

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 sector annual cost 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, private sector annual 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 PM2.5 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 PM2.5 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.