


STATE OF CALIFORNIA
DEPARTMENT OF INDUSTRIAL RELATIONS
OCCUPATIONAL SAFETY AND HEALTH STANDARDS BOARD
2520 Venture Oaks Way, Suite 350
Sacramento, California 95833
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In the Matter of a Petition by:) **AMENDED**
)
) PETITION FILE NO. 573
Mitch Steiger)
Legislative Advocate) DECISION
California Labor Federation)
1127 Eleventh Street #425)
Sacramento, CA 95814)
)
_____) Applicant.)

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

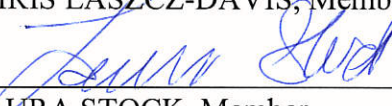


NOLA KENNEDY, Member

DAVE HARRISON, Member



CHRIS LASZCZ-DAVIS, Member



LAURA STOCK, Member

By: 

Christina Shupe, Executive Officer

DATE: March 21, 2019
Attachments

**OCCUPATIONAL SAFETY
AND HEALTH STANDARDS BOARD**

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**AMENDED PROPOSED DECISION OF THE
OCCUPATIONAL SAFETY AND HEALTH STANDARDS BOARD
REGARDING PETITION FILE NO. 573****INTRODUCTION**

On December 13, 2018, the Occupational Safety and Health Standards Board (Board or OSHSB) received a joint submission from Mitch Steiger, California Labor Federation; Douglas Parker, Worksafe; and Anne Katten, California Rural Legal Assistance Foundation (Petitioners), seeking emergency regulatory protection of outdoor workers from the harmful effects of wildfire smoke. The submission was received by the Board pursuant to Labor Code Section 142.2 and designated OSHSB Petition 573 (Petition).

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 to render its decision no later than six months following receipt.

SUMMARY

The Petitioners seek adoption of new regulatory standards through the emergency rulemaking process, to protect outdoor workers from conditions of unhealthful air quality, defined as an Air Quality Index level higher than 150. Although only referring to the overall Air Quality Index, which reflects the most noncompliant level among numerous pollutants, the Petitioners otherwise focus more specifically upon the hazard posed by fine particulate matter (PM 2.5) present in wildfire smoke. Petitioners propose no means of determining that such Air Quality Index exceedance has been caused by any one among the thousands of California wildfires occurring in any given year.

Wildfires, and the smoke they generate, are an increasing threat to the safety and health of Californians. On January 8, 2019, Governor Gavin Newsom issued Executive Order N-05-19, declaring that California experienced the most destructive fire season in state history in 2018, with over 7,600 wildfires that burned 1,846,445 acres in total. The Order further states, in part, “...*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, U.S. Environmental Protection Agency research finds that fires are increasing in frequency, size and intensity, creating the potential for greater smoke production and chronic exposures in the United States, particularly in the West.^{2,3}

A central focus of the Petition is the Air Quality Index (AQI), a public health tool intended to inform the public of air pollution levels so that individuals can make their own decisions about how to protect their personal health and the health of their family when engaged in outdoor activities. The AQI is not intended to be an indicator for triggering mandatory occupational health controls.

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>

² U.S. EPA. Website accessed 1_7_2019. Wildland Fire Research to Protect Health and the Environment. <https://www.epa.gov/air-research/wildland-fire-research-protect-health-and-environment>

³ 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>

The Division of Occupational Safety and Health (Division) believes current Title 8 regulations lack sufficient specificity as to when protections are required for employees exposed to wildfire smoke. It recommends granting the Petitioners' request to undertake emergency rulemaking utilizing the AQI as a trigger for required protective measures. Board staff sees inherent flaws in the Petitioners' proposal, recommending instead that an expert panel be convened to formulate a more sound strategy to protect workers, along with possible adoption of "super emergency" regulation to be in effect for the limited duration of a specific triggering wildfire event.

REQUESTED ACTION

The Petitioners request emergency rulemaking, to address potential harm posed to outdoor workers by wildfire smoke, by adopting safety order requirements to be triggered in the event the Air Quality Index (AQI) for PM 2.5 rises to the "Unhealthy" level (i.e. over 150).

The requested emergency regulation would apply to outdoor occupations, including:

- Agriculture;
- Construction;
- Landscaping;
- [Outdoor] Maintenance;
- Commercial delivery; and
- Other outdoor activities not considered to be "first response" such as,
 - Nurses evacuating patients;
 - Caregivers evacuating residents; and
 - School staff evacuating students.

It is requested that the emergency regulation be modeled after wildfire smoke hazard health advisories of Cal/OSHA, the Air Resources Board (ARB), and public health authorities. The Petition cites in particular ARB "Protecting Yourself from Wildfire Smoke" guidelines recommending:

- Check air quality reports;
- Stay indoors and keep indoor air clean;
- Avoid outdoor activities;
- Use a respirator mask with an efficiency rating of N95 or higher - checking with potential wearer's doctor before using a mask if he or she has heart or lung disease, or has trouble breathing - it being harder to breathe when wearing these masks.

The Petition calls for the standard to require feasible engineering controls such as enclosed structures or vehicle cabs with filtered air for rest and meal breaks, or where feasible, administrative controls such as changes in work location and schedules, reduction in work intensity, and additional rest periods. Also, it calls for provision of appropriately selected and maintained respiratory protection for the employees.

WIDESPREAD HEALTH EFFECTS OF WILDFIRE SMOKE

The National Oceanic and Atmospheric Administration (NOAA) has determined that wildfire smoke can spread thousands of miles from its source.^{4,5} Therefore, communities both near and far from wildland fires can be severely impacted by the smoke.⁶ Temperature inversions exacerbate pollution from wildfire smoke by trapping unhealthy air close to ground level, preventing dilution with cleaner air from higher elevations.⁷ Winds also affect the dispersion pattern of smoke.⁸

This means that in addition to employees who work in close proximity to active wildfires, other employees working outdoors can be exposed to smoke from distant wildfires. Indoor workers also can be exposed to wildfire smoke if they are working in locations where the workplace is open to the outside or where the indoor air is inadequately filtered. Such indoor workplaces may include warehouses, packing sheds, vehicle repair shops, and similar facilities.

Wildfire smoke is a complex mixture of vapors, gases, and solid and liquid particulate matter. It contains chemicals such as carbon dioxide, carbon monoxide, nitrogen oxides, water vapor, trace minerals, hydrocarbons, and other organic chemicals. And while thousands of chemical compounds are present in wildfire smoke, most of the mass particulate matter produced by wildland fire is composed of carbon compounds within the fine particulate matter (PM 2.5) range.

Numerous published scientific journal epidemiological studies have found an association between wildfire smoke respiratory morbidity in general (respiratory emergency visits, physicians visits, declines in lung function among children), and more specifically exacerbation of asthma and chronic obstructive pulmonary disease (COPD).⁹

AIR QUALITY INDEX (AQI)

The Air Quality Index, or AQI, was developed by the U.S. Environmental Protection Agency (EPA) to make it easier for the public to understand the health impacts of air pollution. AQI information is issued by the AirNow system. The EPA developed the AirNow system, in conjunction with other federal, state, and local agencies, to provide the public with easy access to national air quality information. Through participation in the system, State and local agencies report the air quality index (AQI) for cities across the US. According to the EPA's AirNow website: AirNow data are used only to report the AQI, not to formulate or support regulation, guidance or any other EPA decision or position.¹⁰

The AQI can be thought of as a yardstick running from 0 to 500. The higher the AQI value, the greater the level of air pollution and the greater the health concern. An AQI value of 50 represents good air quality with little potential to affect public health. There is a general AQI reflecting the highest level

⁴ NOAA Twitter. <https://twitter.com/noaaatlites/status/1032311533668319232?lang=en>

⁵ NOAA 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>

⁶ Navarro KM [Fall 2016]. Assessment of Ambient and Occupational Exposures to Air Contaminants from Wildland Fire Smoke. Dissertation. Berkeley, CA: University of California, Berkeley
http://digitalassets.lib.berkeley.edu/etd/ucb/text/Navarro_berkeley_0028E_16683.pdf

⁷ https://www.fs.usda.gov/Internet/FSE_DOCUMENTS/stelprdb5354046.pdf

⁸ http://www.auburn.edu/academic/forestry_wildlife/fire/smoke_guide/smoke_dispersion.htm

⁹ Environ Health Perspect. 2016 Sep; 124(9): 1334-1343; <https://www.ncbi.nlm.nih.gov/pubmed/27082891>

¹⁰ AirNow.gov, accessed 2_27_2019. https://airnow.gov/index.cfm?action=topics.about_airnow

among five primary pollutants (ground-level ozone, particle pollution, carbon monoxide, nitrous oxide, and sulfur dioxide). The highest of these AQI values is reported as the overall AQI value for that day. AQI forecasts and measurements of individual constituent pollutants are also issued, and are standardized to the same numeric scale. An AQI value of 100 generally corresponds to the national air quality standard for a given pollutant, which is the level set by EPA to protect public health. AQI values below 100 are characterized as satisfactory. AQI values above 100 are categorized as unhealthy for certain sensitive groups, above 150 unhealthy for all, above 200 very unhealthy for all, and above 300 hazardous for all.

EXISTING REGULATIONS

California Regulations: Numerous Title 8 safety orders address, to varying degrees, potential harm to workers posed by wildfire smoke, including:

General Industry Safety Orders

- **Section 3203. Injury and Illness Prevention Program (IIPP).**
Requiring an employer's IIPP to identify and evaluate work hazards and develop methods and procedures to correct unsafe or unhealthy work conditions.
- **Section 5140. Definitions.**
Including definition of "harmful exposure", which is defined as an exposure to dusts, fumes, mists, vapors, or gases:
 - (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.*
- **Section 5141. Control of Harmful Exposures to Employees.**
Establishing the hierarchy of controls: engineering, administrative, and respiratory protection:
 - (a) *Engineering Controls. Harmful exposures shall be prevented by engineering controls whenever feasible.*
 - (b) *Administrative Controls. Whenever engineering controls are not feasible or do not achieve full compliance, administrative controls shall be implemented if practicable.*
 - (c) *Control by Respiratory Protective Equipment. Respiratory protective equipment, in accordance with Section 5144, shall be used to prevent harmful exposures as follows:*
 - (1) *During the time period necessary to install or implement feasible engineering controls;*
 - (2) *Where feasible engineering controls and administrative controls fail to achieve full compliance; and*
 - (3) *In emergencies*
- **Section 5144. Respiratory Protection, with Appendices A-D**
Setting out the requisite elements of a respiratory protection program, including those for voluntary respirator use (subpart (c) and Appendix D)
- **Section 5155. Airborne Contaminants, with Appendix and Table AC-1**

Listing concentration limits of airborne contaminants (PELs) that workers may be exposed to daily during a 40-hour workweek for a working lifetime without adverse effect. Employers are required to conduct exposure monitoring whenever it is reasonable to suspect that employees may be exposed to concentrations above the limits. If monitoring results reveal that the employee exposure is at or above the allowable limits, employers are required to institute control measures in accordance with Section 5141.

Regardless of whether inside a fully enclosed building or outdoors, when employees are working in air containing wildfire smoke, Sections 5141 and 5144 require employers to determine if the smoke is harmful to the employees. If conditions constitute a harmful exposure (as defined in Section 5140), then employers must take action to protect employees as described in Section 5141 and 5144, in accordance with Section 5155 exposure limits for the many listed substances. Section 5155 also sets a limit on the overall amount of respirable small particulates up to PM 10—without singling out PM 2.5.

Construction Safety Orders

- **Section 1509. Injury and Illness Prevention Program**

This Section requires employers to develop an IIPP in accordance with Section 3203(a).

- **Section 1510(c). Safety Instructions for Employees**

This Section requires employers to provide procedures for protecting employees from known jobsite hazards.

- **Section 1528. General**

This Section requires employers to prevent harmful exposure to employees by removing the employees from exposure to the hazard; by limiting the daily exposure of employees to the hazard; or by application of engineering controls. Whenever such controls are not practicable or fail to achieve full compliance, respiratory protective equipment shall be provided as prescribed in Section 1531, which refers the reader to Section 5144.

Federal Regulations: California's, Title 8, Section 5144, conforms closely to Federal OSHA requirements for respiratory protection within the Code of Federal Regulations (CFR), Title 29, Section 1910.134. Like Title 8, CFR, Title 29, does not set a PM 2.5 permissible exposure limit other than as part of a respirable small particle limit.

EMERGENCY RULEMAKING

The Government Code Section 11346.1, provides for expedited rulemaking, under certain emergency circumstances, allowing for adoption of regulations generally remaining in effect for 180 days. The requisite "emergency" is defined as "*a situation that calls for immediate action to avoid serious harm to the public peace, health, safety, or general welfare.*"¹¹ Per Section 11346.1, "*[a] finding of emergency based only upon expediency, convenience, best interest, general public need, or speculation, shall not be adequate to demonstrate the existence of an emergency. If the situation identified in the finding of emergency existed and was known by the agency adopting the emergency regulation in sufficient time to*

¹¹ Gov. Code Section 11342.545.

have been addressed through nonemergency regulations... the finding of emergency shall include facts explaining the failure to address the situation through nonemergency regulations.”

At least five days prior to submission of the proposed emergency regulation to the Office of Administrative Law (OAL) for review, notice of the proposed action is to be sent to persons having filed a request for notice of regulatory action with the agency¹² — unless the emergency situation clearly poses such an immediate, serious harm that delaying action to allow public comment would be inconsistent with the public interest.¹³ OAL guidelines specify completion of its pre-adoption review within 10 calendar days of submission, inclusive of any requisite 5 day public notice period.¹⁴

The submitting agency is not required to provide the 5 day notice if the emergency situation clearly poses such an immediate, serious harm that delaying action to allow public comment would be inconsistent with the public interest.¹⁵ This is sometimes referred to as “super emergency” action, in which case OAL may, if feasible, reduce the 10 day review period, as well.

DIVISION EVALUATION

The Division provides a well substantiated evaluation of how airborne particle size is directly linked to the potential for causing health problems. Key among the points made is that small particles less than 2.5 micrometers in diameter pose the greatest risk, because of how they penetrate deep into the lungs and may enter the bloodstream.¹⁶ Adding to the risk, toxic volatile and semi-volatile organic compounds can be adsorbed onto airborne PM 2.5.¹⁷ These tiny particles may cause additional adverse health outcomes through multiple biological mechanisms, such as increased local lung and systemic inflammation, acute and chronic cardiovascular effects, and acute and chronic respiratory effects.¹⁸ The Division advises persuasively that the principal harmful pollutant of concern for persons not in close proximity to wildfires is PM 2.5.^{19,20,21}

The Division reports having received many calls and complaints concerning wildfire smoke, leading it to believe many employers do not know what protective measures to use and when to use them. This has led it to conclude Title 8 presently lacks sufficient specificity in this area of regulation. At the same

¹² To the Office of Administrative Law (OAL)

¹³ Gov. Code Section 11346.1(a)(2) and (3).

¹⁴ <https://oal.ca.gov/wp-content/uploads/sites/166/2018/11/Emergency-Rulemaking-Flowchart-New-for-2018.pdf> accessed 2_25_2019.

¹⁵ Gov. Code Section 11346.1(a)(3)

¹⁶ U.S. EPA. Website accessed 1_19_2019. Health and Environmental Effects of Particulate Matter (PM).

<https://www.epa.gov/pm-pollution/health-and-environmental-effects-particulate-matter-pm>

¹⁷ 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>

¹⁸ Navarro KM [Fall 2016]. Assessment of Ambient and Occupational Exposures to Air Contaminants from Wildland Fire Smoke. Dissertation. Berkeley, CA: University of California, Berkeley

http://digitalassets.lib.berkeley.edu/etd/ucb/text/Navarro_berkeley_0028E_16683.pdf

¹⁹ Butte County Air Quality Management District. Wildfires and Air Quality. <http://bcaqmd.org/resources-education/wildfires/>

²⁰ U.S. Environmental Protection Agency, U.S. Forest Service, U.S. Centers for Disease Control and Prevention, California Air Resources Board. Wildfire Smoke A Guide for Public Health Officials p7. May 2016.

https://www3.epa.gov/airnow/wildfire_may2016.pdf

²¹ California Air Resources Board. Website accessed 1_9_2019. Inhalable Particulate Matter and Health (PM2.5 and PM10). <https://www.arb.ca.gov/research/aaqs/common-pollutants/pm/pm.htm>

time the Division recognizes the problem is exacerbated by the sudden and dynamic nature of wildfire smoke events, leaving insufficient time to evaluate the hazards created by the presence wildfire smoke. According to the Division, in order to determine whether wildfire smoke is harmful to employees under existing regulations, employers must take several factors into consideration, such as:

- Concentration of contaminants in the air where employees are located
- Duration workers are outside
- Level of physical exertion made by employees
- Symptoms exhibited by employees that are consistent with exposure to wildfire smoke
- Pre-existing medical conditions

The Division believes that proposed reliance upon a reported AQI level would create a simplified method for setting a wildfire smoke hazard level at which employers would be required to implement the Section 5141 specified hierarchy of protective controls.

The Division shares the opinion of the Petitioners that wildfire smoke poses an increasing hazard to outdoor workers justifying emergency rulemaking of the type proposed. Reflecting concerns raised by the Petitioners, it cites the following justifications for emergency action:

- The impact of wildfires has worsened over the past two years, and environmental factors have created conditions that will lead to more frequent and destructive fires
- Wildfires are no longer limited to summer and early fall and can now occur throughout the year
- Inhalation of wildfire smoke may cause serious adverse health impacts, including increased mortality
- Wildfire smoke can spread far and affect many workers

Another concern raised by the Division in support of emergency rulemaking is its estimation of how long regular rulemaking may require. Considering current and recent occupational health rulemaking projects, such as medical services and first aid, housekeeping in the hotel and hospitality industry, and workplace violence in healthcare, it estimates regular rulemaking to address this issue will take between 3 to 5 years.

Believing action must be taken quickly to ensure the protection of outdoor workers, and certain indoor workers, the Division recommends:

- Grant of the petition
- Development of emergency regulation language by Division, followed by emergency rulemaking
- Subsequent regular rulemaking to establish a permanent regulation addressing the hazard.

BOARD STAFF'S EVALUATION

Of great concern to Board staff is the Air Quality Index having not been developed, nor intended by the EPA to function as a trigger, or even indicator, for mandatory occupational health controls. Board staff cautions that comparing AQI index values and Title 8 Permissible Exposure Limits (PEL) is problematic. Both have different underlying assumptions and bases (general public health vs. worker health, 24 daily average concentration vs. 8 hours of time weighted average).

In terms of particle size, EPA's PM 10 level (includes particulates that have an aerodynamic diameter that are 10 micrometers or less) corresponds to the Occupational Safety and Health Administration (OSHA) Permissible Exposure Limit (PEL) for respirable dust. However, Board staff explains that the EPA limit for particulates is based on a 24-hour exposure while the OSHA PEL is based on an 8-hour exposure. In addition, EPA and OSHA have different sampling methods. Title 8, Fed-OSHA PEL standards do not have a PEL specific to PM 2.5.

Hazard assessments and control of airborne contaminants are not new to the occupational health field. Typically air pollutants that are generated and controlled are man-made, having been created during the performance of a job or task. The model for controlling airborne contaminants in the workplace is identification, evaluation, and feasible controls. Board staff is of the opinion, regarding outdoor work, that if the source of the contaminant is generated by the environment, depending upon severity, the available controls are limited.

Board staff provides statistical examples in support of its point that the number of acres having burned in a particular county does not necessarily correspond with which counties will have the highest incidence of AQI days deemed "Unhealthy" (i.e. >150). Certain areas and counties may experience overall "Unhealthy" AQI levels, apart from any wildfire smoke that may sometimes worsen it.

Board staff deems significant that occupational health is concerned with the health of workers, as distinct from the overall population. The intent of PELs is to set limits for airborne contaminants to which (nearly all) workers may be exposed to daily, during a 40-hour workweek, for a working lifetime, without adverse effect. PELs are based on a daily exposure, typically a time weighted average of 8 hours. Certain Short Term Exposure Limits (STELs), defined as 15 minutes exposures during a single work shift, provide additional protection as found necessary. Also, there are ceiling values which represent a level of airborne contamination that must not be exceeded at any time. Non-regulatory Threshold Limit Values (TLVs) published by the American Conference of Governmental Industrial Hygienists (ACGIH), provide scientific guidance as well.

Board staff notes that employer guidance currently posted by the Division advises that airnow.gov AQI information can be used to assist employers in determining if outside air is harmful to employees. It also advises employers to institute, when feasible, the same control hierarchy advocated by Petitioners: engineering controls, administrative controls, and respiratory protection.

While Board staff does not discount the health effects of wildfire smoke, the Petitioners' proposed method of addressing the hazards has inherent flaws:

- The criteria and indices for limiting exposure for public health and occupational health differ (AQIs vs TLVs, PEL, and STELs)
- The availability of monitoring stations and the ability for the Division to verify the chain of custody of air sampling results, calibration of sampling instrumentation, laboratory accreditation and use of OSHA-NIOSH sampling methods
- "Unhealthy" air is inherently more prevalent in urban areas than agriculture farm areas

- The proposal does not consider the impact of the proposed rules on counties/areas with already high levels for criteria pollutants ozone, PM 2.5, and PM 10
- Enforcement challenges presented by the proposal
- Employer compliance challenges are also presented relating to having readily available, and accurate, site specific AQI measurements that must somehow be extrapolated or converted into a meaningful estimation of worker exposure to wildfire smoke and its constituents.

Board staff recommends that the Petition for a regulation requiring employers to institute feasible controls: engineering, administrative, and respiratory protection, when the AQI readings are considered “Unhealthy” be DENIED. Board staff does recommend gathering a panel of experts to evaluate the hazards and available information to develop a strategy to protect employees who work outdoors from wildfire smoke or other hazards associated with wildfires. Options and issues to be considered by the expert panel should include:

- Possible use of “super emergency” rulemaking action, in response to a specific triggering wildfire event (specific wildfire event), to be in effect for a limited time to deal with that event
- Further evaluate suitability, and adaptability, of AQI forecasts and readings as an occupational condition triggering prescriptive protective controls against wildfire smoke
- Evaluate what acceptable “feasible” controls, pursuant to Section 5141, would be available to protect outdoor workers and how that might vary by industry
- Distinguishing between feasible vs practicable controls
- Determining what new indoor ventilation and filtration rules would be necessary for indoor respite
- Potential consequences of respirator use by employees with known or unknown pre-existing medical conditions

DISCUSSION

It is the well-recognized reality of climate change that persistent drought, warmer temperatures, and more severe winds, have created conditions that will lead to more frequent and destructive wildfires. Compounding the threat posed to life and property by wildfire itself, is the potential harm to outdoor workers posed by the huge volumes of smoke generated by these increasingly frequent and large wildfire events.

Both the Division and Board staff have provided well substantiated Petition evaluations, persuasively describing the harmful effects of elevated airborne PM_{2.5} levels, and the accompanying harmful elements of wildfire smoke. They are in agreement that the hazard to outdoor workers posed by wildfire smoke has substantially increased in recent years, both in frequency and intensity. How the evaluations differ most is in their assessments of whether the AQI information issued by the AirNow system can easily be adapted to function as a basis for requiring occupational health controls as outlined in Title 8, Section 5141.

The Division reports having received many calls and complaints regarding wildfire smoke, leading it to believe that many employers do not know what protective measure to use and when. Certainly, the Division is well positioned, as the State agency responsible for enforcement of Title 8 safety orders, to advise the Board regarding the enforceability of new safety order requirements under consideration. Accordingly, the Board finds significant the Division's assessment that AQI information regarding PM 2.5 conditions is suitable for use as a means of determining the level of potential harm posed by wildfire smoke to workers in a given outdoor location for the upcoming wildfire season.

In contrast, Board staff raises well-reasoned concerns about the suitability of AQI information as an occupational health control trigger. Staff points out that the EPA has not developed, nor does it intend, the AirNow system's AQI to serve such a function. Nonetheless, Board staff believes further consideration should be given to the Board taking action, including consideration of developing emergency rulemaking to address the immediate hazards faced by outdoor workers, and regular rulemaking with the assistance of an expert advisory panel.

CONCLUSION AND ORDER

The Board has considered the Petition and the recommendations of the Division and Board staff. For reasons stated in the preceding discussion, the petition is hereby GRANTED in part as follows:

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 requests 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.