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RE: Protection from Wildfire Smoke Permanent Regulation

Ms. Neidhardt:

Southern California Edison (SCE) appreciates the opportunity to provide input and recommendations to the proposed Protection from Wildfire Smoke regulatory language.

We have structured our comments in coordination with the Division's latest draft of Proposed Revisions to Emergency Regulation Section 5141.1, dated August 13, 2019.

**Section I** will identify and recommend a very simple and effective approach to the emergency regulation.

**Section II** will provide comments and recommendations to the emergency regulation being considered for the permanent regulation, in addition to the "Black bold underlined text," colloquially spoken of as Version 2.0 by the Division.

**Section III** of our letter will address recommendations to the “Red bold underlined text with yellow highlight,” identified as Version 3.0 by the Division, which are substantive changes that are being considered for later rulemaking.

Overall, the Division is acting without sufficient reflection. Promulgating standards requires due process, vetting by constituents and appropriate stakeholders, along with an assessment of financial impacts. The Division and Standards Board cannot simply convert an emergency regulation into a permanent one without more analysis than is being provided here. Furthermore, we continue to urge that utility operations while performing arc-rated emergency activities with firefighters, to be exempt from the standard with regard to mandatory respirator use, fit testing, and medical surveillance requirements.

Specific comments, suggestions, and requests related to areas of this proposed regulation are included below. Recommended insertions are shown in underlined font and proposed deletions are shown using strikethrough font (i.e., insertions and ~~deletions~~).

## **SECTION I**

### **Proposed Alternative to Current Emergency Regulation Approach**

#### **Recommendations for an Alternative to the Current Emergency Regulation:**

**Concern:** We are concerned that the proposed draft language has drifted from our understanding of the original intent of the emergency regulation, causing challenges with and uncertainty over the implementation and impact of its unique requirements. Therefore, we offer a simpler, and arguably more effective, option than what was implemented by the emergency regulation.

#### **Recommended Language:**

An additional paragraph that could be inserted into the voluntary use of respirator requirements of 5144 – Respiratory Protection are discussed, as follows:

*(c)(2)(C) “In areas impacted by wildfire smoke, an employer must provide an effective filtering facepiece respirator (e.g., N95) for use by its employees, when*

requested. A wildfire smoke area is defined as a workplace in an area where a wildfire smoke advisory has been issued by a local, regional, state, or federal government agency."

**Rationale for Recommended Language:** This approach ensures workers are provided filtering facepiece respirators by their employer for optional use when smoke advisories are issued by an authority designated to warn the public of a specific acute health concern from wildfires in the areas where these workers are present. It is not dependent on AQI, which has been subject to a significant amount of controversy and challenges related to using an environmental tool not specifically designed nor evaluated for worker protection. It removes the administrative complexity of requiring all companies in California to track, monitor, and communicate the AQI to employees. It aligns with the voluntary use intent of the current emergency regulation. Since this regulation falls under the voluntary use section of the existing regulation, Appendix D would be provided to ensure the employee understands the purpose of a respirator, its limitations, hygiene considerations, and to heed all the manufacturer's instructions.

## **SECTION II**

This section contains comments and recommendations to the emergency regulation being considered for the permanent regulation, in addition to the "Black bold underlined text," colloquially spoken of as Version 2.0 by the Division.

### **Subsection (a) Scope**

#### **A. Recommendation for (a)(1)(A):**

##### **Concern:**

While the AQI is a convenient tool that can be utilized through AirNow.gov and inform/educate the general public, the rationale for establishing the EPA's six "levels of health concern" for AQI (PM 2.5) as an appropriate index for worker protection has not been properly established, vetted and recommended/approved under standard OSHA industrial hygiene body review. It does not establish occupational exposure limits as found in Table AC-1 of 8 CCR 5155 Airborne Contaminants, which are reflective of current medical opinion and industrial hygiene practice. Health and Safety experts in the past have worked with Permissible Exposure Limits (PELs), Short Term Exposure Limits (STELs), and ceiling limits to establish concentration limits for airborne contaminants to which nearly all workers may be exposed daily

during a 40-hour workweek for a working lifetime without adverse effect. The EPA's AQI system does not follow OSHA's established approach.

The EPA's/local AQMD monitoring locations deployed to monitor AQI (PM 2.5) that employers are directed by the emergency regulation to check in order to determine employee PM 2.5 exposure is not of sufficient quantity nor strategically deployed to effectively determine actual workplace conditions on a consistent and accurate basis. Some zip codes entered into the EPA's AirNow website return a "does not currently have Air Quality data available" message. In addition, other factors such as wind direction, humidity, and terrain have a significant impact on employee exposure and are not reflected in the AQI (PM 2.5) nor considered in the regulation, making the AQI a poor and inconsistent measure of employee exposure.

Finally, employers are unable to accurately determine the area of impact based on a single air monitoring location since the air monitoring location represents only the reading at that spot and not over a well-defined area.

**Recommendation:**

The Division should initiate a HEAC study, in a similar fashion to that of Silica or Lead, before setting an exposure limit for wildfire smoke rather than using the AQI, which was not developed with occupation exposures in mind. The occupational exposure limits for PM2.5 should be established as full shift Time-Weighted Average (TWA), ceiling, and/or short-term exposure limits based on health hazard assessments for smoke particulate exposures during wildfire events, where the dose is both a function of concentration and duration.

**Rationale:**

As noted earlier in our comments, using AQI as the value to be used for entering this regulation has not gone through the vetting process or stakeholder discussions that other PEL values have undergone. Occupational illness is related to a "dose" of something that may cause harm. "Dose" is both a function of concentration (in this case, AQI of 150 or greater for PM2.5) and duration of exposure to that concentration. Occupational health standards are established to prevent occupational illnesses from occurring by controlling employee exposure to, or below, that dose. We support that the regulation establishes a minimum exposure duration as well.

**B. Recommendation for (a)(2)(B):**

**Concern:**

The current language places a responsibility on employers that is not feasible to comply with. It is unreasonable in an emergency to require that the employer

“ensure that windows, doors, or other openings” of enclosed vehicles are “kept closed to minimize contamination by outdoor or unfiltered air.” Where employees are in mobile crews, the employer is not always present to ensure that these potential openings are kept closed. The employer should explain the importance of keeping vehicle opening closed in the information provided to employees, but “ensuring” that they are kept closed, when the employer may have no way of doing so, is unreasonable. This is not a situation where employees are parked at a single worksite and are easily supervised.

In addition, based on review of our fleet vehicles, we’ve found that a significant percentage those vehicles do not have cabin air filters, contrary to DOSH’s claim to the Board that “all vehicles have cabin air filters.” In conversations with industry peers, this has been a consistent finding. We recommend allowing for recirculation of the cabin air, in addition to filter use, as that will prohibit contaminants from entering the vehicle.

**Recommended Language for (a)(2)(B):**

*Enclosed air-conditioned vehicles where the air is filtered by a cabin air filter or recirculated within the cabin and the employer communicates ~~ensures~~ the importance that windows, doors, or other openings are kept closed to minimize contamination by outdoor or unfiltered air.*

**Rationale:**

This language limits the scope to air-conditioned vehicles, with either filtered or recirculated air, and removes the requirement that employers ensure that openings are kept closed which is not always feasible with mobile crews restoring utility systems during wildfire emergencies. As noted above, we have determined that only a small number of vehicles come equipped with cabin air filters, and it is not an option to simply retrofit many of these vehicles by adding a filter. Other utility peers have also encountered similar issues with air filters in their fleet vehicles.

Retrofitting may not be a possibility for some vehicle makes and upgrading to an alternate vehicle (with cabin air filters) would be an excessive and unnecessary cost without additional safety benefits for workers.

**C. Recommendation for proposed new section (a)(2)(F):**

**Concern:**

Wildfires are unannounced events in most cases, requiring immediate response. During wildfire activity, SCE is involved in performing critical life-safety work. As part

of this process, we have trained workers who are actively working during the initial stages of a wildfire to ensure power lines are de-energized/safe, so that firefighters can perform their duties to mitigate the risk to the public and restore power to the public and critical operations as soon as possible.

**Recommended Language for (a)(2)(F):**

Utility and telecommunication workers assisting firefighters, engaged in wildland firefighting activities, will be required to wear N95 filtering facepiece respirators when AQI PM 2.5 exceeds 500, except when performing electrical work with an arc flash hazard. Fit testing and medical evaluation are not required for these workers involved in these activities.

**Rationale:**

This exemption was recently removed from previous draft language but should be added back into this standard going forward. The inability to provide emergency assistance to firefighting efforts for the time it takes to fit test, train, and medically evaluate workers would not be practicable, and would drastically slow down the response time given to emergency response personnel and decreasing safety to firefighters. It is not feasible to prepare all utility workers for mandatory respirator use (i.e., fit testing, medical evaluations) on the spot, as these employees cover a broad geographical territory and may be called upon to respond to any incident across the service territory. Additionally, utility companies provide mutual assistance to other utilities within the state as well as other states during wildfire efforts. Employees arrive into our service territory and leave our service territory to support other areas. Requiring fit testing and medical evaluations is a daunting and time-consuming task, which would also delay the much-needed emergency response to firefighters and other emergency personnel. There would also be a significant cost involved with enrolling all our field employees into a respiratory protection program to be able to respond to a Wildfire immediately, who may only be under that regulation on a limited basis or not at all. Southern California Edison absolutely believes in and commits to the safety of our employees. However, these “administrative” components of fit testing and medical surveillance do not provide for greater worker safety and will create public safety challenges in emergency situations.

## **Subsection (c) Identification of Harmful Exposures**

### **D. Recommendation for subsection (c)EXCEPTION:**

#### **Concern:**

The first sentence is a requirement that an employer check the AQI forecasts and the current AQI on various websites at the start of each shift and periodically thereafter. Utility companies, such as SCE, have numerous mobile crews that are in various locations during each day. It would be impractical, and sometimes infeasible, to track all the AQI forecasts during the work hours which may bear no relationship to the actual AQI at a given time and employee location. Not all monitoring locations provide forecasts. Moreover, it would be virtually impossible for employers with mobile workforces to track local conditions for each employee in a specific and timely manner.

In addition, there is concern that the AirNow website is not always a reliable source to obtain an AQI. We understand that the website crashed during wildfires in 2017 and 2018 due to the overwhelming number of people who attempted to access the website. We recommend that DOSH carefully review this issue and if that problem persists, referral to the AirNow website should not be required. Nor should an employer have to track multiple websites. If there is not a single reliable source, this would be yet another reason not to use the AQI standard.

Ideally, DOSH should establish a “source of truth” for the state and broadcast necessary wildfire smoke information to those who sign up for distribution of those messages. It is terribly inefficient for DOSH to expect each employer in the state to establish processes for tracking this information, as opposed to centralized monitoring and communication of this information. We request that DOSH establish a system for communicating wildfire smoke impacts to California businesses and workers.

Additionally, as previously mentioned, other factors such as wind direction, humidity, and terrain significantly impact worker exposure to wildfire smoke. Determining the area of worker exposure triggering employer responsibilities under the proposed regulation is difficult for an employer to establish and would lead to differences in identifying an area of a certain level of exposure between employers. This effectively results in differing levels of worker protection in the same work area.

**Recommended Language for EXCEPTIONS 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 workers (e.g., those who employees who change locations frequently), 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.*

**Rationale:**

An exception to these communication processes for mobile employees is appropriate for the reasons stated above. This issue was also recognized with the outdoor heat illness prevention standard, and an attempt was made to address this issue by requiring two-way communication between the employer and the mobile or solo employee who would be in the best position to monitor local conditions (See T8 CCR 3395(e)). Employers should be able to rely on employees who are out in the field to communicate when conditions worsen, and additional precautions are needed. Furthermore, Cal/OSHA establishing a communication method to convey wildfire smoke and PM 2.5 levels would allow for consistency in implementation and a reduction of overall costs of monitoring and area impact determination on the part of the many employers within the State of California.

**Subsection (f) Control of Harmful Exposures to Employees**

**E. Recommendation for subsection (f):**

**Concern:**

Because of the critical role played by those in the power, gas, water, and communications industries during and after wildfire emergencies, we believe that (f) must include an exemption from the requirement for mandatory respiratory protection in these limited situations. We support the language in subsection (f)(1) which exempts utilities and communications operations when they are directly aiding firefighting or emergency response. However, we believe these exceptions should be broadened as drafted below.



**Recommended Language:**

Exception to subsection (f)(4)(B): In emergencies, including rescue and evacuation, respirator use is not required regardless of the current AQI for PM2.5. Emergencies include utilities, communications, and medical operations, when such operations directly aid firefighting or emergency response. In emergencies, employers shall comply with subsection (f)(4)(A) to provide respirators to employees for voluntary use.

**Rationale:**

We appreciate DOSH’s recognition that utilities and communications employers should be exempt from the requirements for engineering and administrative controls during emergency response efforts. Wildfire smoke emergency conditions do not provide the time or material for constructing such enclosures. By the time the structures are completed, the smoke hazard has likely passed. Expenditure of resources in this manner is wasteful, particularly considering other urgent needs at this time to restore gas, power, water and communications systems. Further, it has long been recognized by the Board that respiratory protective equipment “shall be used to prevent harmful exposures ...in emergencies” 8 CCR 5141(c)(3). Additionally, contrary to statements made by DOSH, we are not aware of arc rated respiratory protection. As such, the requirement for mandatory respiratory protection places utility workers in a position to have to choose which regulations to follow. Based upon these challenges, coupled with the fact that we are not using known exposure limits to mandate respiratory protection requirements, we strongly recommend an exception from mandatory respirator use for those aiding in the emergency support and response efforts.

We also strongly recommend that DOSH also eliminate the requirement for mandatory respiratory protection for these operations.

**E. Recommendation for (f)(4)(B):**

**Concern:**

Because of the unique circumstances involved in wildfires, we recommend that the permanent regulation not require mandatory use of respirators at all.

**Recommended Language:**

Deletion of (f)(4)(B).

**Rationale:** The Respiratory Protection Standard (8 CCR [5144](#)) and its federal OSHA equivalent were written for situations where there is a regular exposure to an atmospheric hazard or hazards. These hazards are to be addressed through the hierarchy of controls. Wildfire smoke above any designated trigger value is not a regular exposure and 5144 should not be applied to any emergency wildfire situations. Because the assigned protection factor for N-95s is 10, employees would use the same type of

respiratory protection for an AQI of 501 as they would for an AQI of 150. The requirement for mandatory respirators obligates employers to provide fit testing and medical evaluations, which require time not available when responding to an emergency. Also, as we have stated before, there is not an Arc Rated respirator that would be able to be utilized by electrical workers performing energized work necessary to clear downed power lines and restore power; delays will put the utilities at odds with the California Public Utilities Commission.

### ***Section III***

This section contains recommendations and requests related to the proposed permanent draft language (Version 3.0), which is indicated by “**Red bold underlined text with yellow highlight**” in DOSH’s draft proposal.

#### **Subsection (a) Scope**

##### **A. Recommendation for (a)(1), (a)(2)(C), (a)(2)(D), and (a)(4):**

###### **Concern:**

Workplace safety and health regulations are established to ensure a healthy working population. They do not assume the presence of any sensitive populations, such as the elderly or young children. The working population is categorized as the “general public” and is typically healthier. The website [AirNow](#) states:

“Unhealthy for Sensitive Groups” AQI is 101 to 150. Although general public is not likely to be affected at this AQI range, people with lung disease, older adults and children are at a greater risk from exposure to ozone, whereas persons with heart and lung disease, older adults and children are at greater risk from the presence of particles in the air.”

We believe that DOSH has not provided any scientific basis for the need for the reduction from an AQI for PM2.5 of 151 to 100 for voluntary use, or the requirement for mandatory use of respirators at 300. Although we heard anecdotal testimony at the Board hearings and during the Advisory Committee meetings, no scientific findings have been provided.

###### **Recommended Language:**

The current Air Quality Index (current AQI), for PM2.5 is ~~100~~ 151 or greater, regardless of the AQI for other pollutants; and

[We recommend removing references in (a)(2)(C), (a)(2)(D), and (a)(4) to an AQI for PM2.5 of 100.]

**Rationale:**

For consistency with other workplace safety and health regulations, the threshold that triggers implementation of a program should be based on the general population, not the most sensitive groups. SCE, along with other utility peers, have strong concerns regarding the use of a threshold developed for public health, as opposed to worker health. Exposure limits for PM2.5 should be derived from health hazard exposure assessments, similar to how occupations exposure limits are determined for other regulated chemicals. However, if the AQI for PM2.5 is the selected metric, the level where the regulation becomes applicable should be no lower than 151. AQI for PM2.5 levels below 150 are intended to convey warnings to sensitive population groups, including people who have heart or lung disease, older adults, children, and teenagers. The occupational exposure limits for PM2.5 should be established as full working shift Time-Weighted Averages (TWAs), ceiling, and/or short-term exposure limits based on health hazard assessments for particulate exposures during wildfire events, where the dose is both a function of concentration and duration.

In addition, as mentioned in 8 CCR 5155, the list of air contaminants has a note which states, in part, “Because of some variation in individual susceptibility, an occasional worker may suffer discomfort, aggravation of a pre-existing condition, or occupational disease upon exposure to concentrations even below the values specified in these tables.” Therefore, the list (Table AC-1) of air contaminants established in 5155 was not intended to capture these smaller subsets of the worker population. The change proposed is inconsistent with OSHA’s established levels in 5155.

**B. Recommendation for newly proposed Subsection (c)****Concern:**

These additional obligations for work area where the AQI for PM2.5 is greater than 100 and less than 151 unnecessarily complicate the regulation. This regulation is for emergency situations resulting from wildfire events.

**Recommended Language:**

Delete subsection (c) in its entirety.

**Rationale:**

Wildfire events are not normal operations. Having three triggers, varying levels of requirements will likely result in confusion during a wildfire emergency.

### **C. Recommendation for Subsection (f)(4)(A)**

#### **Concern:**

The trigger level of AQI for PM2.5 of 300 for mandatory respirator use will result in widespread business disruption. In Sacramento alone, there were several days in November 2018 where the AQI for PM2.5 exceeded 300 during the Camp Fire.

#### **Recommended Language:**

*(A) Where the current AQI for PM2.5 exceeds 500 ~~300~~, 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...*

#### **Rationale:**

Shortages of N95s and other respiratory protective equipment have been experienced during recent wildfire events. It is important that these not be exacerbated by a regulation requiring respirators for non-emergency circumstances. Again, DOSH has provided no scientific basis for the significant lowering of the threshold for mandatory respirator use.

Further, it is surprising that DOSH believes that at an AQI of 299 (or 499), voluntary use of a respirator is appropriate, and one index point different, mandatory respirator use is required. It also defies logic to permit an employee to wear a respirator on a voluntary basis at any level, but fit testing and medical evaluations are required at these specific levels. Again, this is an emergency situation. This is not a normal business operation.

### **D. Recommendation for (f)(4)(B)**

#### **Concern:**

In the last line of the current regulation, it requires “that the PM2.5 levels inside the respirator correspond to an AQI less than 151.” We are not aware of the scientific justification for this requirement, and the practicality of actually measuring inside a respirator during an emergency situation in which crews are trying to restore power, gas, water and communications systems and aiding firefighters, will likely delay response efforts.

#### **Recommended Language:**

*(B) Where the current AQI for PM2.5 exceeds 500... 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.~~*

#### **Rationale:**

In all other forms of Industrial Hygiene, once a threshold has been crossed, you are required to provide protection that brings you back down below the previous

threshold. The current regulation is written in a way that requires the PPE to not only bring you below the threshold into a “voluntary use basis” range, but then go below another threshold level. As stated earlier, if this is meant to provide respiratory protection by offering and/or requiring them to wear N95 filtering facepiece respirators, this appears to be adequate. However, if we will now be required to wear PAPR, full-face, or half-face respirators with fit testing and medical surveillance once the AQI exceeds roughly 550, then this will be an extremely daunting and expensive process, without the worker safety justification that should coincide with that process.

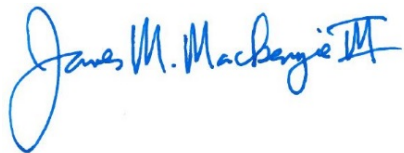
**E. Subsection (f)(4)(B) EXCEPTION**

Please see discussion regarding Subsection (f)(4)(B) in Section II of this letter. We appreciate that DOSH is attempting to rectify its lack of recognition in the emergency regulation that electrical power employers are being asked to protect employees against either arc flashes or wildfire smoke. However, the language proposed does not solve the problem. Also, we strongly encourage DOSH to include an exception to the mandatory respirator use requirement for emergency situations, including arc flash environments, in the permanent regulations to be finalized by July 2020, rather than waiting for yet another rulemaking.

Again, we appreciate the opportunity to participate in dialogue regarding this permanent regulatory language. We look forward to continued partnership in these efforts and to the implementation of a regulation that provides important protections for workers and is reasonable, as well as prudent in its design and implementation.

If you require further information on the comments listed above, please do not hesitate to contact me at 626-633-7120 or James.Mackenzie@sce.com.

Sincerely,



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