



# Protection from Wildfire Smoke Program

## Scope

This program applies to all workplaces and job sites within Outsource Utility Contractor Corp. operations where the Current Air Quality Index (CAQI) for PM2.5 is greater than 150, regardless of the CAQI for other pollutants; and where the OUCC should reasonably anticipate that employees may be exposed to wildfire smoke. This program complies with Cal/OSHA Title 8 §5141.1.

The following workplaces and operations are exempt from this program:

1. Enclosed buildings or structures in which the air is filtered by a mechanical ventilation system and that employees ensure that windows, doors, bays, or other openings are kept closed to minimize contamination by outdoor or unfiltered air.
2. Enclosed vehicles in which the air is filtered by a cabin air filter and that employees ensure that windows, doors, or other openings are kept closed to minimize contamination by outdoor or unfiltered air.
3. Where OUCC demonstrates that the concentration of PM2.5 in the air does not exceed a concentration that corresponds to a CAQI of 150 for PM2.5 by measuring PM2.5 levels at the worksite in accordance with the Appendix.
4. Employees exposed to a current AQI for PM2.5 exceeding 150 for a total of one hour or less during a shift.

## Definitions

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

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

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

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

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

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



## Roles and Responsibilities

### VP of Safety

It is the role and responsibility of the Vice President of Safety to ensure employees who are exposed at jobsites where the CAQI for PM2.5 is greater than 150 to train on the requirements mentioned in the Appendix. It is also the VP of Safety's responsibility to monitor air quality conditions and the CAQI using the AirNow website or other applicable methods mentioned later in this program. If there are any chances of an unhealthy AQI, or there is currently an AQI for PM2.5 of 151 or greater, the VP of Safety is to communicate such hazards to all superintendents.

### Superintendent

It is the role of the Superintendent to also monitor and communicate the CAQI for PM2.5 of 151 or greater to all foremen who may be exposed. They are to ensure that the foreman can provide employees with the proper respiratory protection, or that other necessary precautions and/or measures are taken to protect employees from exposure.

### Foreman

It is the responsibility of the foreman to train employees in this program and enforce this program's requirements when applicable on the worksite. If an AQI for PM2.5 of 151 or greater is present, they are to communicate such hazards to all employees on site. The foreman is to have enough respiratory protection to supply the entire crew if necessary. Also, the foreman will be responsible for ensuring that all necessary plans, precautions, and supplies are prepared in case of a wildfire.

## Identification of Harmful Exposures

OUCC shall determine employee exposure to PM2.5 for worksites covered by this section before each shift and periodically thereafter, as needed to protect the health of the employees, by any of the following methods:

1. Check AQI forecasts and the CAQI for PM2.5 from any of the following: U.S. EPA AirNow website, U.S. Forest Service Wildland Air Quality Response Program website, California Air Resources Board website, local air pollution control district website, or local air quality management district website.
2. Obtain AQI forecasts and the CAQI for PM2.5 directly from the EPA, California Air Resources Board, local air pollution control district, or local air quality management district by telephone, email, text, or other effective method.
3. Measure PM2.5 levels at the worksite and convert the PM2.5 levels to the corresponding AQI in accordance with the Appendix.

If OUCC assumes that the CAQI for PM2.5 is greater than 500, OUCC may use that assumption to comply with the Control of Harmful Exposures to Employees section of this program.

## Communication

Beyond the notifications described in the responsibilities section, all employees working in environments where the Current Air Quality Index (CAQI) for PM2.5 is greater than 150 will be notified by their foreman that work will be suspended or they must be trained and provided with the opportunity of voluntarily wearing an approved respirator.



Employees are also to be instructed that they can inform OUCC of wildfire smoke hazards at the worksite without fear of reprisal. Worsening air quality and adverse symptoms that may be the result of wildfire smoke exposure such as asthma attacks, difficulty breathing, and chest pain must be reported to the foreman by employees.

## **Training and Instruction**

OUCC shall provide employees with effective training and instruction delivered by either a Safety Representative, the Superintendent or the Foremen. At a minimum, this shall contain the information found in the Appendix, which is listed below:

1. The health effects of wildfire smoke.
2. The right to obtain medical treatment without fear of reprisal.
3. How employees can obtain the CAQI for PM2.5.
4. The requirements in Cal/OSHA's regulation about wildfire smoke, Title 8 §5141.1.
5. OUCC's communication system.
6. OUCC's methods to protect employees from wildfire smoke.
7. The importance, limitations, and benefits of using a respirator when exposed to wildfire smoke.
8. How to properly put on, use, and maintain the respirators provided by OUCC.

All training shall be documented and records shall be kept at OUCC's main office.

## **Control of Harmful Exposures to Employees**

In emergency situations, such as preparing a project for closure pending an evacuation order due to wildfire, Engineering Controls and Administrative Controls do not apply, and OUCC shall comply with Control by Respiratory Protective Equipment.

### **Engineering Controls**

OUCC shall reduce employee exposure to PM2.5 to less than a CAQI of 151 by engineering controls whenever feasible, for instance by providing enclosed buildings, structures, or vehicles where the air is filtered. If engineering controls are insufficient to reduce exposure to PM2.5 to less than a CAQI of 151, then OUCC shall reduce employee exposures as much as feasible.

### **Administrative Controls**

Whenever engineering controls are not feasible or do not reduce employee exposures to PM2.5 to less than a CAQI of 151, the employer shall implement administrative controls, if practicable, such as relocating work to a location where the CAQI for PM2.5 is lower, changing work schedules, reducing work intensity, or providing additional rest periods.

### **Control by Respiratory Protective Equipment**

Where the CAQI for PM2.5 is equal to or greater than 151, but does not exceed 500, OUCC shall provide respirators to all employees for voluntary use in accordance with Cal/OSHA Title 8 §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. Respirators shall be cleaned, stored, maintained, and replaced so that they do not present a health hazard to users.



OUCC will use the attached Appendix of this program in lieu of Appendix D to Cal/OSHA Title 8 §5144 for training regarding voluntary use of respirators. For voluntary use of filtering facepieces, such as N95 respirators, some of the requirements of Cal/OSHA Title 8 §5144 do not apply, such as fit testing and medical evaluations. If an employee chooses to use a respirator voluntarily, the employee and their supervisor must complete the "Request for Voluntary Respirator Usage and Advisory Form" in the Appendix of this program.

Where the CAQI for PM2.5 exceeds 500, respirator use is required in accordance with Cal/OSHA Title 8 §5144. OUCC shall provide respirators with an assigned protection factor, as listed in Cal/OSHA Title 8 §5144, such that the PM2.5 levels inside the respirator correspond to an AQI less than 151.



## **Appendix - Information to be Provided to Affected Employees (Mandatory)**

### **The Health Effects of Wildfire Smoke**

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

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

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

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

### **The Right to Obtain Medical Treatment without Fear of Reprisal**

OUCC will allow employees who show signs of injury or illness due to wildfire smoke exposure to seek medical treatment and will not punish affected employees for seeking such treatment. OUCC 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.

### **How employees can obtain the current Air Quality Index (CAQI) for PM2.5.**

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

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

The easiest way to find the current and forecasted AQI for PM2.5 is to go to [www.AirNow.gov](http://www.AirNow.gov) and enter the zip code of the location where you will be working. The CAQI is also available from the U.S. Forest Service at <https://tools.airfire.org/> or a local air district, which can be located at [www.arb.ca.gov/capcoa/dismap.htm](http://www.arb.ca.gov/capcoa/dismap.htm). Employees who do not have access to the internet can contact OUCC for the CAQI. The EPA website [www.enviroflash.info](http://www.enviroflash.info) can transmit daily and forecasted AQIs by text or email for particular cities or zip codes.

### **The Requirements in Title 8, §5141.1 About Wildfire Smoke**

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

1. Check the CAQI before and periodically during each shift.
2. Provide training to employees.
3. Lower employee exposures.
4. Provide respirators and encourage their use.



## I. OUCC's Two-Way Communication System

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

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

OUCC's communication system is to be trained and notified by their foreman or superintendent.

### **The employer's methods to protect employees from wildfire smoke**

OUCC will take action to protect employees from PM2.5 when the CAQI for PM2.5 is 151 or greater. Protective methods include:

1. Suspending work activities until CAQI improves.
2. Providing N95 respirators for employees use.
3. Locating work in enclosed structures or vehicles where the air is filtered.
4. Changing procedures such as moving workers to a place with a lower CAQI for PM2.5.
5. Reducing work time in areas with unfiltered air.
6. Increasing rest time and frequency, and providing a rest area with filtered air.
7. Reducing the physical intensity of the work to help lower the breathing and heart rates.

### **The Importance, Limitations, and Benefits of Using a Respirator When Exposed to Wildfire Smoke**

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

When the CAQI for PM2.5 is 151 or greater, OUCC shall provide their workers with proper respirators for voluntary use. If the CAQI is greater than 500, respirator use is required.

A respirator should be used properly and kept clean.

The following precautions shall be taken:

1. OUCC shall select respirators certified for protection against the specific air contaminants at the workplace. NIOSH, the National Institute for Occupational Safety and Health of the U.S. Center for Disease Control and Prevention certifies respirators. A label or statement of certification should appear on the respirator or respirator packaging. It will list what the respirator is designed for (particulates, for example). Surgical masks or items worn over the nose and mouth such as scarves, T-shirts, and bandannas will not provide protection against wildfire smoke. An N95 filtering facepiece respirator, shown in the image below, is the minimum level of protection for wildfire smoke.
2. Read and follow the manufacturer's instructions on the respirator's use, maintenance, cleaning and care, along with any warnings regarding the respirator's limitations. The manufacturer's instructions for medical evaluations, fit testing, and shaving should also be followed, although doing so is not required by Title 8 §5141.1 for voluntary use of filtering facepiece respirators.
3. Do not wear respirators in areas where the air contains contaminants for which the respirator is not designed. A respirator designed to filter particles will not protect employees against gases or vapors, and it will not supply oxygen.

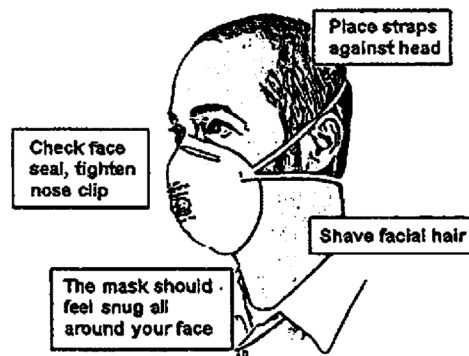
4. Employees should keep track of their respirator so that they do not mistakenly use someone else's respirator.
5. Employees who have a heart or lung problem should ask their doctor before using a respirator.

### How to Properly Put On, Use, and Maintain the Respirators Provided by OUCC

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

The proper way to put on a respirator depends on the type and model of the respirator. For those who use an N95 or other filtering facepiece respirator mask that is made of filter material:

1. Place the mask over the nose and under the chin, with one strap placed below the ears and one strap above.
2. Pinch the metal part (if there is one) of the respirator over the top of the nose so it fits securely.



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

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

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

If you have symptoms such as difficulty breathing, dizziness, or nausea, go to an area with cleaner air, take off the respirator, and get medical help.



### Request for Voluntary Respirator Usage and Advisory Form

Respirators protect against airborne hazards when properly selected and used. In certain cases, respirator usage may be required by Cal/OSHA or OUCC and is not considered voluntary (e.g. as required by pesticide label). If a respirator is required, OUCC will provide further training and meet additional requirements including a medical examination. Respirator use is encouraged even when exposures are below permissible exposure limits (PEL) because respirators can provide you an additional level of comfort and protection. However, if a respirator is used improperly or not kept clean, the respirator itself can become a hazard to the worker.

If you are provided a respirator for voluntary use (or if you decide to bring in your own), you need to take certain precautions to be sure that the respirator itself does not present a hazard.

If you choose to use a respirator / dust mask, you should do the following:

1. Read and heed all instructions provided by the manufacturer on use, maintenance, cleaning and care, and warnings regarding the respirator’s limitations.
2. Choose respirators certified for use to protect against the contaminant of concern. NIOSH (the National Institute for Occupational Safety and Health of the U.S. Dept. of Health and Human Services) certifies respirators. A label or statement of certification should appear on the respirator or respirator’s packaging. It will tell you what the respirator is designed for and how much it will protect you.
3. Do not wear your respirator into atmospheres containing contaminants for which the respirator is not designed to protect against. For example, a respirator designed to filter dust particles will not protect you against gases, vapors, or very small solid particles of fumes or smoke.
4. Keep track of your respirator so that you do not mistakenly use someone else’s respirator.

By signing this form, I verify that I am using a respirator on a voluntary basis and understand the above information.

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Employee’s Signature	Date	Employee’s Name (printed)
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Supervisor’s Signature	Date	Supervisor’s Name (printed)
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