 60%. These findings and the date of removal are to be conspicuously documented in the elevator machine room or controller location. The removed RSDD must be replaced or returned to proper service within 30 days. If upon routine inspection, the RSDD device is found to be in a non-functional state, the date and findings are to be conspicuously documented in the elevator machine room or controller location.

If upon inspection by the Division, the RSDD is found to be non-functional or removed, and the required documentation is not in place, the elevator will be removed from service. If the device is removed to facilitate belt replacement, it must be properly installed and functional before the elevator is returned to service.

(B) On or before November 21, 2020, Applicant shall provide to the Division the following written information:

1. Engineering submittals detailing the functional specifications of the residual-strength monitoring device.
2. A substantiating explanation of how the residual-strength monitoring device will continuously monitor the actual residual strength of each load bearing suspension member at any time during its operational life cycle.
3. The results of testing performed, fully demonstrating how the RSDD directly correlates to the physical properties of the suspension members.
4. Information detailing how the RSDD is to be tested by simulating a reduction of suspension member residual strength.

Proposed Decision

OSHSB Variance File No 20-V-128

Patton Equities, LLC

Hearing Date: October 22, 2020

5. Complete test reports of third party listing/certification required by the Elevator Safety Orders (i.e. ASME A17.5)
 6. Schematic wiring diagram of the residual-strength monitoring device, including its interface with the elevator controller.
- (C) On or before May 21, 2021, Applicant shall provide Division for examination, and fully demonstrate to Division the operational performance of, a RSDD of the design to be installed and continuously functioning on the subject elevator. Provided to Division with the RSDD to be examination and demonstration shall be the information specific to it, per above Appendix 1, subpart B.
- (D) On or before November 21 2021, and thereafter, the above specified and documented RSDD shall be installed and operational on the subject elevator.
- (E) A successful functionality test of each RSDD shall be conducted once a year, and a copy of completed testing documentation conspicuously located in the machine room or within proximity of the controller.

STATE OF CALIFORNIA
DEPARTMENT OF INDUSTRIAL RELATIONS
OCCUPATIONAL SAFETY AND HEALTH STANDARDS BOARD
2520 Venture Oaks Way, Suite 350
Sacramento, California 95833
(916) 274-5721

In the Matter of Application to Modify)
Permanent Variance by:)
)
Chapman University)
)
)
_____)

OSHSB FILE No. 20-V-154M1
Proposed Decision Dated: November 24, 2020

DECISION

The Occupational Safety and Health Standards Board hereby adopts the attached PROPOSED DECISION by Christina Shupe, Hearing Officer.

DAVID THOMAS, Chairman

OCCUPATIONAL SAFETY AND HEALTH
STANDARDS BOARD

Date of Adoption: December 17, 2020

BARBARA BURGEL, Member

DAVID HARRISON, Member

NOLA KENNEDY, Member

CHRIS LASZCZ-DAVIS, Member

LAURA STOCK, Member

THE FOREGOING VARIANCE DECISION WAS ADOPTED ON THE DATE INDICATED ABOVE. IF YOU ARE DISSATISFIED WITH THE DECISION, A PETITION FOR REHEARING MAY BE FILED BY ANY PARTY WITH THE STANDARDS BOARD WITHIN TWENTY (20) DAYS AFTER SERVICE OF THE DECISION. YOUR PETITION FOR REHEARING MUST FULLY COMPLY WITH THE REQUIREMENTS OF CALIFORNIA CODE OF REGULATIONS, TITLE 8, SECTIONS 427, 427.1 AND 427.2.

Note: A copy of this Decision must be posted for the Applicant's employees to read, and/or a copy thereof must be provided to the employees' Authorized Representatives.

BEFORE THE
 OCCUPATIONAL SAFETY AND HEALTH STANDARDS BOARD
 DEPARTMENT OF INDUSTRIAL RELATIONS
 STATE OF CALIFORNIA

In the Matter of Application to Modify Permanent Variance by: <p style="text-align: center;">Chapman University</p>	OSHSB File No.: 20-V-154M1 <p style="text-align: center;"><u>PROPOSED DECISION</u></p> Hearing Date: November 20, 2020
---	---

A. The following person or entity (“Applicant”) has applied for a modification of permanent variance from provisions of the Elevator Safety Orders, found at Title 8 of the California Code of Regulations, for each elevator having the specified preexisting variance location address of record:

Preexisting OSHSB File No	Applicant Name	Preexisting Variance Address of Record
20-V-154	Chapman University	Wilkinson Hall 1 University Ave. Orange, CA

B. This proceeding is conducted in accordance with Labor Code Section 143, and California Code of Regulations, Title 8, Section 401, et. seq.

C. Procedural Matters:

1. This hearing was held on November 20, 2020, in Sacramento, California, via teleconference, by Occupational Safety and Health Standards Board (“Board”), with Hearing Officer Christina Shupe, both presiding and hearing the matter on its merit, as a basis of proposed decision to be advanced to the Board for its consideration, in accordance with California Code of Regulations, Title 8, Section 426.
2. At the hearing, Wolter Geesink with Otis Elevator Company, and Dan Leacox of Leacox & Associates, appeared on behalf of the Applicant; Mark Wickens and David Morris appeared on behalf of the Division of Occupational Safety and Health (“Division”); and Michael Nelmidia appeared on behalf of Board staff in a technical advisory role apart from the Board.
3. Documentary and oral evidence was received at the hearing, and by stipulation of all parties, documents were admitted into evidence: the subject modification of permanent variance application captioned above as Exhibit PD-1, Notice of Hearing as Exhibit PD-2, Board staff Pending Application(s) for Permanent Variance Opinion Letter as PD-3, Division evaluation as PD-4, Review Draft 1 Proposed Decision as PD-5, and official notice taken of the Board’s rulemaking records and variance decisions concerning the

Proposed Variance Decision

OSHSB File No. 20-V-154M1

Hearing Date: November 20, 2020

safety order provisions from which variance has been requested. On November 20, 2020, the hearing and record closed, and the matter was taken under submission by the Hearing Officer.

D. Based on the record of this hearing, the Board makes the following findings of fact:

1. The Applicant requests modification of the address of the unchanging variance location specified within Board records for each elevator the subject of previously granted Permanent Variance 20-V-154.
2. Application Section 3, declared to be wholly truthful under penalty of perjury by Application signatory, states facts upon which reasonably may be based a finding that the address, specified in the records of the Board, at which Permanent Variance 20-V-154 is in effect, in fact is more completely, and correctly the different address information specified in below subsection D.5.
3. The Division has evaluated the request for modification of variance location address, finds no issue with it, and recommends that the application for modification be granted subject to the same conditions of the Decision and Order in OSHSB Permanent Variance File No. 20-V-154.
4. The Board finds the above subpart D.2 referenced declaration to be credible, uncontroverted, and consistent with available, sufficient facts, and of no bearing as to the finding of equivalent occupational health and safety upon which Grant of preexisting Permanent Variance 20-V-154 was, in part, based.
5. The Board finds the correct address by which to designate the location of each elevator the subject of Permanent Variance No. 20-V-154, to be:

Wilkinson Hall
301 N. Orange Street
Orange, CA

E. Decision and Order:

1. Permanent Variance Application No. 20-V-154M1 is conditionally GRANTED, thereby modifying Board records, such that, without change in variance location, each elevator being the subject of Permanent Variance Nos. 20-V-154, and 20-V-154M1, shall have the following address designation:

Wilkinson Hall
301 N. Orange Street
Orange, CA

Proposed Variance Decision

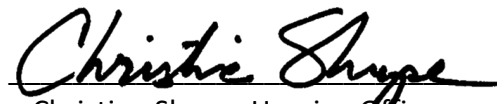
OSHSB File No. 20-V-154M1

Hearing Date: November 20, 2020

2. Permanent Variance No. 20-V-154, being only modified as to the subject location address specified in above Decision and Order Section 1, is otherwise unchanged and remaining in full force and effect, as hereby incorporated by reference into this Decision and Order of Permanent Variance No. 20-V-154M1.

Pursuant to California Code of Regulations, Title 8, Section 426(b), the above, duly completed Proposed Decision, is hereby submitted to the Occupational Safety and Health Standards Board for consideration of adoption.

Dated: November 24, 2020


Christina Shupe, Hearing Officer

STATE OF CALIFORNIA
DEPARTMENT OF INDUSTRIAL RELATIONS
OCCUPATIONAL SAFETY AND HEALTH STANDARDS BOARD
2520 Venture Oaks Way, Suite 350
Sacramento, California 95833
(916) 274-5721

In the Matter of Application to Modify)
Permanent Variance by:)
)
Nash-Holland T&C Residential Investors, LLC)
)
_____)

OSHSB FILE No. 20-V-224M1
Proposed Decision Dated: November 24, 2020

DECISION

The Occupational Safety and Health Standards Board hereby adopts the attached PROPOSED DECISION by Christina Shupe, Hearing Officer.

DAVID THOMAS, Chairman

OCCUPATIONAL SAFETY AND HEALTH
STANDARDS BOARD

Date of Adoption: December 17, 2020

BARBARA BURGEL, Member

DAVID HARRISON, Member

NOLA KENNEDY, Member

CHRIS LASZCZ-DAVIS, Member

LAURA STOCK, Member

THE FOREGOING VARIANCE DECISION WAS ADOPTED ON THE DATE INDICATED ABOVE. IF YOU ARE DISSATISFIED WITH THE DECISION, A PETITION FOR REHEARING MAY BE FILED BY ANY PARTY WITH THE STANDARDS BOARD WITHIN TWENTY (20) DAYS AFTER SERVICE OF THE DECISION. YOUR PETITION FOR REHEARING MUST FULLY COMPLY WITH THE REQUIREMENTS OF CALIFORNIA CODE OF REGULATIONS, TITLE 8, SECTIONS 427, 427.1 AND 427.2.

Note: A copy of this Decision must be posted for the Applicant's employees to read, and/or a copy thereof must be provided to the employees' Authorized Representatives.

BEFORE THE
 OCCUPATIONAL SAFETY AND HEALTH STANDARDS BOARD
 DEPARTMENT OF INDUSTRIAL RELATIONS
 STATE OF CALIFORNIA

<p>In the Matter of Application to Modify Permanent Variance by:</p> <p style="text-align: center;">Nash-Holland T&C Residential Investors, LLC</p>	<p>OSHSB File No.: 20-V-224M1</p> <p style="text-align: center;"><u>PROPOSED DECISION</u></p> <p>Hearing Date: November 20, 2020</p>
---	--

A. The following person or entity (“Applicant”) has applied for a modification of permanent variance from provisions of the Elevator Safety Orders, found at Title 8 of the California Code of Regulations, for each elevator having the specified preexisting variance location address of record:

Preexisting OSHSB File No.	Applicant Name	Preexisting Variance Address of Record
20-V-224	Nash-Holland T&C Residential Investors, LLC	600 Del Sol Drive San Diego, CA

B. This proceeding is conducted in accordance with Labor Code Section 143, and California Code of Regulations, Title 8, Section 401, et. seq.

C. Procedural Matters:

1. This hearing was held on November 20, 2020, in Sacramento, California, via teleconference, by Occupational Safety and Health Standards Board (“Board”), with Hearing Officer Christina Shupe, both presiding and hearing the matter on its merit, as a basis of proposed decision to be advanced to the Board for its consideration, in accordance with California Code of Regulations, Title 8, Section 426.
2. At the hearing, Daniel May, with KONE, Inc., appeared on behalf of the Applicant, Mark Wickens and David Morris appeared on behalf of the Division of Occupational Safety and Health (“Division”); and Michael Nelmida appeared on behalf of Board staff in a technical advisory role apart from the Board.
3. Documentary and oral evidence was received at the hearing, and by stipulation of all parties, documents were admitted into evidence: the subject modification of permanent variance application captioned above as Exhibit PD-1, Notice of Hearing as Exhibit PD-2, Board staff Pending Application(s) for Permanent Variance Opinion Letter as PD-3, Division evaluation as PD-4, Review Draft 1 Proposed Decision as PD-5, and official notice taken of the Board’s files, records, recordings and decisions concerning the Elevator Safety Order requirements from which variance shall issue. On November 20,

2020, the hearing and record closed, and the matter was taken under submission by the Hearing Officer.

D. Based on the record of this hearing, the Board makes the following findings of fact:

1. The Applicant requests modification of the address of the unchanging variance location specified within Board records for each elevator the subject of previously granted Permanent Variance 20-V-224.
2. Application Section 3, declared to be wholly truthful under penalty of perjury by Application signatory, states facts upon which reasonably may be based a finding that the address, specified in the records of the Board, at which Permanent Variance 20-V-224 is in effect, in fact is more completely, and correctly the different combination of addresses specified in below subsection D.5.
3. The Division has evaluated the request for modification of variance location address, finds no issue with it, and recommends that the application for modification be granted subject to the same conditions of the Decision and Order in OSHSB Permanent Variance File No. 20-V-224.
4. The Board finds the above subpart D.2 referenced declaration to be credible, uncontroverted, and consistent with available, sufficient facts, and of no bearing as to the finding of equivalent occupational health and safety upon which Grant of preexisting Permanent Variance 20-V-224 was, in part, based.
5. The Board finds the correct address by which to designate the location of each elevator the subject of Permanent Variance No. 20-V-224, to be:

610 Del Sol Drive
San Diego, CA

E. Decision and Order:

1. Permanent Variance Application No. 20-V-224M1 is conditionally GRANTED, thereby modifying Board records, such that, without change in variance location, each elevator being the subject of Permanent Variance Nos. 20-V-224, and 20-V-224M1, shall have the following address designation:

610 Del Sol Drive
San Diego, CA

2. Permanent Variance No. 20-V-224, being only modified as to the subject location address specified in above Decision and Order Section 1, is otherwise unchanged and

Proposed Variance Decision
OSHSB File No. 20-V-224M1
Hearing Date: November 20, 2020

remaining in full force and effect, as hereby incorporated by reference into this Decision and Order of Permanent Variance No. 20-V-224M1.

Pursuant to California Code of Regulations, Title 8, Section 426(b), the above, duly completed Proposed Decision, is hereby submitted to the Occupational Safety and Health Standards Board for consideration of adoption.

Dated: November 24, 2020


Christina Shupe, Hearing Officer

STATE OF CALIFORNIA
DEPARTMENT OF INDUSTRIAL RELATIONS
OCCUPATIONAL SAFETY AND HEALTH STANDARDS BOARD
2520 Venture Oaks Way, Suite 350
Sacramento, California 95833
(916) 274-5721

In the Matter of Application for Permanent Variance Regarding:)
)
)
KONE Monospace 500 Elevators)
with Retractable Platform Guard (Group IV))
)
_____)

OSHSB FILE No.: see grid in Item A of Proposed Decision Dated: November 24, 2020

DECISION

The Occupational Safety and Health Standards Board hereby adopts the attached PROPOSED DECISION by Christina Shupe, Hearing Officer.

DAVID THOMAS, Chairman

BARBARA BURGEL, Member

DAVID HARRISON, Member

NOLA KENNEDY, Member

CHRIS LASZCZ-DAVIS, Member

LAURA STOCK, Member

OCCUPATIONAL SAFETY AND HEALTH STANDARDS BOARD

Date of Adoption: December 17, 2020

THE FOREGOING VARIANCE DECISION WAS ADOPTED ON THE DATE INDICATED ABOVE. IF YOU ARE DISSATISFIED WITH THE DECISION, A PETITION FOR REHEARING MAY BE FILED BY ANY PARTY WITH THE STANDARDS BOARD WITHIN TWENTY (20) DAYS AFTER SERVICE OF THE DECISION. YOUR PETITION FOR REHEARING MUST FULLY COMPLY WITH THE REQUIREMENTS OF CALIFORNIA CODE OF REGULATIONS, TITLE 8, SECTIONS 427, 427.1 AND 427.2.

Note: A copy of this Decision must be posted for the Applicant's employees to read, and/or a copy thereof must be provided to the employees' Authorized Representatives.

BEFORE THE
 OCCUPATIONAL SAFETY AND HEALTH STANDARDS BOARD
 DEPARTMENT OF INDUSTRIAL RELATIONS
 STATE OF CALIFORNIA

<p>In the Matter of Application for Permanent Variance Regarding:</p> <p>KONE Monospace 500 Elevators <i>with Retractable Platform Guard</i> (Group IV)</p>	<p>OSHSB File Nos.: Per Section A.1 Grid Below</p> <p><u>PROPOSED DECISION</u></p> <p>Hearing Date: November 20, 2020</p>
--	---

A. Subject Matter:

- Each below listed applicant (“Applicant”) applied for a permanent variance from provisions of the Elevator Safety Orders, found at Title 8 of the California Code of Regulations, with respect to a conveyance, or conveyances, in the listed quantity, at the listed location:

Variance No.	Applicant Name	Variance Location Address	No. of Elevators
20-V-256	250 Cambridge Associates, LLC	250 Cambridge Ave Palo Alto, CA	1

- The subject Title 8, safety order requirements are set out within California Code of Regulations, Title 8, Section 3141 incorporated ASME A17.1-2004, Sections 2.18.5.1, 2.20.4, 2.4.1.5 and 2.15.9.2.

B. Procedural:

- This hearing was held on November 20, 2020, in Sacramento, California, via teleconference, by delegation of the Occupational Safety and Health Standards Board (“Board”), with Hearing Officer Christina Shupe, both presiding and hearing the matter on its merit, as a basis of proposed decision to be advanced to the Board for its consideration, in accordance with California Code of Regulations, Title 8, Section 426.
- At the hearing, Daniel May, with KONE, Inc., appeared on behalf of each Applicant; Mark Wickens and David Morris appeared on behalf of the Division of Occupational Safety and Health (“Division”), and Michael Nelmidia appeared on behalf of Board staff in a technical advisory capacity apart from the Board.
- Documentary and oral evidence was received at the hearing, and by stipulation of all parties, documents were admitted into evidence: permanent variance applications per

Proposed Variance Decision

KONE Monospace 500 Elevators with Retractable Platform Guard (Group IV)

Hearing Date: November 20, 2020

Section A.1 table as Exhibit PD-1, Notice of Hearing as Exhibit PD-2, Board staff Pending Application Memorandum as PD-3, Division Review of Application as PD-4, Review Draft 1 Proposed Decision as PD-5, and official notice taken of the Board's rulemaking records and variance decisions concerning the safety order requirements from which variance is sought. Upon close of hearing on November 20, 2020, the record closed and the matter was taken under submission by the Hearing Officer.

C. Findings of Fact—Based on the record of this proceeding, the Board finds the following:

1. Each respective Applicant intends to utilize the KONE Inc. Monospace 500 type elevator, in the quantity, at the location, specified per the above Section A.1 table.
2. The installation contract for this elevator was or will be signed on or after May 1, 2008, thus making the elevator subject to the Group IV Elevator Safety Orders.
3. Each Applicant proposes to use hoisting ropes that are 8 mm in diameter which also consist of 0.51 mm diameter outer wires, in variance from the express requirements of ASME A17.1-2004, Section 2.20.4.
4. In relevant part, ASME A17.1-2004, Section 2.20.4 states:

2.20.4 Minimum Number and Diameter of Suspension Ropes

...The minimum diameter of hoisting and counterweight ropes shall be 9.5 mm (0.375 in.). Outer wires of the ropes shall be not less than 0.56 mm (0.024 in.) in diameter.

5. An intent of the afore cited requirement of ASME A17.1-2004, Section 2.20.4, is to ensure that the number, diameter, and construction of suspension ropes are adequate to provided safely robust and durable suspension means over the course of the ropes' foreseen service life.
6. KONE has represented to Division and Board staff, having established an engineering practice for purposes of Monospace 500 elevator design, of meeting or exceeding the minimum factor of safety of 12 for 8 mm suspension members, as required in ASME A17.1-2010, Section 2.20.3—under which, given that factor of safety, supplemental broken suspension member protection is not required.
7. Also, each Applicant proposes as a further means of maintaining safety equivalence, monitoring the rope in conformity with the criteria specified within the *Inspector's Guide to 6 mm Diameter Governor and 8 mm Diameter Suspension Ropes for KONE Elevators*

Proposed Variance Decision

KONE Monospace 500 Elevators with Retractable Platform Guard (Group IV)

Hearing Date: November 20, 2020

(per Application attachment “B”, or as thereafter revised by KONE subject to Division approval).

8. In addition, each Applicant has proposed to utilize 6 mm diameter governor ropes in variance from Title 8, Section 3141, incorporated ASME A17.1-2004, Section 2.18.5.1.
9. ASME A17.1-2004, Section 2.18.5.1, specifies, in relevant part:

2.18.5.1 Material and Factor of Safety.

... [Governor ropes] not less than 9.5 mm (0.375 in.) in diameter. The factor of safety of governor ropes shall be not less than 5...

10. The Board takes notice of Title 8, Elevator Safety Order Section 3141.7, subpart (a)(10):

A reduced diameter governor rope of equivalent construction and material to that required by ASME A17.1-2004, is permissible if the factor of safety as related to the strength necessary to activate the safety is 5 or greater;

11. Applicants propose use of 6mm governor rope having a safety factor of 5 or greater, in conformity with Section 3141.7(a)(10), the specific parameters of which, being expressly set out within Title 8, Elevator Safety Orders, take precedence over more generally referenced governor rope diameter requirements per ASME A17.1-2004, Section 2.18.5.1. Accordingly, the governor rope specifications being presently proposed, inclusive of a factor of safety of 5 or greater, would comply with current Title 8, Elevator Safety Orders requirements, and therefore not be subject to issuance of permanent variance.
12. Absent evident diminution in elevator safety, over the past decade the Board has issued numerous permanent variances for use in KONE (Ecospace) elevator systems of 8 mm diameter suspension rope materially similar to that presently proposed (e.g. OSHSB File Nos. 06-V-203, 08-V-245, and 13-V-303).
13. As noted by the Board in OSHSB File Nos. 18-V-044, and 18-V-045, Decision and Order Findings, subpart B.17 (hereby incorporated by reference), the strength of wire rope operating as an elevator’s suspension means does not remain constant over its years of projected service life. With increasing usage cycles, a reduction in the cross-sectional area of the wire rope normally occurs, resulting in decreased residual strength. This characteristic is of particular relevance to the present matter because, as also noted by Board staff, decreasing wire rope diameter is associated with a higher rate of residual strength loss. This foreseeable reduction in cross-sectional area primarily results from elongation under sheave rounding load, as well as from wear, and wire or strand breaks.

Proposed Variance Decision

KONE Monospace 500 Elevators with Retractable Platform Guard (Group IV)

Hearing Date: November 20, 2020

However, these characteristics need not compromise elevator safety when properly accounted for in the engineering of elevator suspension means, and associated components.

14. The presently proposed wire rope is Wuxi Universal steel rope Co LTD. 8 mm 8x19S+8x7+PP, with a manufacturer rated breaking strength of 35.8 kN, and an outer wire diameter of less than 0.56 mm, but not less than 0.51 mm. Both Board staff and Division safety engineers have scrutinized the material and structural specifications, and performance testing data, of this particular proposed rope, and conclude it will provide for safety equivalent to ESO compliant 9.5 mm wire rope, with 0.56 mm outer wire (under conditions of use included within the below Decision and Order).
15. The applicant supplies tabulated data regarding the “Maximum Static Load on All Suspension Ropes.” To obtain the tabulated data, the applicant uses the following formula derived from ASME A17.1 2004, Section 2.20.3:

$$W = (S \times N) / f$$

where

W = maximum static load imposed on all car ropes with the car and its rated load at any position in the hoistway

N = number of runs of rope under load. For 2:1 roping, N shall be two times the number of ropes used, etc.

S = manufacturer's rated breaking strength of one rope

f = the factor of safety from Table 2.20.3

16. ASME A17.1-2010 Sections 2.20.3 and 2.20.4 utilize the same formula, but provide for use of suspension ropes having a diameter smaller than 9.5 mm, under specified conditions, key among them being that use of ropes having a diameter of between 8 mm to 9.5 mm be engineered with a factor of safety of 12 or higher. This is a higher minimum factor of safety than that proposed by Applicant, but a minimum recommended by both Board staff and Division as a condition of variance necessary to the achieving of safety equivalence to 9.5 mm rope.
17. Board staff and Division are in accord with Applicant, in proposing as a condition of safety equivalence, that periodic physical examination of the wire ropes be performed to confirm the ropes continue to meet the criteria set out in the (Application attachment) *Inspector's Guide to 6 mm Diameter Governor and 8 mm Diameter Suspension Ropes for KONE Elevators*. Adherence to this condition will provide an additional assurance of safety equivalence, regarding smaller minimum diameter suspension rope outer wire performance over the course of its service life.

Proposed Variance Decision

KONE Monospace 500 Elevators with Retractable Platform Guard (Group IV)

Hearing Date: November 20, 2020

18. The Board incorporates by reference the following findings of fact: Subsections 5 through 9, set forth in the “Findings of Fact” Section of the Proposed Decision adopted by the Board on June 18, 2010 regarding OSHSB File No. 08-V-108M1.
19. Applicant proposes to install a two-section retractable platform guard (apron) consisting of a stationary upper section guard plate and a moveable lower section guard plate. To monitor the retractable mechanism, an electrical switching system will be provided to monitor for malfunction.
20. Section 3141 [ASME A17.1-2004, Section 2.15.9.2] states, in part:

2.15.9.2 The guard plate shall have a straight vertical face, extending below the floor surface of the platform, conforming to one of the following:

(a) where the elevator is required to conform to 2.19.2.2(b) the depth of the truck zone, where provided, plus 75 mm (3 in.), but in no case less than 1,220 mm (48 in.).

An intent of this code section is to guard a hazardous opening to the hoistway if the elevator car is intentionally or unintentionally positioned above the landing zone, by providing a guard that extends below the car platform to obstruct the opening.

21. Section 3141 [ASME A17.1-2004, Section 2.4.1.5] states, in part:

2.4.1.5 When the car is resting on its fully compressed buffers or bumpers, no part of the car, or any equipment attached thereto or equipment traveling with the car, shall strike any part of the pit or any equipment mounted therein.
22. An intent of this code section is to prevent any equipment attached to the elevator car from striking any part of the pit. This could damage the elevator equipment, which may result in unsafe operation or injury.
23. Per Division’s Review of Application (Exhibit PD-4) Applicant’s proposed platform guard is similar in all material respects to installations for which a permanent variance previously has been granted. (e.g. 18-V-010M1).
24. Both Board staff, and Division, by way of written submissions to the record (Exhibits PD-3 and PD-4 respectively), and stated positions at hearing, are of the well informed opinion that grant of permanent variance, as limited and conditioned per the below Decision and Order will provide employment, places of employment, and subject

Proposed Variance Decision

KONE Monospace 500 Elevators with Retractable Platform Guard (Group IV)

Hearing Date: November 20, 2020

conveyances, as safe and healthful as would prevail given non-variant conformity with the Elevator Safety Order requirements from which variance has been requested.

D. Conclusive Findings:

The above stated procedural prerequisites, legal authority, and factual findings, as further supported by the documentary record and hearing testimony in this matter, provide a substantive and reasonable basis of conclusion that: (1) Each Applicant has complied with the statutory and regulatory requirements that must be met before an application for permanent variance may be conditionally granted; and (2) a preponderance of the evidence establishes that each Applicants proposal, subject to all conditions and limitations set forth in the below Decision and Order, will provide equivalent safety and health to that which would prevail upon full compliance with the requirements of California Code of Regulation, Title 8, Elevator Safety Orders from which variance is being sought.

E. Decision and Order:

Each Application being the subject of this proceeding, per the table in Jurisdictional and Procedural Matters, section 1 above, is conditionally GRANTED, to the extent that each such Applicant shall be issued permanent variance from California Code of Regulations, Title 8, section 3141 shall be GRANTED subject to the following conditions and limitations:

Elevator Safety Orders:

- Minimum Diameter of Suspension Ropes: 2.20.4 (Only to the extent necessary to permit the use of 8 mm [0.0315 in.] diameter suspension ropes, where the Elevator Safety Orders require a minimum diameter of 9.5 mm [0.375]);
- Platform Guard: 2.15.9.2 (Only to the extent necessary to permit the use of a two-section retractable platform guard (apron) where the depth of the pit is not sufficient enough to prevent the platform guard from contacting the floor when the car is resting on its fully compressed buffers or bumpers); and
- Bottom Car Clearances: 2.4.1.5 (Only to the extent necessary to permit the two-section retractable platform guard (apron) to contact the pit floor).

Conditions:

1. The diameter of the hoisting steel ropes shall be not less than 8 mm (0.315 in) diameter and the roping ratio shall be two to one (2:1).
2. The outer wires of the suspension ropes shall be not less than 0.51 mm (0.02 in.) in diameter.

Proposed Variance Decision

KONE Monospace 500 Elevators with Retractable Platform Guard (Group IV)

Hearing Date: November 20, 2020

3. The number of suspension ropes shall be not fewer than those specified per hereby incorporated Decision and Order Appendix 1 Table.
4. The ropes shall be inspected annually for wire damage (rouge, valley break etc.) in accordance with "KONE Inc. Inspector's Guide to 6 mm diameter and 8 mm diameter steel ropes for KONE Elevators" (per Application Exhibit B, or as thereafter amended by KONE subject to Division approval).
5. A rope inspection log shall be maintained and available in the elevator controller room / space at all times.
6. The elevator rated speed shall not exceed those speeds specified per the Decision and Order Appendix 1 Table.
7. The maximum suspended load shall not exceed those weights (plus 5%) specified per the Decision and Order Appendix 1 Table.
8. The opening to the hoistway shall be effectively barricaded when car top inspection, maintenance, servicing, or testing of the elevator equipment in the hoistway is required. If the service personnel must leave the area for any reason, the hoistway and control room doors shall be closed.
9. The installation shall meet the suspension wire rope factor of safety requirements of ASME A17.1-2013 Section 2.20.3.
10. The Applicant shall comply with suspension means replacement reporting condition per hereby incorporated Decision and Order Appendix 2.
11. In lieu of the straight vertical face (one-piece) platform guards (aprons) required by Section 3141 [ASME A17.1-2004, Section 2.15.9.2], a two-section retractable platform guard consisting of a stationary, upper-section guard plate and a moveable, lower-section guard plate shall be installed to conform to the following:
 - a. The stationary, upper-section guard plate shall have a straight vertical face, extending below the floor surface of the platform; the height shall be not less than 920 mm (36.2 in).
 - b. The movable, lower-section guard plate shall:
 - i. Comply with ASME A17.1-2004, Section 2.15.9.3;
 - ii. Be provided a rubber bumper at the center of the bottom edge of the plate to absorb the impact when the toe guard strikes the concrete pit floor;

Proposed Variance Decision

KONE Monospace 500 Elevators with Retractable Platform Guard (Group IV)

Hearing Date: November 20, 2020

- iii. Be provided with an electrical switch that indicates to the control system that the retractable platform guard is in its extended position (when car is away from the bottom landing), and be provided with a second electrical switch that indicates to the control system that the moveable lower section is in its retracted position (when the car is at the bottom landing), thereby overriding the first switch. Failure of either of these electrical switches or of the mechanical parts that activate these electrical switches shall cause the controller to remove power from the driving machine and brake.
 - c. The two-section retractable platform guard shall be provided with smooth metal guard plates of not less than 1.5 mm (0.059 in) thick steel, or material of equivalent strength and stiffness, adequately reinforced and braced to the car platform and conforming to ASME A17.1-2004, sections 2.15.9.1 and 2.15.9.4.
 - d. The overall height of the two-section retractable platform guard shall be not less than 1220 mm (48 in) when the moveable lower section is in the fully extended (deployed) position.
 - e. The elevator rated speed shall be equal to or less than 200 feet per minute.
 - f. The opening to the hoistway shall be effectively barricaded when car top inspection, maintenance, servicing, or testing of the elevator equipment in the hoistway is required. If the service personnel must leave the area for any reason, the hoistway and control room doors shall be closed.
12. Any Certified Qualified Conveyance Company performing inspections, maintenance, servicing or testing the elevators shall be provided a copy of this variance decision.
13. The Division shall be notified when the elevator is ready for inspection. The elevator shall be inspected by the Division and a "Permit to Operate" issued before the elevator is placed in service.
14. The Applicant shall notify its employees or their authorized representative(s), or both, of this order in the same way and to the same extent that employees and authorized representatives are to be notified of docketed permanent variance applications pursuant to California Code of Regulations, Title 8, Sections 411.2 and 411.3.
15. This Decision and Order shall remain in effect unless modified or revoked upon application by the Applicant, affected employee(s), the Division of Occupational Safety and Health, or by the Board on its own motion, in accordance with procedures per Title 8, Division 1, Chapter 3.5.

Proposed Variance Decision

KONE Monospace 500 Elevators with Retractable Platform Guard (Group IV)

Hearing Date: November 20, 2020

Pursuant to California Code of Regulations, Title 8, Section 426(b), the above, duly completed Proposed Decision, is hereby submitted to the Occupational Safety and Health Standards Board for consideration of adoption.

Dated: November 24, 2020


Christina Shupe, Hearing Officer

Proposed Variance Decision

KONE Monospace 500 Elevators with Retractable Platform Guard (Group IV)

Hearing Date: November 20, 2020

Appendix 1

	Monospace 500 Suspension Ropes Appendix 1 Table			
OSHSB File No.	Elevator ID	Minimum Quantity of Ropes (per Condition 3)	Maximum Speed in Feet per Minute (per Condition 6)	Maximum Suspended Load (per Condition 7)
20-V-256	1	6	150	10,497

Appendix 2

Suspension Means Replacement Reporting Condition

Beginning on the date the Board adopts this Proposed Decision and continuing for a period of two years, the Applicant shall report to the Division within 30 days any and all replacement activity performed on the elevator(s) pursuant to the requirements of ASME A17.1-2004, Section 8.6.3 involving the suspension means or suspension means fastenings. Further:

1. A separate report for each elevator shall be submitted, in a manner acceptable to the Division, to the following address (or to such other address as the Division might specify in the future): DOSH Elevator Unit, 2 MacArthur Place, Suite 700, Santa Ana, CA 92707, Attn: Engineering Section.
2. Each such report shall contain, but not necessarily be limited to, the following information:
 - a. The State-issued conveyance number, complete address, and OSHSB file number that identifies the permanent variance.
 - b. The business name, complete address, telephone number, and contact person of the elevator responsible party (presumably the Applicant or the subsequent holder of this variance).
 - c. The business name, complete address, telephone number, and Certified Qualified Conveyance Company (CQCC) certification number of the firm performing the replacement work.
 - d. The name (as listed on certification), Certified Competent Conveyance Mechanic (CCCM) certification number, certification expiration date, and signature of each CCCM performing the replacement work.
 - e. The date and time the elevator was removed from normal service for suspension replacement, the date and time the replacement work commenced, the date and time the replacement work was completed, and the date and time the elevator was returned to normal service.
 - f. A detailed description of, and clear color photographs depicting, (1) all the conditions that existed in the suspension components requiring their replacement and (2) any conditions that existed to cause damage or distress to the suspension components being replaced.

Proposed Variance Decision

KONE Monospace 500 Elevators with Retractable Platform Guard (Group IV)

Hearing Date: November 20, 2020

- g. A detailed list of all elevator components adjusted, repaired, or replaced in conjunction with the suspension component replacement.
 - h. All information provided on the crosshead data plate per ASME A17.1-2004, Section 2.20.2.1, unless that ASME requirement is modified by the conditions of a variance that pertains to the elevator in question, in which case, the information to be reported shall be the information required by the ASME provision as modified by the variance.
 - i. For the suspension means being replaced, all information provided on the data tag required per ASME A17.1-2004, Section 2.20.2.2, unless that ASME requirement is modified by the conditions of a variance that pertains to the elevator in question, in which case, the information to be reported shall be the information required by the ASME provision as modified by the variance.
 - j. For the replacement suspension means, all information provided on the data tag required by ASME A17.1-2004, Section 2.20.2.2, unless that ASME requirement is modified by the conditions of a variance that pertains to the elevator in question, in which case, the information to be reported shall be the information required by the ASME provision as modified by the variance.
 - k. Any other information requested by the Division regarding the replacement of the suspension means or fastenings.
3. In addition to the submission of the report to the Division, the findings of any testing, failure analysis, or other engineering evaluations performed on any portion of the replaced suspension components, or other elevator components replaced in conjunction therewith, shall be submitted to the Division referencing the information contained in above Appendix 2, Section 2, Subsection (a), above.

STATE OF CALIFORNIA
DEPARTMENT OF INDUSTRIAL RELATIONS
OCCUPATIONAL SAFETY AND HEALTH STANDARDS BOARD
2520 Venture Oaks Way, Suite 350
Sacramento, California 95833
(916) 274-5721

In the Matter of Application for Permanent Variance Regarding:)
)
)
)
KONE Monospace 500 Elevators (Group IV))
)
_____)

OSHSB FILE No.: see grid in Item A of Proposed Decision Dated: November 24, 2020

DECISION

The Occupational Safety and Health Standards Board hereby adopts the attached PROPOSED DECISION by Christina Shupe, Hearing Officer.

DAVID THOMAS, Chairman

OCCUPATIONAL SAFETY AND HEALTH STANDARDS BOARD

Date of Adoption: December 17, 2020

BARBARA BURGEL, Member

DAVID HARRISON, Member

THE FOREGOING VARIANCE DECISION WAS ADOPTED ON THE DATE INDICATED ABOVE. IF YOU ARE DISSATISFIED WITH THE DECISION, A PETITION FOR REHEARING MAY BE FILED BY ANY PARTY WITH THE STANDARDS BOARD WITHIN TWENTY (20) DAYS AFTER SERVICE OF THE DECISION. YOUR PETITION FOR REHEARING MUST FULLY COMPLY WITH THE REQUIREMENTS OF CALIFORNIA CODE OF REGULATIONS, TITLE 8, SECTIONS 427, 427.1 AND 427.2.

NOLA KENNEDY, Member

CHRIS LASZCZ-DAVIS, Member

LAURA STOCK, Member

Note: A copy of this Decision must be posted for the Applicant's employees to read, and/or a copy thereof must be provided to the employees' Authorized Representatives.

BEFORE THE
 OCCUPATIONAL SAFETY AND HEALTH STANDARDS BOARD
 DEPARTMENT OF INDUSTRIAL RELATIONS
 STATE OF CALIFORNIA

In the Matter of Application for Permanent Variance Regarding: KONE Monospace 500 Elevators (Group IV)	OSHSB File Nos.: Per Section A.1 Grid Below <u>PROPOSED DECISION</u> Hearing Date: November 20, 2020
---	--

A. Subject Matter:

- Each below listed applicant (“Applicant”) applied for a permanent variance from provisions of the Elevator Safety Orders, found at Title 8 of the California Code of Regulations, with respect to a conveyance, or conveyances, in the listed quantity, at the listed location:

Variance No.	Applicant Name	Variance Location Address	No. of Elevators
20-V-303	The Board of Trustees of the Leland Stanford Junior University	Stanford Gilbert Sciences Bldg 371 Serra Mall Stanford, CA	1
20-V-351	HPMU4 LA, LLC	920 S. District Drive. Inglewood, CA	2
20-V-358	Allied 38631 Fremont, L.P.	38631 Fremont Blvd. Fremont, CA	1
20-V-371	303 Austin Street, LLC	1523 Franklin St. San Francisco, CA	1
20-V-372	230 7th Street, LLC	230 7th Street San Francisco, CA	1
20-V-410	556 SC Partners LLC	556 Santa Cruz Avenue Menlo Park, CA	1

- The subject Title 8, safety order requirements are set out within California Code of Regulations, Title 8, Section 3141 incorporated ASME A17.1-2004, Sections 2.18.5.1 and 2.20.4.

B. Procedural:

1. This hearing was held on November 20, 2020, in Sacramento, California and via teleconference, by delegation of the Occupational Safety and Health Standards Board (“Board”), with Hearing Officer Christina Shupe, both presiding and hearing the matter on its merit, as a basis of proposed decision to be advanced to the Board for its consideration, in accordance with California Code of Regulations, Title 8, Section 426.
2. At the hearing, Daniel May, with KONE, Inc., appeared on behalf of each Applicant; Mark Wickens and David Morris appeared on behalf of the Division of Occupational Safety and Health (“Division”), and Michael Nelmidia appeared on behalf of Board staff in a technical advisory capacity apart from the Board.
3. Documentary and oral evidence was received at the hearing, and by stipulation of all parties, documents were admitted into evidence: permanent variance applications per Section A.1 table as Exhibit PD-1, Notice of Hearing as Exhibit PD-2, Board staff Pending Application Memorandum as PD-3, Division Review of Application as PD-4, Review Draft 1 Proposed Decision as PD-5, and official notice taken of the Board’s rulemaking records and variance decisions concerning the safety order requirements from which variance is sought. Upon close of hearing on November 20, 2020, the record closed and the matter was taken under submission by the Hearing Officer.

C. Findings of Fact—Based on the record of this proceeding, the Board finds the following:

1. Each respective Applicant intends to utilize the KONE Inc. Monospace 500 type elevator, in the quantity, at the location, specified per the above Section A.1 table.
2. The installation contract for this elevator was or will be signed on or after May 1, 2008, thus making the elevator subject to the Group IV Elevator Safety Orders.
3. Each Applicant proposes to use hoisting ropes that are 8 mm in diameter which also consist of 0.51 mm diameter outer wires, in variance from the express requirements of ASME A17.1-2004, Section 2.20.4.
4. In relevant part, ASME A17.1-2004, Section 2.20.4 states:

2.20.4 Minimum Number and Diameter of Suspension Ropes

...The minimum diameter of hoisting and counterweight ropes shall be 9.5 mm (0.375 in.). Outer wires of the ropes shall be not less than 0.56 mm (0.024 in.) in diameter.

5. An intent of the afore cited requirement of ASME A17.1-2004, Section 2.20.4, is to ensure that the number, diameter, and construction of suspension ropes are adequate to provided safely robust and durable suspension means over the course of the ropes' foreseen service life.
6. KONE has represented to Division and Board staff, having established an engineering practice for purposes of Monospace 500 elevator design, of meeting or exceeding the minimum factor of safety of 12 for 8 mm suspension members, as required in ASME A17.1-2010, Section 2.20.3—under which, given that factor of safety, supplemental broken suspension member protection is not required.
7. Also, each Applicant proposes as a further means of maintaining safety equivalence, monitoring the rope in conformity with the criteria specified within the *Inspector's Guide to 6 mm Diameter Governor and 8 mm Diameter Suspension Ropes for KONE Elevators* (per Application attachment "B", or as thereafter revised by KONE subject to Division approval).
8. In addition, each Applicant has proposed to utilize 6 mm diameter governor ropes in variance from Title 8, Section 3141, incorporated ASME A17.1-2004, Section 2.18.5.1.
9. ASME A17.1-2004, Section 2.18.5.1, specifies, in relevant part:

2.18.5.1 Material and Factor of Safety.

... [Governor ropes] not less than 9.5 mm (0.375 in.) in diameter. The factor of safety of governor ropes shall be not less than 5...

10. The Board takes notice of Title 8, Elevator Safety Order Section 3141.7, subpart (a)(10):

A reduced diameter governor rope of equivalent construction and material to that required by ASME A17.1-2004, is permissible if the factor of safety as related to the strength necessary to activate the safety is 5 or greater;

11. Applicants propose use of 6mm governor rope having a safety factor of 5 or greater, in conformity with Section 3141.7(a)(10), the specific parameters of which, being expressly set out within Title 8, Elevator Safety Orders, take precedence over more generally referenced governor rope diameter requirements per ASME A17.1-2004, Section 2.18.5.1. Accordingly, the governor rope specifications being presently

proposed, inclusive of a factor of safety of 5 or greater, would comply with current Title 8, Elevator Safety Orders requirements, and therefore not be subject to issuance of permanent variance.

12. Absent evident diminution in elevator safety, over the past decade the Board has issued numerous permanent variances for use in KONE (Ecospace) elevator systems of 8 mm diameter suspension rope materially similar to that presently proposed (e.g. OSHSB File Nos. 06-V-203, 08-V-245, and 13-V-303).
13. As noted by the Board in OSHSB File Nos. 18-V-044, and 18-V-045, Decision and Order Findings, subpart B.17 (hereby incorporated by reference), the strength of wire rope operating as an elevator's suspension means does not remain constant over its years of projected service life. With increasing usage cycles, a reduction in the cross-sectional area of the wire rope normally occurs, resulting in decreased residual strength. This characteristic is of particular relevance to the present matter because, as also noted by Board staff, decreasing wire rope diameter is associated with a higher rate of residual strength loss. This foreseeable reduction in cross-sectional area primarily results from elongation under sheave rounding load, as well as from wear, and wire or strand breaks. However, these characteristics need not compromise elevator safety when properly accounted for in the engineering of elevator suspension means, and associated components.
14. The presently proposed wire rope is Wuxi Universal steel rope Co LTD. 8 mm 8x19S+8x7+PP, with a manufacturer rated breaking strength of 35.8 kN, and an outer wire diameter of less than 0.56 mm, but not less than 0.51 mm. Both Board staff and Division safety engineers have scrutinized the material and structural specifications, and performance testing data, of this particular proposed rope, and conclude it will provide for safety equivalent to ESO compliant 9.5 mm wire rope, with 0.56 mm outer wire (under conditions of use included within the below Decision and Order).
15. The applicant supplies tabulated data regarding the "Maximum Static Load on All Suspension Ropes." To obtain the tabulated data, the applicant uses the following formula derived from ASME A17.1 2004, Section 2.20.3:

$$W = (S \times N) / f$$

where

W = maximum static load imposed on all car ropes with the car and its rated load at any position in the hoistway

N = number of runs of rope under load. For 2:1 roping, N shall be two times the number of ropes used, etc.

S = manufacturer's rated breaking strength of one rope
 f = the factor of safety from Table 2.20.3

16. ASME A17.1-2010 Sections 2.20.3 and 2.20.4 utilize the same formula, but provide for use of suspension ropes having a diameter smaller than 9.5 mm, under specified conditions, key among them being that use of ropes having a diameter of between 8 mm to 9.5 mm be engineered with a factor of safety of 12 or higher. This is a higher minimum factor of safety than that proposed by Applicant, but a minimum recommended by both Board staff and Division as a condition of variance necessary to the achieving of safety equivalence to 9.5 mm rope.
17. Board staff and Division are in accord with Applicant, in proposing as a condition of safety equivalence, that periodic physical examination of the wire ropes be performed to confirm the ropes continue to meet the criteria set out in the (Application attachment) *Inspector's Guide to 6 mm Diameter Governor and 8 mm Diameter Suspension Ropes for KONE Elevators*. Adherence to this condition will provide an additional assurance of safety equivalence, regarding smaller minimum diameter suspension rope outer wire performance over the course of its service life.
18. Both Board staff, and Division, by way of written submissions to the record (Exhibits PD-3 and PD-4 respectively), and stated positions at hearing, are of the well informed opinion that grant of permanent variance, as limited and conditioned per the below Decision and Order will provide employment, places of employment, and subject conveyances, as safe and healthful as would prevail given non-variant conformity with the Elevator Safety Order requirements from which variance has been requested.

D. Conclusive Findings:

The above stated procedural prerequisites, legal authority, and factual findings, as further supported by the documentary record and hearing testimony in this matter, provide a substantive and reasonable basis of conclusion that: (1) Each Applicant has complied with the statutory and regulatory requirements that must be met before an application for permanent variance may be conditionally granted; and (2) a preponderance of the evidence establishes that each Applicants proposal, subject to all conditions and limitations set forth in the below Decision and Order, will provide equivalent safety and health to that which would prevail upon full compliance with the requirements of California Code of Regulation, Title 8, Elevator Safety Orders from which variance is being sought.

E. Decision and Order:

Each Application being the subject of this proceeding, per above Section A.1 table, is conditionally GRANTED, to the extent that each such Applicant shall be issued permanent

Proposed Variance Decision
KONE Monospace 500 Elevators
Hearing Date: November 20, 2020

variance from California Code of Regulations, Title 8, Section 3141 incorporated ASME A17.1-2004, Section 2.20.4, in as much as it precludes use of suspension rope of between 8 mm and 9.5 mm, or outer wire of between 0.51 mm and 0.56 mm in diameter, at such locations and numbers of Group IV KONE Monospace 500 elevators identified in each respective Application, subject to the following conditions:

1. The diameter of the hoisting steel ropes shall be not less than 8 mm (0.315 in) diameter and the roping ratio shall be two to one (2:1).
2. The outer wires of the suspension ropes shall be not less than 0.51 mm (0.02 in.) in diameter.
3. The number of suspension ropes shall be not fewer than those specified per hereby incorporated Decision and Order Appendix 1 Table.
4. The ropes shall be inspected annually for wire damage (rouge, valley break etc.) in accordance with "KONE Inc. Inspector's Guide to 6 mm diameter and 8 mm diameter steel ropes for KONE Elevators" (per Application Exhibit B, or as thereafter amended by KONE subject to Division approval).
5. A rope inspection log shall be maintained and available in the elevator controller room / space at all times.
6. The elevator rated speed shall not exceed those speeds specified per the Decision and Order Appendix 1 Table.
7. The maximum suspended load shall not exceed those weights (plus 5%) specified per the Decision and Order Appendix 1 Table.
8. The opening to the hoistway shall be effectively barricaded when car top inspection, maintenance, servicing, or testing of the elevator equipment in the hoistway is required. If the service personnel must leave the area for any reason, the hoistway and control room doors shall be closed.
9. The installation shall meet the suspension wire rope factor of safety requirements of ASME A17.1-2013 Section 2.20.3.
10. Any Certified Qualified Conveyance Company performing inspections, maintenance, servicing or testing the elevators shall be provided a copy of this variance decision.
11. The Division shall be notified when the elevator is ready for inspection. The elevator shall be inspected by the Division and a "Permit to Operate" issued before the elevator is placed in service.

Proposed Variance Decision
KONE Monospace 500 Elevators
Hearing Date: November 20, 2020

12. The Applicant shall comply with suspension means replacement reporting condition per hereby incorporated Decision and Order Appendix 2.
13. The Applicant shall notify its employees or their authorized representative(s), or both, of this order in the same way and to the same extent that employees and authorized representatives are to be notified of docketed permanent variance applications pursuant to California Code of Regulations, Title 8, Sections 411.2 and 411.3.
14. This Decision and Order shall remain in effect unless modified or revoked upon application by the Applicant, affected employee(s), the Division of Occupational Safety and Health, or by the Board on its own motion, in accordance with procedures per Title 8, Division 1, Chapter 3.5.

Pursuant to California Code of Regulations, Title 8, Section 426(b), the above, duly completed Proposed Decision, is hereby submitted to the Occupational Safety and Health Standards Board for consideration of adoption.

Dated: November 24, 2020


Christina Shupe, Hearing Officer

Appendix 1

Monospace 500 Suspension Ropes Appendix 1 Table				
OSHSB File No.	Elevator ID	Minimum Quantity of Ropes (per Condition 3)	Maximum Speed in Feet per Minute (per Condition 6)	Maximum Suspended Load (per Condition 7)
20-V-303	1	5	350	7,316
20-V-351	1	8	350	11,706
20-V-351	3	8	350	11,706
20-V-358	1	7	150	12,247
20-V-371	1	8	200	13,207
20-V-372	1	7	200	11,556
20-V-410	1	7	150	12,247

Appendix 2

Suspension Means Replacement Reporting Condition

Beginning on the date the Board adopts this Proposed Decision and continuing for a period of two years, the Applicant shall report to the Division within 30 days any and all replacement activity performed on the elevator(s) pursuant to the requirements of ASME A17.1-2004, Section 8.6.3 involving the suspension means or suspension means fastenings. Further:

1. A separate report for each elevator shall be submitted, in a manner acceptable to the Division, to the following address (or to such other address as the Division might specify in the future): DOSH Elevator Unit, 2 MacArthur Place, Suite 700, Santa Ana, CA 92707, Attn: Engineering Section.
2. Each such report shall contain, but not necessarily be limited to, the following information:
 - a. The State-issued conveyance number, complete address, and OSHSB file number that identifies the permanent variance.
 - b. The business name, complete address, telephone number, and contact person of the elevator responsible party (presumably the Applicant or the subsequent holder of this variance).
 - c. The business name, complete address, telephone number, and Certified Qualified Conveyance Company (CQCC) certification number of the firm performing the replacement work.
 - d. The name (as listed on certification), Certified Competent Conveyance Mechanic (CCCM) certification number, certification expiration date, and signature of each CCCM performing the replacement work.
 - e. The date and time the elevator was removed from normal service for suspension replacement, the date and time the replacement work commenced, the date and time the replacement work was completed, and the date and time the elevator was returned to normal service.
 - f. A detailed description of, and clear color photographs depicting, (1) all the conditions that existed in the suspension components requiring their replacement and (2) any conditions that existed to cause damage or distress to the suspension components being replaced.

Proposed Variance Decision

KONE Monospace 500 Elevators

Hearing Date: November 20, 2020

- g. A detailed list of all elevator components adjusted, repaired, or replaced in conjunction with the suspension component replacement.
 - h. All information provided on the crosshead data plate per ASME A17.1-2004, Section 2.20.2.1, unless that ASME requirement is modified by the conditions of a variance that pertains to the elevator in question, in which case, the information to be reported shall be the information required by the ASME provision as modified by the variance.
 - i. For the suspension means being replaced, all information provided on the data tag required per ASME A17.1-2004, Section 2.20.2.2, unless that ASME requirement is modified by the conditions of a variance that pertains to the elevator in question, in which case, the information to be reported shall be the information required by the ASME provision as modified by the variance.
 - j. For the replacement suspension means, all information provided on the data tag required by ASME A17.1-2004, Section 2.20.2.2, unless that ASME requirement is modified by the conditions of a variance that pertains to the elevator in question, in which case, the information to be reported shall be the information required by the ASME provision as modified by the variance.
 - k. Any other information requested by the Division regarding the replacement of the suspension means or fastenings.
3. In addition to the submission of the report to the Division, the findings of any testing, failure analysis, or other engineering evaluations performed on any portion of the replaced suspension components, or other elevator components replaced in conjunction therewith, shall be submitted to the Division referencing the information contained in above Appendix 2, Section 2, Subsection (a), above.

STATE OF CALIFORNIA
DEPARTMENT OF INDUSTRIAL RELATIONS
OCCUPATIONAL SAFETY AND HEALTH STANDARDS BOARD
2520 Venture Oaks Way, Suite 350
Sacramento, California 95833
(916) 274-5721

In the Matter of Application for Permanent)
Variance Regarding:)
)
)
Schindler Model 3300 Elevators (Group IV))
)
)
_____)

OSHSB FILE No.: see grid in Item A of
Proposed Decision Dated: November 24, 2020

DECISION

The Occupational Safety and Health Standards Board hereby adopts the attached PROPOSED DECISION by Christina Shupe, Hearing Officer.

DAVID THOMAS, Chairman

OCCUPATIONAL SAFETY AND HEALTH
STANDARDS BOARD

BARBARA BURGEL, Member

Date of Adoption: December 17, 2020

DAVID HARRISON, Member

NOLA KENNEDY, Member

CHRIS LASZCZ-DAVIS, Member

LAURA STOCK, Member

THE FOREGOING VARIANCE DECISION WAS ADOPTED ON THE DATE INDICATED ABOVE. IF YOU ARE DISSATISFIED WITH THE DECISION, A PETITION FOR REHEARING MAY BE FILED BY ANY PARTY WITH THE STANDARDS BOARD WITHIN TWENTY (20) DAYS AFTER SERVICE OF THE DECISION. YOUR PETITION FOR REHEARING MUST FULLY COMPLY WITH THE REQUIREMENTS OF CALIFORNIA CODE OF REGULATIONS, TITLE 8, SECTIONS 427, 427.1 AND 427.2.

Note: A copy of this Decision must be posted for the Applicant's employees to read, and/or a copy thereof must be provided to the employees' Authorized Representatives.

BEFORE THE
 OCCUPATIONAL SAFETY AND HEALTH STANDARDS BOARD
 DEPARTMENT OF INDUSTRIAL RELATIONS
 STATE OF CALIFORNIA

<p>In the Matter of Application for Permanent Variance Regarding:</p> <p style="text-align: center;">Schindler Model 3300 Elevators (Group IV)</p>	<p>OSHSB File Nos.: Per Section A table, below</p> <p style="text-align: center;"><u>PROPOSED DECISION</u></p> <p>Hearing Date: November 20, 2020</p>
--	---

A. Subject Matter and Jurisdiction:

- Each below listed applicant (“Applicant”) has applied for permanent variance from certain provisions of the Elevator Safety Orders, found at Title 8, of the California Code of Regulations, with respect to a conveyance, or conveyances, in the listed quantity, at the listed location:

Variance No.	Applicant Name	Variance Location Address	No. of Elevators
20-V-347	Satellite Affordable Housing Associates	1601 Oxford St. Berkeley, CA	1

- This proceeding is conducted in accordance with Labor Code Section 143, and California Code of Regulations, Title 8, Section 401, et. seq.
- The safety orders at issue are set out in below Section C.1—C.4.

B. Process and Procedure:

- This hearing was held on November 20, 2020, in Sacramento, California, via teleconference, by Occupational Safety and Health Standards Board (“Board”), with Hearing Officer Christina Shupe, both presiding and hearing the matter on its merit, as a basis of proposed decision to be advanced to the Board for its consideration, in accordance with California Code of Regulations, Title 8, Section 426.
- At the hearing, Jennifer Linares, with the Schindler Elevator Company, appeared on behalf of each Applicant; Mark Wickens and David Morris appeared on behalf of the Division of Occupational Safety and Health (“Division”), and Michael Nelmda appeared on behalf of Board staff, in a technical advisory role apart from the Board.
- Oral evidence was received at the hearing, and by stipulation of all parties, documents were admitted into evidence: each respective permanent variance applications per Section A table as Exhibit PD-1, Notice of Hearing as Exhibit PD-2, Board staff Pending

Proposed Variance Decision

Schindler Model 3300 Elevators (Group IV)

Hearing Date: November 20, 2020

Application Memorandum as PD-3, Division Review of Application as PD-4, Review Draft 1 Proposed Decision as PD-5, and official notice taken of the Board’s rulemaking records, and variance decisions concerning the safety order requirements from which variance is requested. At close of hearing on November 20, 2020, the record was closed, and the matter taken under submission by the Hearing Officer.

C. Findings of Fact—Based upon the record of this proceeding, the Board finds the following:

Requested Suspension Means Related Variance:

1. As each pertains to the non-circular elastomeric coated suspension means characteristic of the Schindler Model 3300 elevator, each Applicant presently seeks permanent variance from the following Title 8, Elevator Safety Order incorporated ASME Safety Code for Elevators and Escalators (ASME Code) A17.1-2004, sections and subsections:

Section 2.20.1—Wire rope suspension means

Section 2.20.2.1—Crosshead data plate

Subsection 2.20.2.2(a)—Wire rope data tag

Subsection 2.20.2.2(f)—ID of steel wire rope as preformed or nonpreformed

Section 2.20.3—Wire rope safety factor

Section 2.20.4—Number and diameter of wire ropes

Section 2.20.9.3.4—Wire rope end connections

Section 2.20.9.5.4—Wire rope sockets

Requested Car Top Railing Inset Variance:

2. As it pertains to top of car railing placement requiring space occupied by upper hoistway mounted elevator machinery characteristic of the Schindler Model 3300 elevator, each Applicant presently seeks permanent variance from the following Title 8, Elevator Safety Order incorporated ASME Code A17.1-2004, section:

Section 2.14.1.7.1—Top of Car Perimeter Railing Placement

Requested Seismic Reset Switch Placement Variance:

3. As it pertains to installation of the requisite seismic reset switch within a “machine room” location incompatible with machine-room-less design of the Schindler Model 3300 elevator, each Applicant presently seeks permanent variance from the following Title 8, Elevator Safety Order incorporated ASME Code subsection:

Subsection 8.4.10.1.1(a)(2)(b)--Seismic Reset Switch Placement in Machine Room

Requested Transfer Switch Placement Variance:

4. As it pertains to installation of the requisite transfer switch within a “machine room” location incompatible with machine-room-less design of the Schindler Model 3300 elevator, each Applicant presently seeks permanent variance from the following Title 8, Elevator Safety Order incorporated ASME Code A17.1-2004, subsection:

Subsection 2.26.1.4.4(a)--Transfer Switch Placement in Machine Room

Official Notice and Incorporation by Reference—OSHSB File No. 15-V-349:

5. Per hereby entered stipulation offered at hearing by Applicant, Division, and Board staff, concerning preexisting Board records, including decisions in matters of permanent variance from Elevator Safety Order requirements, the Board takes Official Notice and expressly incorporates herein by reference, OSHSB File No. 15-V-349, Decision and Order adopted November 17, 2016, Section D.1—D.75 findings, and therein entered record upon which it was based.

Positions of Division, and Board Staff:

6. Having fully reviewed each Applicant’s request for variance from the above identified Elevator Safety Order requirements, it is the concurrent opinion of Division and Board staff, that conditionally limited grant to each Applicant of permanent variance as specified per the below Decision and Order, will provide for elevator safety, and occupational safety and health, equivalent or superior to that of the Elevator Safety Order requirements from which variance is being sought. The present opinion of Division and Board staff, to any extent it may vary from those previously held with respect to the previously heard matter in OSHSB File No. 15-V-349, reflects further scrutiny of the subject matter, consultation between the Division, Board staff, Applicant representatives, and refinement of recommended conditions and limitations.

D. Conclusive Findings:

The above stated procedural prerequisites, legal authority, and factual findings, as further supported by the documentary record and hearing testimony in this matter, provide a substantive and reasonable basis of conclusion that: (1) Each Applicant has complied with the statutory and regulatory requirements that must be met before an application for permanent variance may be conditionally granted, and (2) a preponderance of the

evidence establishes that each Applicant's proposal, subject to all conditions and limitations set forth in the below Decision and Order, will provide equivalent safety and health to that which would prevail upon full compliance with the requirements of California Code of Regulation, Title 8, Elevator Safety Orders from which variance is being sought.

E. Decision and Order:

Each Section A table identified Applicant is hereby conditionally GRANTED Permanent Variance as specified below, and to the limited extent, as of the date the Board adopts this Proposed Decision, with respect to the Section A specified number of Schindler Model 3300 elevator(s), at the specified location, each shall conditionally hold permanent variance from the following subparts of ASME A17.1-2004, currently incorporated by reference into California Code of Regulations, Title 8, Section 3141.

Suspension Members: Each Applicant shall conditionally hold permanent variance from the following Title 8, Section 3141, incorporated sections and subsections of ASME A17.12004, to the limited extent variance is necessary to provide for use of noncircular elastomeric-coated steel suspension members and concomitant components, and configurations—Section 2.20.1; Section 2.20.2.1; Subsection 2.20.2.2(a); Subsection 2.20.2.2(f); Section 2.20.3; Section 2.20.4: Section 2.20.9.3.4; and Section 2.20.9.5.4.

Inspection Transfer Switch: Each Applicant shall conditionally hold permanent variance from certain requirements of the following Title 8, Section 3141 incorporated section of ASME A17.1-2004, to the extent variance is necessary to having the requisite inspection transfer switch located elsewhere than a machine room, within a Security Group I enclosure built into an upper floor landing door jam, or within other readily accessible and secure space shared with the motion controller outside the hoistway: Section 2.26.1.4.4.

Seismic Safety Switch Placement: Each Applicant shall conditionally hold permanent variance from certain requirements of the following Title 8, Section 3141, incorporated section of ASME A17.1-2004, to the limited extent variance is necessary to having the requisite seismic reset switch located elsewhere than a machine room, within a Security Group I enclosure built into an upper floor landing door jam, or within other readily accessible and secure space shared with the motion controller outside the hoistway: Section 8.4.10.1.1.

Car Top Railing: Each Applicant shall conditionally hold permanent variance from certain requirements of the following Title 8, Section 3141, incorporated section of ASME A17.1-2004, to the limited extent variance is necessary to provide for the below specified inseting of the subject elevator's top of car railing: Section 2.14.1.7.1.

Further Conditions and Limitations:

1. The elevator suspension system shall comply to the following:
 - 1.1. The suspension traction media (STM) members and their associated fastenings shall conform to the applicable requirements of ASME A17.1-2013, sections:
 - 2.20.4.3 – Minimum Number of Suspension Members
 - 2.20.3 – Factor of Safety
 - 2.20.9 – Suspension Member Fastening
 - 1.1.1 Additionally, STMs shall meet or exceed all requirements of ASME 17.6-2010, Standard for Elevator Suspension, Compensation, and Governor Systems, Part 3 Noncircular Elastomeric Coated Steel Suspension Members for Elevators.
 - 1.2. The Applicant shall not utilize the elevator unless the manufacturer has written procedures for the installation, maintenance, inspection and testing of the STM members and fastenings and related monitoring and detection systems and criteria for STM replacement, and the Applicant shall make those procedures and criteria available to the Certified Competent Conveyance Mechanic (CCCM) at the location of the elevator, and to the Division of Occupational Safety and Health (Division) upon request.
 - 1.3. STM member mandatory replacement criteria shall include:
 - 1.3.1 Any exposed wire, strand or cord;
 - 1.3.2 Any wire, strand or cord breaks through the elastomeric coating;
 - 1.3.3 Any evidence of rouging (steel tension element corrosion) on any part of the elastomeric coated steel suspension member;
 - 1.3.4 Any deformation in the elastomeric suspension member such as, but not limited to, kinks or bends.
 - 1.4. Traction drive sheaves must have a minimum diameter of 72 mm. The maximum speed of STM members running on 72 mm, 87 mm and 125 mm drive sheaves shall be no greater than 2.5 m/s, 6.0 m/s and 8.0 m/s respectively.
 - 1.5. If any one STM member needs replacement, the complete set of suspension members on the elevator shall be replaced. Exception: If a new suspension member is damaged during installation, and prior to any contemporaneously installed STM having been placed into service, it is permissible to replace the

individual damaged suspension member. STM members that have been installed on another installation shall not be re-used.

- 1.6. A traction loss detection means shall be provided that conforms to the requirements of ASME A17.1-2013, Section 2.20.8.1. The means shall be tested for correct function annually in accordance with ASME A17.1-2013, section 8.6.4.19.12.
- 1.7. A broken suspension member detection means shall be provided that conforms to the requirements of ASME A17.1-2013, Section 2.20.8.2. The means shall be tested for correct function annually in accordance with ASME A17.1-2013, section 8.6.4.19.13(a).
- 1.8. An elevator controller integrated bend cycle monitoring system shall monitor actual STM bend cycles, by means of continuously counting, and storing in nonvolatile memory, the number of trips that the STM makes traveling, and thereby being bent, over the elevator sheaves. The bend cycle limit monitoring means shall automatically stop the car normally at the next available landing before the bend cycle correlated residual strength of any single STM member drops below 80 percent of full rated strength. The monitoring means shall prevent the car from restarting. Notwithstanding any less frequent periodic testing requirement per Addendum 1 (Division Circular Letter), the bend cycle monitoring system shall be tested semi-annually in accordance with the procedures required per above Conditions 1.2, and 1.3.
- 1.9. Each elevator shall be provided with a device that electronically detects a reduction in residual strength of each STM member. The device shall be in compliance with Division Circular Letter E-10-04, a copy of which is attached hereto as Addendum 1, and incorporated herein by reference.
- 1.10. The elevator crosshead data plate shall comply with the requirements of ASME A17.1-2013, Section 2.20.2.1.
- 1.11. A suspension means data tag shall be provided that complies with the requirements of ASME A17.1-2013, Section 2.20.2.2.
- 1.12. Comprehensive visual inspections of the entire length of each and all installed suspension members, in conformity with above Conditions 1.2 and 1.3 specified criteria, shall be conducted and documented every six months by a CCCM.

Proposed Variance Decision

Schindler Model 3300 Elevators (Group IV)

Hearing Date: November 20, 2020

- 1.13. The Applicant shall be subject to the requirements per hereto attached, and inhere incorporated, Addendum 2, "Suspension Means Replacement Reporting Condition."
- 1.14. Records of all tests and inspections shall be maintenance records subject to ASME A17.1-2004, Sections 8.6.1.2, and 8.6.1.4, respectively.
2. Inspection Transfer switch and Seismic Reset switch placement and enclosure shall comply with the following:
 - 2.1. If the inspection transfer switch required by ASME A17.1-2004, Rule 2.26.1.4.4, does not reside in a machine room, that switch shall not reside in the elevator hoistway. The switch shall reside in the control/machinery room/space containing the elevator's control equipment in an enclosure secured by a lock openable by a Group 1 security key. The enclosure is to remain locked at all times when not in use.
 - 2.2. If the seismic reset switch does not reside in the machine room, that switch shall not reside in the elevator hoistway. The switch shall reside in the control/machinery room/space containing the elevator's control equipment in an enclosure secured by a lock openable by a Group 1 security key. The enclosure is to remain locked at all times when not in use.
3. Any and all inset car top railing shall comply with the following:
 - 3.1. Serviceable equipment shall be positioned so that mechanics and inspectors do not have to stand on or climb over the railings to perform adjustments, maintenance, repairs or inspections. The Applicant shall not permit anyone to stand or climb over the car top railing.
 - 3.2. The distance that the railing can be inset shall be limited to not more than 6 inches.
 - 3.3. All exposed areas of the car top outside the car top railing where the distance from the railing to the edge of the car top exceeds 2 inches, shall be beveled with metal, at an angle of not less than 75 degrees with the horizontal, from the mid or top rail to the outside of the car top, such that no person or object can stand, sit, kneel, rest, or be placed in the exposed areas.
 - 3.4. The top surface of the beveled area and/or car top outside the railing, shall be clearly marked. The markings shall consist of alternating 4 inch diagonal red and white stripes.

Proposed Variance Decision
Schindler Model 3300 Elevators (Group IV)
Hearing Date: November 20, 2020

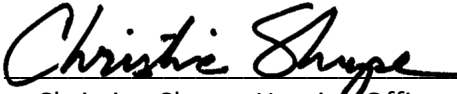
- 3.5. The applicant shall provide durable signs with lettering not less than 1/2 inch on a contrasting background on each inset railing; each sign shall state:

CAUTION
STAY INSIDE RAILING
NO LEANING BEYOND RAILING
NO STEPPING ON, OR BEYOND, RAILING

- 3.6. The Group IV requirements for car top clearances shall be maintained (car top clearances outside the railing will be measured from the car top and not from the required bevel).
4. The elevator shall be serviced, maintained, adjusted, tested, and inspected only by CCCM having been trained, and competent, to perform those tasks on the Schindler Model 3300 elevator system in accordance with written procedures and criteria, including as required per above Conditions 1.2, and 1.3.
5. The Division shall be notified when the elevator is ready for inspection. The elevator shall be inspected by the Division, and all applicable requirements met, including conditions of this permanent variance, prior to a Permit to Operate the elevator being issued. The elevator shall not be placed in service prior to the Permit to Operate being issued by Division.
6. The Applicant shall notify its employees or their authorized representative(s), or both, of this order in the same way and to the same extent that employees and authorized representatives are to be notified of docketed permanent variance applications pursuant to California Code of Regulations, Title 8, Sections 411.2, and 411.3.
7. This Decision and Order shall remain in effect unless modified or revoked upon application by the Applicant, affected employee(s), the Division, or by the Board on its own motion, in the manner prescribed for its issuance.

Pursuant to California Code of Regulations, Title 8, Section 426(b), the above, duly completed Proposed Decision, is hereby submitted to the Occupational Safety and Health Standards Board for consideration of adoption.

Dated: November 24, 2020


Christina Shupe, Hearing Officer

ADDENDUM 1

October 6, 2010

CIRCULAR LETTER E-10-04

TO: Installers, Manufacturers of Conveyances and Related Equipment and, Other Interested Parties

SUBJECT: Coated Steel Belt Monitoring

The Elevator Safety Orders require routine inspection of the suspension means of an elevator to assure its safe operation.

The California Labor Code Section 7318 allows the Division to promulgate special safety orders in the absence of regulation.

As it is not possible to see the steel cable suspension means of a Coated Steel Belt, a monitoring device which has been accepted by the Division is required on all Coated Steel Belts which will automatically stop the car if the residual strength of any belt drops below 60%. The Device shall prevent the elevator from restarting after a normal stop at a landing.

The monitoring device must be properly installed and functional. A functioning device may be removed only after a determination has been made that the residual strength of each belt exceeds 60%. These findings and the date of removal are to be conspicuously documented in the elevator machine room. The removed device must be replaced or returned to proper service within 30 days.

If upon routine inspection, the monitoring device is found to be in a non-functional state, the date and findings are to be conspicuously documented in the elevator machine room.

If upon inspection by the Division, the monitoring device is found to be non-functional or removed, and the required documentation is not in place, the elevator will be removed from service.

If the device is removed to facilitate belt replacement, it must be properly installed and functional before the elevator is returned to service.

A successful test of the device's functionality shall be conducted once a year.

This circular does not preempt the Division from adopting regulations in the future, which may address the monitoring of Coated Steel Belts or any other suspension means.

This circular does not create an obligation on the part of the Division to permit new conveyances utilizing Coated Steel Belts.

Debra Tudor
Principal Engineer
DOSH-Elevator Unit HQS

ADDENDUM 2

Suspension Means – Replacement Reporting Condition

Beginning on the date the Board adopts this Proposed Decision and continuing for a period of two years, the Applicant shall report to the Division within 30 days any and all replacement activity performed on the elevator(s) pursuant to the requirements of ASME A17.1-2004, Section 8.6.3 involving the suspension means or suspension means fastenings.

Further:

1. A separate report for each elevator shall be submitted, in a manner acceptable to the Division, to the following address (or to such other address as the Division might specify in the future): DOSH Elevator Unit, 2 MacArthur Place, Suite 700, Santa Ana, CA 92707, Attn: Engineering Section.
2. Each such report shall contain, but not necessarily be limited to, the following information:
 - a. The State-issued conveyance number, complete address, and OSHSB file number that identifies the permanent variance.
 - b. The business name, complete address, telephone number, and contact person of the elevator responsible party (presumably the Applicant or the subsequent holder of this variance).
 - c. The business name, complete address, telephone number, and Certified Qualified Conveyance Company (CQCC) certification number of the firm performing the replacement work.
 - d. The name (as listed on certification), Certified Competent Conveyance Mechanic (CCCM) certification number, certification expiration date, and signature of each CCCM performing the replacement work.
 - e. The date and time the elevator was removed from normal service for suspension replacement, the date and time the replacement work commenced, the date and time the replacement work was completed, and the date and time the elevator was returned to normal service.
 - f. A detailed description of, and clear color photographs depicting, (1) all the conditions that existed in the suspension components requiring their replacement

Proposed Variance Decision

Schindler Model 3300 Elevators (Group IV)

Hearing Date: November 20, 2020

- and (2) any conditions that existed to cause damage or distress to the suspension components being replaced.
- g. A detailed list of all elevator components adjusted, repaired, or replaced in conjunction with the suspension component replacement.
 - h. All information provided on the crosshead data plate per ASME A17.1-2004, Section 2.20.2.1, unless that ASME requirement is modified by the conditions of a variance that pertains to the elevator in question, in which case, the information to be reported shall be the information required by the ASME provision as modified by the variance.
 - i. For the suspension means being replaced, all information provided on the data tag required per ASME A17.1-2004, Section 2.20.2.2, unless that ASME requirement is modified by the conditions of a variance that pertains to the elevator in question, in which case, the information to be reported shall be the information required by the ASME provision as modified by the variance.
 - j. For the replacement suspension means, all information provided on the data tag required by ASME A17.1-2004, Section 2.20.2.2, unless that ASME requirement is modified by the conditions of a variance that pertains to the elevator in question, in which case, the information to be reported shall be the information required by the ASME provision as modified by the variance.
 - k. Any other information requested by the Division regarding the replacement of the suspension means or fastenings.
3. In addition to the submission of the report to the Division, the findings of any testing, failure analysis, or other engineering evaluations performed on any portion of the replaced suspension components, or other elevator components replaced in conjunction therewith, shall be submitted to the Division referencing the information contained in item 2a above.

STATE OF CALIFORNIA
DEPARTMENT OF INDUSTRIAL RELATIONS
OCCUPATIONAL SAFETY AND HEALTH STANDARDS BOARD
2520 Venture Oaks Way, Suite 350
Sacramento, California 95833
(916) 274-5721

In the Matter of Application for Permanent)
Variance By:)
)
)
Triple Seven Properties, Inc)
)
)
_____)

OSHSB FILE No.: 20-V-350
Proposed Decision Dated: November 24, 2020

DECISION

The Occupational Safety and Health Standards Board hereby adopts the attached PROPOSED DECISION by Christina Shupe, Hearing Officer.

DAVID THOMAS, Chairman

OCCUPATIONAL SAFETY AND HEALTH
STANDARDS BOARD

Date of Adoption: December 17, 2020

BARBARA BURGEL, Member

DAVID HARRISON, Member

THE FOREGOING VARIANCE DECISION WAS ADOPTED ON THE DATE INDICATED ABOVE. IF YOU ARE DISSATISFIED WITH THE DECISION, A PETITION FOR REHEARING MAY BE FILED BY ANY PARTY WITH THE STANDARDS BOARD WITHIN TWENTY (20) DAYS AFTER SERVICE OF THE DECISION. YOUR PETITION FOR REHEARING MUST FULLY COMPLY WITH THE REQUIREMENTS OF CALIFORNIA CODE OF REGULATIONS, TITLE 8, SECTIONS 427, 427.1 AND 427.2.

NOLA KENNEDY, Member

CHRIS LASZCZ-DAVIS, Member

LAURA STOCK, Member

Note: A copy of this Decision must be posted for the Applicant's employees to read, and/or a copy thereof must be provided to the employees' Authorized Representatives.

BEFORE THE
OCCUPATIONAL SAFETY AND HEALTH STANDARDS BOARD
DEPARTMENT OF INDUSTRIAL RELATIONS
STATE OF CALIFORNIA

In the Matter of Application for Permanent Variance by: Triple Seven Properties, Inc.	OSHSB File No.: 20-V-350 PROPOSED DECISION Hearing Date: November 20, 2020
--	--

A. Procedural Matters:

1. Triple Seven Properties, Inc. (“Applicant”) has applied for a permanent variance from provisions of Title 8 of the California Code of Regulations regarding vertical platform (wheelchair) lifts, with respect to one vertical platform (wheelchair) lift proposed to be located at:

777 N. Pershing Avenue
Stockton, CA

2. The safety orders at issue are stated in the prefatory part of the Decision and Order. This proceeding is conducted in accordance with Labor Code Section 143, and California Code of Regulations, Title 8, Section 401, et. seq.
3. This hearing was held on November 20, 2020, in Sacramento, California, via teleconference, by delegation of the Occupational Safety and Health Standards Board (“Board”), with Hearing Officer Christina Shupe, both presiding and hearing the matter on its merit, as a basis of proposed decision to be advanced to the Board for its consideration, in accordance with California Code of Regulations, Title 8, Section 426.
4. At the hearing, Melissa Neylon with Arrow Lift of California, appeared on behalf of the Applicant, Mark Wickens and David Morris appeared on behalf of the Division of Occupational Safety and Health (“Division”), and Michael Nelmidia appeared on behalf of Board staff acting in a technical advisory role apart from the Board.
5. At the hearing, oral evidence was received and by stipulation of all parties, documents were accepted into evidence: subject Application for Permanent Variance, as Exhibit PD-1, Notice of Hearing in this matter as PD-2, Board staff Pending Application for Permanent Variance memorandum as PD-3, Division evaluation as PD-4, Review-Draft-1 Proposed Decision as PD-5; and official notice taken of the Board’s rulemaking records and variance decision concerning the Elevator Safety Order requirements at issue. On November 20, 2020, at close of hearing, the record closed and the matter was taken under submission on behalf of the Board.

B. Findings of Fact

Based on the record of this proceeding, and officially noticed Board records per (above Section A.5) stipulation of Applicant and Division—inclusive of below cited permanent variance file decisions—the Board finds the following:

1. The Applicant proposes to install one (1) vertical platform (wheelchair) lift at a location having the address of:

777 N. Pershing Avenue
Stockton, CA

2. The subject vertical lift is proposed to be a Symmetry Model VPC SLH-168, with a vertical travel range of approximately 168 inches. That range of travel exceeds the 12 foot maximum vertical rise allowed by ASME A18.1-2003, Section 2.7.1—the State of California standard in force at the time of this Decision.
3. The Division’s evaluation in this Matter, states that the more recent consensus code ASME A18.1-2005 allows for vertical platform lifts to have a travel not exceeding 14 feet (168 in.).
4. Permanent variances regarding the extended travel of vertical platform lifts, of similar configuration to that of the subject proposed model, have been previously granted, absent subsequent harm attributable to such variance being reported by Division. (E.g. OSHSB File Nos. 13-V-260, 15-V-097, 17-V-270, 18-V-278, 19-V-256).
5. With respect to the equivalence or superior of safety, conditions and limitations of the Decision and Order are in material conformity with findings and conditions of prior Board permanent variance decisions, including the above cited.
6. Per its written Review of Application for Permanent Variance, Exhibit PD-4, it is the informed opinion of Division that equivalent safety (at minimum) will be achieved upon grant of presently requested permanent variance, subject to conditions and limitations incorporated into the below Decision and Order. Per its written review memorandum (Exhibit PD-3), Board staff concurs with Division in recommending that such conditional grant will provide for safety equivalence.

C. Conclusive Findings

On the basis of the above procedural matters, legal authority, and findings of fact, the Board finds that Applicant has complied with the statutory and regulatory requirements that must be met before an application for a permanent variance may be granted and that a preponderance of the evidence establishes that the Applicant’s proposal, subject to all limiting conditions set forth in the below Decision and Order, will provide for conveyance safety, and employment and a place of employment that are as safe and healthful, as those that would prevail if the Applicant complied with the safety orders at issue.

D. Decision and Order

The Application for Permanent Variance of Triple Seven Properties, Inc., OSHSB File No. 20-V-350, is conditionally GRANTED to the limited extent, upon the Board's adoption of this Proposed Decision, Triple Seven Properties, Inc., shall have permanent variance from California Code of Regulations, Title 8, Sections 3142(a) and 3142.1 incorporated ASME A18.1-2003, Section 2.7.1, inasmuch as it restricts the vertical rise of a wheelchair lift to a maximum of 12 feet, with respect to one (1) Symmetry Model VPC SLH-168 Vertical Platform Lift, to be located at:

777 N. Pershing Avenue
Stockton, CA

The above referenced vertical platform lift shall be subject to the following further conditions and limitations:

1. This lift may travel up to 168 inches, unless the manufacturer's instructions provide for a lesser vertical travel limit, or lesser total elevation change, in which case, travel shall be limited to the lesser limit or elevation change.
2. The wheelchair lift shall be installed and operated in accordance with the manufacturer's instructions, unless the provisions of this variance or applicable provisions of the law provide otherwise.
3. Durable signs with lettering not less than 5/16 inch on a contrasting background shall be permanently and conspicuously posted inside the car and at all landings indicating that the lift is for the exclusive use of persons with physical impairments and that the lift is not to be used to transport material or equipment. The use of the lift shall be limited in accordance with these signs.
4. A maintenance contract shall be executed between the owner/operator and a Certified Qualified Conveyance Company (CQCC). The contract shall stipulate that the routine preventive maintenance required by Section 3094.5(a)(1) shall be performed at least quarterly and shall include but not be limited to:
 - (a) Platform driving means examination;
 - (b) Platform examination;
 - (c) Suspension means examination;
 - (d) Platform alignment;
 - (e) Vibration examination;

- (f) Door/gate electrical; and
 - (g) Mechanical lock examination.
5. The lift shall be tested annually for proper operation under rated load conditions. The Division's Elevator Unit District Office shall be provided written notification in advance of the test, and the test shall include a check of car or platform safety device.
 6. The lift shall be shut down immediately if the lift experiences unusual noise and vibration, and the Applicant shall notify the CQCC immediately. The lift shall only be restarted by the CQCC.
 7. The Applicant shall notify the CQCC if the lift shuts down for any reason. The lift shall only be restarted by the CQCC.
 8. Service logs including, but not limited to, the device shutdown(s) shall be kept in the maintenance office and shall be available to the Division. The shutdown information shall contain the date of the shutdown, cause of the shutdown, and the action taken to correct the shutdown.
 9. The Applicant shall provide training on the safe operation of the lift in accordance with Section 3203. Such training shall be conducted annually for all employees using or who will be assisting others in using the lift. The Applicant shall notify the Division in writing that training has been conducted. A copy of the training manual (used for the subject training), and documentation identifying the trainer and attendees shall be maintained for at least 1 year and provided to the Division upon request.
 10. Any CQCC performing inspections, maintenance, servicing or testing of the elevators shall be provided a copy of this variance decision.
 11. The Division shall be notified when the lift is ready for inspection, and the lift shall be inspected by the Division and a Permit to Operate shall be issued before the lift is put into service.
 12. The Applicant shall notify its employees or their authorized representative(s), or both, of this order in the same way and to the same extent that employees and authorized representatives are to be notified of docketed permanent variance applications pursuant to California Code of Regulations, Title 8, Sections 411.2 and 411.3.
 13. This Decision and Order shall remain in effect unless modified or revoked upon application by the Applicant, affected employee(s), the Division, or by the Board on its own motion, in accordance with Title 8, Division 1, Chapter 3.5, rules and procedures.

Proposed Variance Decision
OSHSB File No. 20-V-350
Hearing Date: November 20, 2020

Pursuant to California Code of Regulations, Title 8, Section 426(b), the above, duly completed Proposed Decision, is hereby submitted to the Occupational Safety and Health Standards Board for consideration of adoption.

Dated: November 24, 2020


Christina Shupe, Hearing Officer

STATE OF CALIFORNIA
DEPARTMENT OF INDUSTRIAL RELATIONS
OCCUPATIONAL SAFETY AND HEALTH STANDARDS BOARD
2520 Venture Oaks Way, Suite 350
Sacramento, California 95833
(916) 274-5721

In the Matter of Application for Permanent)
Variance Regarding:)
)
)
Mitsubishi Elevators (Group IV))
)
)
_____)

OSHSB FILE No.: see grid in Item A of
Proposed Decision Dated: November 24, 2020

DECISION

The Occupational Safety and Health Standards Board hereby adopts the attached PROPOSED DECISION by Christina Shupe, Hearing Officer.

DAVID THOMAS, Chairman

OCCUPATIONAL SAFETY AND HEALTH
STANDARDS BOARD

BARBARA BURGEL, Member

Date of Adoption: December 17, 2020

DAVID HARRISON, Member

NOLA KENNEDY, Member

CHRIS LASZCZ-DAVIS, Member

LAURA STOCK, Member

THE FOREGOING VARIANCE DECISION WAS ADOPTED ON THE DATE INDICATED ABOVE. IF YOU ARE DISSATISFIED WITH THE DECISION, A PETITION FOR REHEARING MAY BE FILED BY ANY PARTY WITH THE STANDARDS BOARD WITHIN TWENTY (20) DAYS AFTER SERVICE OF THE DECISION. YOUR PETITION FOR REHEARING MUST FULLY COMPLY WITH THE REQUIREMENTS OF CALIFORNIA CODE OF REGULATIONS, TITLE 8, SECTIONS 427, 427.1 AND 427.2.

Note: A copy of this Decision must be posted for the Applicant's employees to read, and/or a copy thereof must be provided to the employees' Authorized Representatives.

BEFORE THE
 OCCUPATIONAL SAFETY AND HEALTH STANDARDS BOARD
 DEPARTMENT OF INDUSTRIAL RELATIONS
 STATE OF CALIFORNIA

<p>In the Matter of Application for Permanent Variance Regarding:</p> <p style="text-align: center;">Mitsubishi Elevators (Group IV)</p>	<p>OSHSB File Nos.: See Section A.1 Table</p> <p style="text-align: center;"><u>PROPOSED DECISION</u></p> <p>Hearing Date: November 20, 2020</p>
---	--

A. Procedural Matters:

- Each below listed applicant (“Applicant”) has applied for permanent variance from provisions of the Elevator Safety Orders, found at title 8 of the California Code of Regulations, with respect to a conveyance, or conveyances, in the listed quantity, at the listed location:

Variance No.	Applicant Name	Variance Location Address	No. of Elevators
20-V-353	SJ 50 West SF LLC	50 West San Fernando Street San Jose, CA	2
20-V-354	Rabin Management Company, LLC	444 19th Street Oakland, CA	2

- The safety orders at issue are set forth in the prefatory portion of the Decision and Order. This proceeding is conducted in accordance with Labor Code Section 143, and California Code of Regulations, title 8, section 401, et. seq.
- This hearing was held on November 20, 2020, in Sacramento, California and via teleconference, by delegation of the Occupational Safety and Health Standards Board (“Board”), with Hearing Officer Christina Shupe, both presiding and hearing the matter on its merit, as a basis of proposed decision to be advanced to the Board for its consideration, in accordance with California Code of Regulations, title 8, section 426.
- At the hearing, Carolina Castaneda, with Mitsubishi Electric, Elevator Division, appeared on behalf of each Applicant, Mark Wickens and David Morris appeared on behalf of the Division of Occupational Safety and Health (“Division”), and Michael Nelmidia appeared on behalf of Board staff in a technical advisory role apart from the Board.

*Proposed Variance Decision
Mitsubishi Elevators (Group IV)
Hearing Date: November 20, 2020*

5. At the hearing, documentary and oral evidence was received, and by stipulation of all parties, documents were accepted into evidence: each permanent variance application per Section A table as Exhibit PD-1; Notice of Hearing as PD-2; Board staff Pending Application Memorandum as PD-3; Division Review of Application report as PD-4; Review Draft 1 Proposed Decision as PD-5; and Official Notice taken of the Board's rulemaking records and variance decisions concerning the safety order requirements from which variance is requested. At the close of hearing on November 20, 2020, the record was closed and the matter taken under submission by the Hearing Officer.

B. Findings of Fact:

Based on the record of this proceeding, the Board makes the following findings of fact:

1. Each Section A table specified Applicant intends to utilize Mitsubishi elevators at the location and in the number stated in the table in Item A. The installation contracts for these elevators were signed on or after May 1, 2008, thus making the elevators subject to the Group IV Elevator Safety Orders.
2. The Board takes official notice and incorporates herein, Subsections D.3 through D.5 of the February 20, 2014, Decision of the Board in OSHSB Permanent Variance File No. 13-V-270.
3. As reflected in the record of this matter, including Board staff Pending Application for Permanent Variance Opinion Letter as PD-3, Division evaluation as PD-4, and testimony at hearing, it is the professionally informed opinion of Board staff and Division, that grant of requested variance, subject to conditions and limitations in substantial conforming with those set out per below Decision and Order, will provide Occupational Safety and Health equivalent or superior to that provided by the safety order requirements from which variance is sought.

C. Conclusive Findings:

The above stated procedural prerequisites, legal authority, and factual findings, as further supported by the documentary record and hearing testimony in this matter, provide a substantive and reasonable basis of conclusion that: (1) Each Applicant has complied with the statutory and regulatory requirements that must be met before an application for permanent variance may be conditionally granted, and (2) a preponderance of the evidence establishes that each Applicants proposal, subject to all conditions and limitations set forth in the below Decision and Order, will provide equivalent safety and health to that which

would prevail upon full compliance with the requirements of California Code of Regulation, Title 8, Elevator Safety Orders from which variance is being sought.

D. Decision and Order:

As of such date as the Board adopts this Proposed Decision, each Application for Permanent Variance listed in the above Section A.1 table, is conditionally GRANTED to the extent each Applicant of record shall have permanent variance from California Code of Regulations, Title 8, Section 3141 [ASME A17.1-2004, Sections 2.10.2.2 (only to the extent necessary to permit the intermediate rail to be located at a point other than halfway between the top rail and the surface on which the railing is installed), 2.10.2.4 (only to the extent necessary to permit a bevel sloping that conforms with the variance conditions) and 2.14.1.7.1 (only to the extent necessary to permit the car top railing to be inset to clear obstructions when the conveyance is elevated to perform work on the machine and/or governor). The variance applies to the location and number of elevators stated in the Section A.1 table, and the variance is subject to the above limitations and following conditions:

1. The car top railing may be inset only to the extent necessary to clear obstructions when the conveyance is located at the top landing to perform work on the machine and/or governor.
2. Serviceable equipment shall be positioned so that mechanics, inspectors, and others working on the car top can remain positioned on the car top within the confines of the railings and do not have to climb on or over railings to perform adjustment, maintenance, minor repairs, inspections, or similar tasks. Persons performing those tasks are not to stand on or climb over railing, and those persons shall not remove handrails unless the equipment has been secured from movement and approved personal fall protection is used.
3. All exposed areas outside the car top railing shall preclude standing or placing objects or persons which may fall, and shall be beveled from an intermediate or bottom rail to the outside of the car top.
4. The top surface of the beveled area shall be clearly marked. The markings shall consist of alternating 4-inch red and white diagonal stripes.
5. The Applicant shall provide a durable sign with lettering not less than ½-inch high on a contrasting background. The sign shall be located on the inset top railing; the sign shall be visible from the access side of the car top, and the sign shall state:

CAUTION

DO NOT STAND ON OR CLIMB OVER RAILING.
PERSONNEL ARE PROHIBITED FROM REMOVING HANDRAIL
UNLESS THE EQUIPMENT HAS BEEN SECURED FROM MOVEMENT
AND APPROVED PERSONAL FALL PROTECTION IS USED.

6. The Group IV requirements for car top clearances shall be maintained (car top clearances outside the railing will be measured from the car top and not from the required bevel).
7. A mechanical means (e.g., locking bar mechanism) that will secure the car to the guide rail to prevent unintended movement shall be provided and used during machine and/or governor car-top work. The mechanical means (e.g., locking bar mechanism) shall have a safety factor of not less than 3.5 for the total unbalanced load.
8. An electrical switch or a lockout/tagout procedure shall be provided that will remove power from the driving machine and brake when the mechanical means (e.g., locking bar mechanism) is engaged.
9. In order to inhibit employees from working outside the car top railing, sections shall not be hinged and they shall be installed by means that will inhibit (but not necessarily completely preclude) removal. The Applicant shall ensure that all persons performing work that requires removal of any part of the car top railing are provided with fall protection that is appropriate and suitable for the assigned work. That fall protection shall consist of a personal fall arrest system or fall restraint system that complies with California Code of Regulations, Title 8, Section 1670.
10. The bevel utilized by the Applicant in accordance with the variance granted from ASME A17.1-2004, Section 2.10.2.4 shall slope at not less than 75 degrees from the horizontal to serve as the toe board; however, that slope may be reduced to a minimum of 40 degrees from the horizontal as may be required for sections where machine encroachment occurs.
11. If the Applicant directs or allows its employees to perform tasks on the car top, the Applicant shall develop, implement, and document a safety training program that shall provide training to Applicant employees. Components of the training shall include, but not necessarily be limited to, the following: car blocking procedures; how examination, inspection, adjustment, repair, removal and replacement of elevator components are to be performed safely, consistent with the requirements of the variance conditions; applicable provisions of the law and other sources of safety practices regarding the

*Proposed Variance Decision
Mitsubishi Elevators (Group IV)
Hearing Date: November 20, 2020*

operation of the elevator. A copy of the training program shall be located in the control room of each elevator that is the subject of this variance, and a copy of the training program shall be attached to a copy of this variance that shall be retained in any building where an elevator subject to this variance is located. The Applicant shall not allow Certified Qualified Conveyance Company (CQCC) or other contractor personnel to work on the top of any elevator subject to this variance unless the Applicant first ascertains from the CQCC or other contractor that the personnel in question have received training equivalent to, or more extensive than, the training components referred to in this condition.

12. Any CQCC performing inspections, maintenance, servicing, or testing of the elevators shall be provided a copy of this variance decision.
13. The Division shall be notified when the elevator is ready for inspection. The elevator shall be inspected by the Division, and a Permit to Operate shall be issued before the elevator is placed in service.
14. The Applicant shall notify its employees or their authorized representative(s), or both, of this order in the same way and to the same extent that employees and authorized representatives are to be notified of docketed permanent variance applications pursuant to California Code of Regulations, title 8, sections 411.2 and 411.3.
15. This Decision and Order shall remain in effect unless modified or revoked upon application by the Applicant, affected employee(s), the Division, or by the Board on its own motion, in the manner prescribed for its issuance.

Pursuant to California Code of Regulations, title 8, section 426(b), the above, duly completed Proposed Decision, is hereby submitted to the Occupational Safety and Health Standards Board for consideration of adoption.

Dated: November 24, 2020


Christina Shupe, Hearing Officer

STATE OF CALIFORNIA
DEPARTMENT OF INDUSTRIAL RELATIONS
OCCUPATIONAL SAFETY AND HEALTH STANDARDS BOARD
2520 Venture Oaks Way, Suite 350
Sacramento, California 95833
(916) 274-5721

In the Matter of Application for Permanent)
Variance Regarding:)
)
)
Otis Gen2S Elevators (Group IV))
)
)
)
_____)

OSHSB FILE No.: see grid in Item A of
Proposed Decision Dated: November 24, 2020

DECISION

The Occupational Safety and Health Standards Board hereby adopts the attached PROPOSED DECISION by Christina Shupe, Hearing Officer.

DAVID THOMAS, Chairman

OCCUPATIONAL SAFETY AND HEALTH
STANDARDS BOARD

BARBARA BURGEL, Member

Date of Adoption: December 17, 2020

DAVID HARRISON, Member

THE FOREGOING VARIANCE DECISION WAS ADOPTED ON THE DATE INDICATED ABOVE. IF YOU ARE DISSATISFIED WITH THE DECISION, A PETITION FOR REHEARING MAY BE FILED BY ANY PARTY WITH THE STANDARDS BOARD WITHIN TWENTY (20) DAYS AFTER SERVICE OF THE DECISION. YOUR PETITION FOR REHEARING MUST FULLY COMPLY WITH THE REQUIREMENTS OF CALIFORNIA CODE OF REGULATIONS, TITLE 8, SECTIONS 427, 427.1 AND 427.2.

NOLA KENNEDY, Member

CHRIS LASZCZ-DAVIS, Member

LAURA STOCK, Member

Note: A copy of this Decision must be posted for the Applicant's employees to read, and/or a copy thereof must be provided to the employees' Authorized Representatives.

BEFORE THE
OCCUPATIONAL SAFETY AND HEALTH STANDARDS BOARD
DEPARTMENT OF INDUSTRIAL RELATIONS
STATE OF CALIFORNIA

<p>In the Matter of Application for Permanent Variance Regarding:</p> <p style="text-align: center;">Otis Gen2S Elevators (Group IV)</p>	<p>OSHSB File Nos.: Per Section A table, below</p> <p style="text-align: center;"><u>PROPOSED DECISION</u></p> <p>Hearing Date: November 20, 2020</p>
--	---

A. Subject Matter

- Each below listed applicant (“Applicant”) has applied for permanent variances from provisions of the Elevator Safety Orders, found at title 8 of the California Code of Regulations, with respect to the listed conveyance or conveyances, in the specified quantity, at the specified location:

Variance No.	Applicant Name	Variance Location Address	No. of Elevators
20-V-359	Aaron P. Peltz	140 Wikiup Drive Santa Rosa, CA	1
20-V-360	SchoolsFirst Federal Credit Union	15332 Newport Ave. Tustin, CA	3
20-V-361	VP Duboce Triangle LLC	2240 Market St. San Francisco, CA	2
20-V-362	City of Burlingame	850 Burlingame Avenue Burlingame, CA	1
20-V-363	Pico Fax LP	5801 W Pico Blvd. Los Angeles, CA	2
20-V-364	Olympic-Barrington Partnership	11668 Olympic Blvd. West Los Angeles, CA	1
20-V-365	LMC Costa Mesa Holdings, LP	Halcyon House - Building A 585 Anton Boulevard Costa Mesa, CA	4
20-V-366	LMC Costa Mesa Holdings, LP	Halcyon House - Building B 565 Anton Boulevard Costa Mesa, CA	3

*Proposed Variance Decision
 Otis Gen2S Elevators (Group IV)
 Hearing Date: November 20, 2020*

20-V-367	San Francisco Public Utilities Commission	Southeast Community Center 1550 Evans Street San Francisco, CA	2
20-V-368	JSF Carson Street EX, LLC	12508 Carson St. Hawaiian Garden, CA	2

2. The safety orders from which variance may issue, are enumerated in the portion of the below Decision and Order preceding the variance conditions.

B. Procedural

1. This proceeding is conducted in accordance with Labor Code Section 143, and California Code of Regulations, Title 8, Section 401, et. seq.
2. This hearing was held on November 20, 2020, in Sacramento, California, and via teleconference, by Occupational Safety and Health Standards Board (“Board”), with Hearing Officer Christina Shupe, both presiding and hearing the matter on its merit, as a basis of proposed decision to be advanced to the Board for its consideration, in accordance with California Code of Regulations, Title 8, Section 426.
3. At the hearing, Dan Leacox of Leacox & Associates, and Wolter Geesink with Otis Elevator, appeared on behalf of each Applicant; Mark Wickens and David Morris appeared on behalf of the Division of Occupational Safety and Health (“Division”), and Michael Nelmidia appeared on behalf of Board staff, in a technical advisory role apart from the Board.
4. Oral evidence was received at the hearing, and by stipulation of all parties, documents were admitted into evidence: each respective permanent variance applications per Section A table as Exhibit PD-1; Notice of Hearing as Exhibit PD-2; Board staff Pending Application Memorandum as PD-3; Division Review of Application as PD-4; Review Draft 1 Proposed Decision as PD-5; and official notice taken of the Board’s rulemaking records, and variance files and decisions, concerning the Elevator Safety Order standards at issue. At close of hearing on November 20, 2020, the record was closed, and the matter taken under submission by the Hearing Officer.

C. Findings and Basis:

Based on the record of this hearing, the Board makes the following findings of fact:

*Proposed Variance Decision
Otis Gen2S Elevators (Group IV)
Hearing Date: November 20, 2020*

1. Each Applicant intends to utilize Otis Gen2S elevators at the locations and in the numbers stated in the above Section A table.
2. The installation contracts for these elevators were or will be signed on or after May 1, 2008, making the elevators subject to the Group IV Elevator Safety Orders.
3. The Board incorporates by reference Items (i.e. Sections) D.3 through D.9 of the Proposed Decision adopted by the Board on July 18, 2013 regarding OSHSB File No. 12-V-093 and Item D.4 of the Proposed Decision adopted by the Board on September 25, 2014 in OSHSB File No. 14-V-206.
4. Both Board staff and Division, by way of written submissions to the record (Exhibits PD-3 and PD-4 respectively), and positions stated at hearing, are of the well informed opinion that grant of requested permanent variance, as limited and conditioned per the below Decision and Order will provide employment, places of employment, and subject conveyances, as safe and healthful as would prevail given non-variant conformity with the Elevator Safety Order requirements from which variance has been requested.

D. Conclusive Findings:

The above stated procedural prerequisites, legal authority, and factual findings, as further supported by the documentary record and hearing testimony in this matter, provide a substantive and reasonable basis of conclusion that: (1) Each Applicant has complied with the statutory and regulatory requirements that must be met before an application for permanent variance may be conditionally granted; and (2) a preponderance of the evidence establishes that each Applicants proposal, subject to all conditions and limitations set forth in the below Decision and Order, will provide equivalent safety and health to that which would prevail upon full compliance with the requirements of California Code of Regulation, Title 8, Elevator Safety Orders from which variance is being sought.

E. Decision and Order:

Each permanent variance application the subject of this proceeding is conditionally GRANTED as specified below, and to the extent, as of the date the Board adopts this Proposed Decision, each Applicant listed in the above Section A table shall have permanent variances from California Code of Regulations, Title 8, Section 3141 and from the following sections of ASME A17.1-2004 that Section 3141 makes applicable to the elevators the subject of those applications:

*Proposed Variance Decision
Otis Gen2S Elevators (Group IV)
Hearing Date: November 20, 2020*

- Car top railing: Sections 2.14.1.7.1 (only to the extent necessary to permit an inset car top railing, if, in fact, the car top railing is inset);
- Speed governor over-speed switch: 2.18.4.2.5(a) (only insofar as is necessary to permit the use of the speed reducing system proposed by the Applicants, where the speed reducing switch resides in the controller algorithms, rather than on the governor, with the necessary speed input supplied by the main encoder signal from the motor);
- Governor rope diameter: 2.18.5.1 (only to the extent necessary to allow the use of reduced diameter governor rope);
- Pitch diameter: 2.18.7.4 (to the extent necessary to use the pitch diameter specified in Condition No. 13.c);
- Suspension means: 2.20.1, 2.20.2.1, 2.20.2.2(a), 2.20.2.2(f), 2.20.3, 2.20.4, 2.20.9.3.4 and 2.20.9.5.4—the variances from these “suspension means” provisions are only to the extent necessary to permit the use of Otis Gen2 flat coated steel suspension belts in lieu of conventional steel suspension ropes;
- Inspection transfer switch: 2.26.1.4.4(a) (only to the extent necessary to allow the inspection transfer switch to reside at a location other than a machine room, if, in fact, it does not reside in the machine room); and
- Seismic reset switch: 8.4.10.1.1(a)(2)(b) (only to the extent necessary to allow the seismic reset switch to reside at a location other than a machine room, if, in fact, it does not reside in the machine room).

These variances apply to the locations and numbers of elevators stated in the Section A table (so long as the elevators are Gen2S Group IV devices that are designed, equipped, and installed in accordance with, and are otherwise consistent with, the representations made in the Otis Master File [referred to in previous proposed decisions as the “Gen2 Master File”] maintained by the Board, as that file was constituted at the time of this hearing) and are subject to the following conditions:

1. The suspension system shall comply with the following:
 - a. The coated steel belt and connections shall have factors of safety equal to those permitted for use by Section 3141 [ASME A17.1-2004, Section 2.20.3] on wire rope suspended elevators.

- b. Steel coated belts that have been installed and used on another installation shall not be reused.
 - c. The coated steel belt shall be fitted with a monitoring device which has been accepted by the Division and which will automatically stop the car if the residual strength of any single belt drops below 60 percent. If the residual strength of any single belt drops below 60 percent, the device shall prevent the elevator from restarting after a normal stop at a landing.
 - d. Upon initial inspection, the readings from the monitoring device shall be documented and submitted to the Division.
 - e. A successful test of the monitoring device's functionality shall be conducted at least once a year (the record of the annual test of the monitoring device shall be a maintenance record subject to ASME A17.1-2004, Section 8.6.1.4).
 - f. The coated steel belts used shall be accepted by the Division.
2. With respect to each elevator subject to this variance, the applicant shall comply with Division Circular Letter E-10-04, the substance of which is attached hereto as Addendum 1 and incorporated herein by this reference.
 3. The Applicant shall not utilize the elevator unless the manufacturer has written procedures for the installation, maintenance, inspection, and testing of the belts and monitoring device and criteria for belt replacement, and the applicant shall make those procedures and criteria available to the Division upon request.
 4. The flat coated steel belts shall be provided with a metal data tag that is securely attached to one of those belts. This data tag shall bear the following flat steel coated belt data:
 - a. The width and thickness in millimeters or inches;
 - b. The manufacturer's rated breaking strength in (kN) or (lbf);
 - c. The name of the person or organization that installed the flat coated steel belts;
 - d. The month and year the flat coated steel belts were installed;
 - e. The month and year the flat coated steel belts were first shortened;

- f. The name or trademark of the manufacturer of the flat coated steel belts; and
 - g. Lubrication information.
5. There shall be a crosshead data plate of the sort required by Section 2.20.2.1, and that plate shall bear the following flat steel coated belt data:
- a. The number of belts;
 - b. The belt width and thickness in millimeters or inches; and
 - c. The manufacturer's rated breaking strength per belt in (kN) or (lbf).
6. The opening to the hoistway shall be effectively barricaded when car top inspection, maintenance, servicing, or testing of elevator equipment in the hoistway is required. If service personnel must leave the area for any reason, the hoistway and control room doors shall be closed.
7. If there is an inset car top railing:
- a. Serviceable equipment shall be positioned so that mechanics and inspectors do not have to climb on railings to perform adjustment, maintenance, repairs or inspections. The applicant shall not permit anyone to stand on or climb over the car top railing.
 - b. The distance that the car top railing may be inset shall be limited to no more than 6 inches.
 - c. All exposed areas outside the car top railing shall preclude standing or placing objects or persons which may fall and shall be beveled from the mid- or top rail to the outside of the car top.
 - d. The top of the beveled area and/or car top outside the railing, shall be clearly marked. The markings shall consist of alternating 4 inch diagonal red and white stripes.
 - e. The applicant shall provide durable signs with lettering not less than ½ inch on a contrasting background on each inset railing; each sign shall state:

**CAUTION
DO NOT STAND ON OR CLIMB OVER RAILING**

Proposed Variance Decision
Otis Gen2S Elevators (Group IV)
Hearing Date: November 20, 2020

- f. The Group IV requirements for car top clearances shall be maintained (car top clearances outside the railing shall be measured from the car top and not from the required bevel).
8. If the seismic reset switch does not reside in a machine room, that switch shall not reside in the elevator hoistway. The switch shall reside in the inspection and test control panel located in one upper floor hoistway door jamb or in the control space (outside the hoistway) used by the motion controller.
9. If the inspection transfer switch required by ASME A17.1, rule 2.26.1.4.4(a) does not reside in a machine room, that switch shall not reside in the elevator hoistway. The switch shall reside in the inspection and test control panel located in one upper floor hoistway door jamb or in the control space (outside the hoistway) used by the motion controller.
10. When the inspection and testing panel is located in the hoistway door jamb, the inspection and test control panel shall be openable only by use of a Security Group I restricted key.
11. The elevator shall be serviced, maintained, adjusted, tested, and inspected only by Certified Competent Conveyance Mechanics who have been trained to, and are competent to, perform those tasks on the Gen2S elevator system in accordance with the written procedures and criteria required by Condition No. 3 and in accordance with the terms of this permanent variance.
12. The governor speed-reducing switch function shall comply with the following:
 - a. It shall be used only with direct drive machines; i.e., no gear reduction is permitted between the drive motor and the suspension means.
 - b. The velocity encoder shall be coupled to the driving machine motor shaft. The "C" channel of the encoder shall be utilized for velocity measurements required by the speed reducing system. The signal from "C" channel of the encoder shall be verified with the "A" and "B" channels for failure. If a failure is detected then an emergency stop shall be initiated.
 - c. Control system parameters utilized in the speed-reducing system shall be held in non-volatile memory.
 - d. It shall be used in conjunction with approved car-mounted speed governors only.

- e. It shall be used in conjunction with an effective traction monitoring system that detects a loss of traction between the driving sheave and the suspension means. If a loss of traction is detected, then an emergency stop shall be initiated.
- f. A successful test of the speed-reducing switch system's functionality shall be conducted at least once a year (the record of the annual test of the speed-reducing switch system shall be a maintenance record subject to ASME A17.1-2004, Section 8.6.1.4).
- g. A successful test of the traction monitoring system's functionality shall be conducted at least once a year (the record of the annual test of the traction monitoring system shall be a maintenance record subject to ASME A17.1-2004, Section 8.6.1.4).
- h. The Applicant shall not utilize the elevator unless the manufacturer has written procedures for the maintenance, inspection, and testing of the speed-reducing switch and traction monitoring systems. The Applicant shall make the procedures available to the Division upon request.

13. The speed governor rope and sheaves shall comply with the following:

- a. The governor shall be used in conjunction with a 6 mm (0.25 in.) diameter steel governor rope with 6-strand, regular lay construction.
- b. The governor rope shall have a factor of safety of 8 or greater as related to the strength necessary to activate the safety.
- c. The governor sheaves shall have a pitch diameter of not less than 180 mm (7.1 in.).

14. Any Certified Qualified Conveyance Company performing inspections, maintenance, servicing, or testing of the elevators shall be provided a copy of this variance decision.

15. The Division shall be notified when the elevator is ready for inspection. The elevator shall be inspected by the Division, and a Permit to Operate shall be issued before the elevator is placed in service.

16. The Applicant shall be subject to the Suspension Means – Replacement Reporting Condition stated in Addendum 2, as hereby incorporated by this reference.

17. The Applicant shall notify its employees or their authorized representative(s), or both, of this order in the same way and to the same extent that employees and authorized

*Proposed Variance Decision
Otis Gen2S Elevators (Group IV)
Hearing Date: November 20, 2020*

representatives are to be notified of docketed permanent variance applications pursuant to California Code of Regulations, Title 8, Sections 411.2 and 411.3.

18. This Decision and Order shall remain in effect unless modified or revoked upon application by the Applicant, affected employee(s), the Division of Occupational Safety and Health, or by the Board on its own motion, in accordance with procedures per Title 8, Division 1, Chapter 3.5.

Pursuant to California Code of Regulations, Title 8, Section 426(b), the above, duly completed Proposed Decision, is hereby submitted to the Occupational Safety and Health Standards Board for consideration of adoption.

Dated: November 24, 2020


Christina Shupe, Hearing Officer

ADDENDUM 1

October 6, 2010

CIRCULAR LETTER E-10-04

TO: Installers, Manufacturers of Conveyances and Related Equipment and, Other Interested Parties

SUBJECT: Coated Steel Belt Monitoring

The Elevator Safety Orders require routine inspection of the suspension means of an elevator to assure its safe operation.

The California Labor Code Section 7318 allows the Division to promulgate special safety orders in the absence of regulation.

As it is not possible to see the steel cable suspension means of a Coated Steel Belt, a monitoring device which has been accepted by the Division is required on all Coated Steel Belts which will automatically stop the car if the residual strength of any belt drops below 60%. The Device shall prevent the elevator from restarting after a normal stop at a landing.

The monitoring device must be properly installed and functional. A functioning device may be removed only after a determination has been made that the residual strength of each belt exceeds 60%. These findings and the date of removal are to be conspicuously documented in the elevator machine room. The removed device must be replaced or returned to proper service within 30 days.

If upon routine inspection, the monitoring device is found to be in a non-functional state, the date and findings are to be conspicuously documented in the elevator machine room.

If upon inspection by the Division, the monitoring device is found to be non-functional or removed, and the required documentation is not in place, the elevator will be removed from service.

If the device is removed to facilitate belt replacement, it must be properly installed and functional before the elevator is returned to service.

A successful test of the device's functionality shall be conducted once a year.

This circular does not preempt the Division from adopting regulations in the future, which may address the monitoring of Coated Steel Belts or any other suspension means.

This circular does not create an obligation on the part of the Division to permit new conveyances utilizing Coated Steel Belts.

Debra Tudor
Principal Engineer
DOSH-Elevator Unit HQS

ADDENDUM 2

Suspension Means – Replacement Reporting Condition

Beginning on the date the Board adopts this Proposed Decision and continuing for a period of two years, the Applicant shall report to the Division within 30 days any and all replacement activity performed on the elevator(s) pursuant to the requirements of ASME A17.1-2004, Section 8.6.3 involving the suspension means or suspension means fastenings.

Further:

1. A separate report for each elevator shall be submitted, in a manner acceptable to the Division, to the following address (or to such other address as the Division might specify in the future): DOSH Elevator Unit, 2 MacArthur Place, Suite 700, Santa Ana, CA 92707, Attn: Engineering Section.
2. Each such report shall contain, but not necessarily be limited to, the following information:
 - a. The State-issued conveyance number, complete address, and OSHSB file number that identifies the permanent variance.
 - b. The business name, complete address, telephone number, and contact person of the elevator responsible party (presumably the Applicant or the subsequent holder of this variance).
 - c. The business name, complete address, telephone number, and Certified Qualified Conveyance Company (CQCC) certification number of the firm performing the replacement work.
 - d. The name (as listed on certification), Certified Competent Conveyance Mechanic (CCCM) certification number, certification expiration date, and signature of each CCCM performing the replacement work.
 - e. The date and time the elevator was removed from normal service for suspension replacement, the date and time the replacement work commenced, the date and time the replacement work was completed, and the date and time the elevator was returned to normal service.

Proposed Variance Decision
Otis Gen2S Elevators (Group IV)
Hearing Date: November 20, 2020

- f. A detailed description of, and clear color photographs depicting, (1) all the conditions that existed in the suspension components requiring their replacement and (2) any conditions that existed to cause damage or distress to the suspension components being replaced.
 - g. A detailed list of all elevator components adjusted, repaired, or replaced in conjunction with the suspension component replacement.
 - h. All information provided on the crosshead data plate per ASME A17.1-2004, Section 2.20.2.1, unless that ASME requirement is modified by the conditions of a variance that pertains to the elevator in question, in which case, the information to be reported shall be the information required by the ASME provision as modified by the variance.
 - i. For the suspension means being replaced, all information provided on the data tag required per ASME A17.1-2004, Section 2.20.2.2, unless that ASME requirement is modified by the conditions of a variance that pertains to the elevator in question, in which case, the information to be reported shall be the information required by the ASME provision as modified by the variance.
 - j. For the replacement suspension means, all information provided on the data tag required by ASME A17.1-2004, Section 2.20.2.2, unless that ASME requirement is modified by the conditions of a variance that pertains to the elevator in question, in which case, the information to be reported shall be the information required by the ASME provision as modified by the variance.
 - k. Any other information requested by the Division regarding the replacement of the suspension means or fastenings.
3. In addition to the submission of the report to the Division, the findings of any testing, failure analysis, or other engineering evaluations performed on any portion of the replaced suspension components, or other elevator components replaced in conjunction therewith, shall be submitted to the Division referencing the information contained in item 2a above.

STATE OF CALIFORNIA
DEPARTMENT OF INDUSTRIAL RELATIONS
OCCUPATIONAL SAFETY AND HEALTH STANDARDS BOARD
2520 Venture Oaks Way, Suite 350
Sacramento, California 95833
(916) 274-5721

In the Matter of Application for Permanent)
Variance Regarding:)
)
)
)
Otis Elevator (Group IV))
Gen2(O) and/or Gen2L Alterations)
)
_____)

OSHSB FILE No.: see grid in Item A of
Proposed Decision Dated: November 24, 2020

DECISION

The Occupational Safety and Health Standards Board hereby adopts the attached PROPOSED DECISION by Christina Shupe, Hearing Officer.

DAVID THOMAS, Chairman

OCCUPATIONAL SAFETY AND HEALTH
STANDARDS BOARD

BARBARA BURGEL, Member

Date of Adoption: December 17, 2020

DAVID HARRISON, Member

THE FOREGOING VARIANCE DECISION WAS ADOPTED ON THE DATE INDICATED ABOVE. IF YOU ARE DISSATISFIED WITH THE DECISION, A PETITION FOR REHEARING MAY BE FILED BY ANY PARTY WITH THE STANDARDS BOARD WITHIN TWENTY (20) DAYS AFTER SERVICE OF THE DECISION. YOUR PETITION FOR REHEARING MUST FULLY COMPLY WITH THE REQUIREMENTS OF CALIFORNIA CODE OF REGULATIONS, TITLE 8, SECTIONS 427, 427.1 AND 427.2.

NOLA KENNEDY, Member

CHRIS LASZCZ-DAVIS, Member

LAURA STOCK, Member

Note: A copy of this Decision must be posted for the Applicant's employees to read, and/or a copy thereof must be provided to the employees' Authorized Representatives.

BEFORE THE
 OCCUPATIONAL SAFETY AND HEALTH STANDARDS BOARD
 DEPARTMENT OF INDUSTRIAL RELATIONS
 STATE OF CALIFORNIA

<p>In the Matter of Application for Permanent Variance Regarding:</p> <p style="text-align: center;">Otis Elevator (Group IV) Gen2(O) and/or Gen2L Alterations</p>	<p>OSHSB File Nos.: Per Section A.1 table</p> <p style="text-align: center;"><u>PROPOSED DECISION</u></p> <p>Hearing Date: November 20, 2020</p>
---	--

A. Subject Matter:

- Each below listed applicant (“Applicant”) has applied for permanent variances from provisions of the Elevator Safety Orders, found at title 8 of the California Code of Regulations, or applied to modify such variances, with respect to a conveyance, or conveyances, in the listed quantity, at the listed location:

Variance No.	Applicant Name	Variance Location Address	No. of Elevators
20-V-369	Workday, Inc	Workday Bldg 5928 5928 Stoneridge Mall Road Pleasanton, CA	4

- The subject regulatory requirements are as enumerated per the below Decision and Order.

B. Jurisdiction:

This proceeding is conducted in accordance with Labor Code Section 143, and California Code of Regulations, Title 8, Section 401, et. seq.

C. Procedural:

- This hearing was held on November 20, 2020, in Sacramento, California, and via teleconference, by Occupational Safety and Health Standards Board (“Board”), with Hearing Officer Christina Shupe, both presiding and hearing the matter on its merit, as a basis of proposed decision to be advanced to the Board for its consideration, in accordance with California Code of Regulations, Title 8, Section 426.
- At the hearing, Wolter Geesink, with Otis Elevator, and Dan Leacox of Leacox & Associates, appeared on behalf of each Applicant; Mark Wickens and David Morris appeared on behalf of the Division of Occupational Safety and Health (“Division”); and

Proposed Variance Decision

Otis Elevator, Group IV, Gen2(O) and/or Gen2L Alterations

Hearing date: November 20, 2020

Michael Nelmidia appeared on behalf of Board staff in a technical advisory role apart from the Board.

3. Oral evidence was received at the hearing, and by stipulation of all parties, documents were admitted into evidence: each permanent variance application per Section A.1 table as Exhibit PD-1; Notice of Hearing as Exhibit PD-2; each respective Board staff Pending Application Memorandum as PD-3; Division evaluation as PD-4; Review Draft 1 Proposed Decision as PD-5; and official notice taken of the Board's rulemaking records and variance decisions concerning the safety order requirements from which variance is requested. At close of hearing on November 20, 2020, the record closed, and the matter was taken under submission by the Hearing Officer.

D. Findings and Basis:

1. Each Applicant intends to alter elevators at the locations, and in the numbers, stated in the Section A.1 table such that each elevator becomes (or incorporates features of) an Otis Gen2(O) and/or Otis Gen2L elevator.
2. The belts and connections that each Applicant intends to install are the same as are used on new Otis Gen2(O)/Gen2L installations.
3. The alterations will be performed after May 1, 2008, and the contracts for the alterations were or will be signed on or after May 1, 2008, making those alterations subject to the Group IV Elevator Safety Orders.
4. The Board incorporates by reference the findings stated in: (a) Items 3 through 5.c, 5.e, and 5.f of the "Findings of Fact" section of the Proposed Decision adopted by the Board on February 19, 2009, regarding OSHSB File No. 08-V-247; (b) Item D.3 of the Proposed Decision adopted by the Board on July 16, 2009, regarding OSHSB File No. 09-V-042; (c) Item D.4 of the Proposed Decision adopted by the Board on September 16, 2010, regarding OSHSB File No. 10-V-029; and (d) Items D.4, D.5, and D.7 of the proposed decision adopted by the Board on July 18, 2013, regarding OSHSB File No. 12-V-146.

E. Conclusive Findings:

The above stated procedural prerequisites, legal authority, and factual findings, as further supported by the documentary record and hearing testimony in this matter, provide a substantive and reasonable basis of conclusion that: (1) Each Applicant has complied with the statutory and regulatory requirements that must be met before an application for permanent variance may be conditionally granted, and (2) a preponderance of the evidence establishes that each Applicants proposal, subject to all conditions and limitations set forth

Proposed Variance Decision

Otis Elevator, Group IV, Gen2(O) and/or Gen2L Alterations

Hearing date: November 20, 2020

in the below Decision and Order, will provide equivalent safety and health to that which would prevail upon full compliance with the requirements of California Code of Regulation, Title 8, Elevator Safety Orders from which variance is being sought.

F. Decision and Order:

Each permanent variance application that is the subject of this proceeding is conditionally GRANTED, as specified below, to the extent that, as of the date the Board adopts this Proposed Decision, each Section A.1 table listed Applicant, at the specified variance location, and as to specified number of conveyances, shall have a permanent variance regarding switches, suspension rope and connection retrofits, (so long as the elevators are Gen2 (O) or Gen2L Group IV devices that are designed, equipped, and installed in accordance with, and are otherwise consistent with, the representations made in the Otis Master File [referred to in previous Proposed Decisions as the “Gen2 Master File”] maintained by the Board, as that file was constituted at the time of this hearing). The variance shall be from California Code of Regulations, Title 8, Sections 3141 and 3141.2(a), and shall only be to the extent necessary to allow variances from the following provisions of ASME A17.1-2004 made applicable by those Title 8 provisions:

- Sections 8.7.1.1(b), 8.7.2.21.1, and 8.7.2.25.1(c) (to the extent necessary to permit variance from the ASME A17.1-2004 provisions listed in the next bullet point);
- Sections 2.14.1.7.1 (only to the extent necessary to permit an inset car top railing, if, in fact, the car top railing is inset), 2.20.1 (only to the extent necessary to permit the use of Otis Gen2 flat coated steel suspension belts [the belts proposed for use on these Gen2(O) and/or Gen2L elevators] in lieu of conventional steel suspension ropes), 2.20.2.1, 2.20.2.2(a), 2.20.2.2(f), 2.20.3, 2.20.4, 2.20.9.3.4, 2.20.9.5.4, 2.26.1.4.4(a) (only to the extent necessary to allow the inspection transfer switch to reside at a location other than a machine room, if, in fact, it does not reside in the machine room) and 8.4.10.1.1(a)(2)(b) (only to the extent necessary to allow the seismic reset switch to reside at a location other than a machine room, if, in fact, it does not reside in the machine room)].

The variance shall be subject to, and limited by, the following additional conditions:

1. Each elevator subject to this variance shall comply with all applicable Group IV Elevator Safety Orders and with all ASME provisions made applicable by those Group IV Elevator Safety Orders, except those from which variances are granted, as set forth in the prefatory portion of this Decision and Order.
2. The elevator suspension system shall comply with the following:

Proposed Variance Decision

Otis Elevator, Group IV, Gen2(O) and/or Gen2L Alterations

Hearing date: November 20, 2020

- a. The coated steel belt shall have a factor of safety at least equal to the factor of safety that ASME A17.1-2004, Section 2.20.3 would require for wire ropes if the elevator were suspended by wire ropes rather than the coated steel belt.
 - b. Steel coated belts that have been installed and used on another installation shall not be reused.
 - c. The coated steel belt shall be fitted with a monitoring device which has been accepted by the Division and which will automatically stop the car if the residual strength of any single belt drops below 60 percent. If the residual strength of any single belt drops below 60 percent, the device shall prevent the elevator from restarting after a normal stop at a landing.
 - d. Upon initial inspection, the readings from the monitoring device shall be documented and submitted to the Division.
 - e. A successful test of the monitoring device's functionality shall be conducted at least once a year (the record of the annual test of the monitoring device shall be a maintenance record subject to ASME A17.1-2004, Section 8.6.1.4).
 - f. The coated steel belts used shall be accepted by the Division.
 - g. The installation of belts and connections shall be in conformance with the manufacturer's specifications, which shall be provided to the Division.
3. With respect to each elevator subject to this variance, the applicant shall comply with Division Circular Letter E-10-04, a copy of which is attached hereto as Addendum 1 and incorporated herein by this reference.
 4. The Applicant shall not utilize the elevator unless the manufacturer has written procedures for the installation, maintenance, inspection, and testing of the belts and monitoring device, and criteria for belt replacement, and the Applicant shall make those procedures and criteria available to the Division upon request.
 5. The flat coated steel belts shall be provided with a metal data tag that is securely attached to one of those belts. This data tag shall bear the following flat steel coated belt data:
 - a. The width and thickness in millimeters or inches;
 - b. The manufacturer's rated breaking strength in (kN) or (lbf);
 - c. The name of the person who or organization that installed the flat coated steel belts;

Proposed Variance Decision

Otis Elevator, Group IV, Gen2(O) and/or Gen2L Alterations

Hearing date: November 20, 2020

- d. The month and year the flat coated steel belts were installed;
 - e. The month and year the flat coated steel belts were first shortened;
 - f. The name or trademark of the manufacturer of the flat coated steel belts; and
 - g. Lubrication information.
6. There shall be a crosshead data plate of the sort required by Section 2.20.2.1, and that plate shall bear the following flat steel coated belt data:
 - a. The number of belts;
 - b. The belt width and thickness in millimeters or inches; and
 - c. The manufacturer's rated breaking strength per belt in (kN) or (lbf).
 7. If the seismic reset switch does not reside in a machine room, that switch shall not reside in the elevator hoistway. The switch shall reside in the inspection and test control panel located in one upper floor hoistway door jamb or in the control space (outside the hoistway) used by the motion controller.
 8. If the inspection transfer switch required by ASME A17.1, rule 2.26.1.4.4(a) does not reside in a machine room, that switch shall not reside in the elevator hoistway. The switch shall reside in the inspection and test control panel located in one upper floor hoistway door jamb or in the control space (outside the hoistway) used by the motion controller.
 9. When the inspection and test control panel is located in the hoistway door jamb, the inspection and test control panels shall be openable only by use of a Security Group I restricted key.
 10. The opening to the hoistway shall be effectively barricaded when car top inspection, maintenance, servicing, or testing of elevator equipment in the hoistway is required. If service personnel must leave the area for any reason, the hoistway and control room doors shall be closed.
 11. If there is an inset car top railing:
 - a. Serviceable equipment shall be positioned so that mechanics and inspectors do not have to climb on railings to perform adjustment, maintenance, repairs, or inspections. The applicant shall not permit anyone to stand on or climb over the car top railing.

Proposed Variance Decision

Otis Elevator, Group IV, Gen2(O) and/or Gen2L Alterations

Hearing date: November 20, 2020

- b. The distance that the car top railing may be inset from the car top perimeter shall be limited to no more than 6 inches.
- c. All exposed areas of the car top outside the car top railing shall preclude standing or placing objects or persons which may fall and shall be beveled from the mid- or top rail to the outside of the car top.
- d. The top of the beveled area and/or the car top outside the railing shall be clearly marked. The markings shall consist of alternating 4 inch diagonal red and white stripes.
- e. The Applicant shall provide durable signs with lettering not less than ½ inch on a contrasting background on each inset railing; each sign shall state:

CAUTION

DO NOT STAND ON OR CLIMB OVER RAILING

- f. The Group IV requirements for car top clearances shall be maintained (car top clearances outside the railing shall be measured from the car top and not from the required bevel).
12. Each elevator shall be serviced, maintained, adjusted, tested, and inspected by Certified Competent Conveyance Mechanics who have been trained, and are competent, to perform those tasks on the Gen2(O) and/or Gen2L elevator system the Applicant proposes to use, in accordance with the written procedures and criteria required by Condition No. 4 and all other terms and conditions of this permanent variance.
13. Any Certified Qualified Conveyance Company performing inspections, maintenance, servicing, or testing of the elevators shall be provided a copy of this variance decision.
14. The Division shall be notified when the elevator is ready for inspection. No elevator shall be placed in service prior to it being inspected and issued a Permit to Operate by the Division
15. Each Applicant shall be subject to the suspension means replacement reporting condition stated in Addendum 2; that condition is incorporated herein by this reference.
16. Each Applicant shall notify its employees or their authorized representative(s), or both, of this order in the same way that the Applicant was required to notify them of the application for permanent variance per California Code of Regulations, Title 8, Sections 411.2 and 411.3.

Proposed Variance Decision

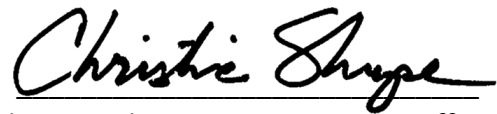
Otis Elevator, Group IV, Gen2(O) and/or Gen2L Alterations

Hearing date: November 20, 2020

17. This Decision and Order shall remain in effect unless modified or revoked upon application by the Applicant, affected employee(s), the Division of Occupational Safety and Health, or by the Board on its own motion, in accordance with procedures per Title 8, Division 1, Chapter 3.5.

Pursuant to California Code of Regulations, Title 8, Section 426(b), the above, duly completed Proposed Decision, is hereby submitted to the Occupational Safety and Health Standards Board for consideration of adoption.

Dated: November 24, 2020



Christina Shupe, OSHSB Hearing Officer

ADDENDUM 1

October 6, 2010

CIRCULAR LETTER E-10-04

TO: Installers, Manufacturers of Conveyances and Related Equipment and, Other Interested Parties

SUBJECT: Coated Steel Belt Monitoring

The Elevator Safety Orders require routine inspection of the suspension means of an elevator to assure its safe operation.

The California Labor Code Section 7318 allows the Division to promulgate special safety orders in the absence of regulation.

As it is not possible to see the steel cable suspension means of a Coated Steel Belt, a monitoring device which has been accepted by the Division is required on all Coated Steel Belts which will automatically stop the car if the residual strength of any belt drops below 60%. The Device shall prevent the elevator from restarting after a normal stop at a landing.

The monitoring device must be properly installed and functional. A functioning device may be removed only after a determination has been made that the residual strength of each belt exceeds 60%. These findings and the date of removal are to be conspicuously documented in the elevator machine room. The removed device must be replaced or returned to proper service within 30 days.

If upon routine inspection, the monitoring device is found to be in a non-functional state, the date and findings are to be conspicuously documented in the elevator machine room.

If upon inspection by the Division, the monitoring device is found to be non-functional or removed, and the required documentation is not in place, the elevator will be removed from service.

If the device is removed to facilitate belt replacement, it must be properly installed and functional before the elevator is returned to service.

A successful test of the device's functionality shall be conducted once a year.

This circular does not preempt the Division from adopting regulations in the future, which may address the monitoring of Coated Steel Belts or any other suspension means.

This circular does not create an obligation on the part of the Division to permit new conveyances utilizing Coated Steel Belts.

Debra Tudor
Principal Engineer
DOSH-Elevator Unit HQS

ADDENDUM 2

Suspension Means – Replacement Reporting Condition

Beginning on the date the Board adopts this Proposed Decision and continuing for a period of two years, the Applicant shall report to the Division within 30 days any and all replacement activity performed on the elevator(s) pursuant to the requirements of ASME A17.1-2004, Section 8.6.3 involving the suspension means or suspension means fastenings.

Further:

1. A separate report for each elevator shall be submitted, in a manner acceptable to the Division, to the following address (or to such other address as the Division might specify in the future): DOSH Elevator Unit, 2 MacArthur Place, Suite 700, Santa Ana, CA 92707, Attn: Engineering Section.
2. Each such report shall contain, but not necessarily be limited to, the following information:
 - a. The State-issued conveyance number, complete address, and OSHSB file number that identifies the permanent variance.
 - b. The business name, complete address, telephone number, and contact person of the elevator responsible party (presumably the Applicant or the subsequent holder of this variance).
 - c. The business name, complete address, telephone number, and Certified Qualified Conveyance Company (CQCC) certification number of the firm performing the replacement work.
 - d. The name (as listed on certification), Certified Competent Conveyance Mechanic (CCCM) certification number, certification expiration date, and signature of each CCCM performing the replacement work.
 - e. The date and time the elevator was removed from normal service for suspension replacement, the date and time the replacement work commenced, the date and time the replacement work was completed, and the date and time the elevator was returned to normal service.

Proposed Variance Decision

Otis Elevator, Group IV, Gen2(O) and/or Gen2L Alterations

Hearing date: November 20, 2020

- f. A detailed description of, and clear color photographs depicting, (1) all the conditions that existed in the suspension components requiring their replacement and (2) any conditions that existed to cause damage or distress to the suspension components being replaced.
 - g. A detailed list of all elevator components adjusted, repaired, or replaced in conjunction with the suspension component replacement.
 - h. All information provided on the crosshead data plate per ASME A17.1-2004, Section 2.20.2.1, unless that ASME requirement is modified by the conditions of a variance that pertains to the elevator in question, in which case, the information to be reported shall be the information required by the ASME provision as modified by the variance.
 - i. For the suspension means being replaced, all information provided on the data tag required per ASME A17.1-2004, Section 2.20.2.2, unless that ASME requirement is modified by the conditions of a variance that pertains to the elevator in question, in which case, the information to be reported shall be the information required by the ASME provision as modified by the variance.
 - j. For the replacement suspension means, all information provided on the data tag required by ASME A17.1-2004, Section 2.20.2.2, unless that ASME requirement is modified by the conditions of a variance that pertains to the elevator in question, in which case, the information to be reported shall be the information required by the ASME provision as modified by the variance.
 - k. Any other information requested by the Division regarding the replacement of the suspension means or fastenings.
3. In addition to the submission of the report to the Division, the findings of any testing, failure analysis, or other engineering evaluations performed on any portion of the replaced suspension components, or other elevator components replaced in conjunction therewith, shall be submitted to the Division referencing the information contained in item 2a above.

Occupational Safety and Health Standards Board

Business Meeting Executive Officer's Report