

9.16.21 DRAFT

Permanent Rule on Protection from Wildfire Smoke

(1) Scope and application. These rules apply to public and private employers whose employees are or will be exposed to wildfire smoke where the ambient air concentration for fine particulate matter (PM2.5) is at or above 35.5 ug/m³ (Air Quality Index [value of 101 for PM2.5](#)).

Note: As with all Oregon OSHA rules, the provisions of this standard represent minimum requirements, not best practices. Employers who have implemented more protective measures than required by this rule are strongly encouraged to leave those more protective measures in place.

Note: Oregon OSHA recognizes that smoke exposures represent particularly dynamic situations. Employers must address such hazards based on the information available to them or that could have been available to them through the exercise of reasonable diligence.

Note: Employees are protected from discrimination and retaliation under ORS 654.062(5). This includes protections for actions against employees for opposing any practice forbidden under the Oregon Safe Employment Act and related statutes and rules (including this smoke rule), making a complaint or causing any proceeding to be instituted under the Oregon Safe Employment Act, or exercising any rights under the law, including those conferred by this rule.

(a) The following workplaces and operations are exempt from these rules:

(A) Enclosed buildings and structures in which the air is filtered by a mechanical ventilation system and the employer ensures that windows, doors, bays, and other exterior openings are kept closed, except when it is necessary to open doors to enter or exit; ~~and~~

(B) Enclosed vehicles in which the air is filtered by a cabin air filter and the employer ensures that windows, doors, and other openings are kept closed, except when it is necessary to open doors to enter and exit. Buses, light rail, and other enclosed vehicles used for transit systems where doors are frequently opened to board and deboard passengers are NOT exempt from these rules; ~~;~~

(C) Work activities involving intermittent employee exposures of less than 15 minutes in an hour ~~or short duration exposure for a maximum of less than~~ two hours ~~in total within~~ a single 24-hour period; ~~;~~

(D) When the employer predetermines that operations involving wildfire smoke will be suspended before and as long as needed to prevent employee exposure to an ambient air concentration for PM2.5 at or above 35.5 ug/m³ (AQI 101); and

(E) Employees working from home.

(b) The following specific workplaces and operations are only subject to the information and training requirements under section (4)(a) through ~~(d)~~ and the control by voluntary use of respirators under section (7)(a) of these rules when feasible, ~~but are and when compliance would not subject to the requirements of sections (5), (6) and (7). expose employees to a greater hazard:~~

(A) Wildland firefighting and associated support activities such as fire camp services and fire management; and

(B) Evacuation, rescue, utilities, communications, and medical operations that are directly involved in or aiding emergency operations or firefighting operations.

(2) Definitions.

(a) Air Quality Index – The Air Quality Index (AQI) was developed by the US Environmental Protection Agency (EPA) as an indicator of overall air quality and is based on the five criteria pollutants regulated under the Clean Air Act: ground-level ozone, particulate matter, carbon monoxide, sulfur dioxide, and nitrogen dioxide.

(b) Feasibility – The ability of an employer to implement any requirement in a rule. Oregon OSHA rules never prohibit work. Whether feasibility is mentioned in a provision of the rule or not, if the employer can demonstrate that it is functionally impossible to comply or if doing so would prevent completion of the work, the employer need not comply, but must take any available reasonable alternative steps to protect the employees involved.

(c) Greater Hazard – The ability of an employer to demonstrate that compliance with the requirements of the rule would expose an employee to a hazard associated with a substantially more serious injury or illness, thereby providing a narrow exception to the rule to the degree that the greater hazard exists. An example of a greater hazard in relation to the use of non-flame resistant filtering facepiece respirators would include potential facial burns to a qualified employee working within the minimum approach distance (MAD) of an energized high voltage electrical system where flame resistant clothing is required.

(d) NIOSH – The National Institute for Occupational Safety and Health of the United States Centers for Disease Control and Prevention. NIOSH tests and approves respirators for use in the workplace.

(e) PM_{2.5} – Solid particles and liquid droplets suspended in air, known as fine particulate matter, with an aerodynamic diameter of 2.5 micrometers or smaller and measured in micrograms per cubic meter ($\mu\text{g}/\text{m}^3$).

(f) Sensitive Groups – People with pre-existing health conditions and those who are sensitive to air pollution who are among those likely to experience health problems from exposure to wildfire smoke. Examples of sensitive groups include: people with lung disease such as asthma or chronic obstructive pulmonary disease (COPD), including bronchitis and emphysema, and those who smoke; people with respiratory infections, such as pneumonia, acute bronchitis, bronchiolitis, cold, flu, or those with or recovering from COVID-19; people with existing heart or circulatory problems, such as irregular heart beat, congestive heart failure, coronary artery disease, angina, and those who have had a heart attack or stroke; children under 18 years old, and adults over age 65; pregnant women; people with diabetes; and people with other medical or health conditions which can be exacerbated by exposure to wildfire smoke as determined by a physician [or other licensed health care provider](#).

(g) Wildfire Smoke – Emissions from unplanned fires in wildlands, which may include adjacent developed and cultivated areas to which the fire spreads or from where it originates.

(h) Wildlands – Uncultivated and sparsely populated geographical areas covered primarily by grass, brush, trees, slash, or a combination thereof.

(3) Exposure assessment. Employers must determine and monitor employee exposure to wildfire smoke where [workplace](#) ambient air concentration for PM_{2.5} is at or above 35.5 $\mu\text{g}/\text{m}^3$ (AQI 101). Such assessments must be conducted at the start of each shift and as needed to identify and implement appropriate exposure controls under section ([67](#)), by using one or more of the following means [and methods](#):

(a) Check the current ~~ambient air concentration and forecasted AQI value~~ for PM2.5 from the ~~U.S. EPA AirNow Oregon Department of Environmental Quality, website, the U.S. EPA AirNow or Interagency Wildland Fire Air Quality Response Program, the Oregon Department of Environmental Quality's air quality website, websites,~~ or equivalent source;

(b) ~~Check notifications of air quality advisories due to wildfire smoke issued by the Oregon Department of Environmental Quality or local government health agencies when the AQI value for PM2.5 is above 151;~~

(c) Directly measure the work location ambient air concentration for PM2.5 in accordance with the manufacturer's instructions for the testing device used; or

(~~e~~) If all of the previous methods are not practical, use the [5-3-1 Visibility Chart](#) to estimate the current air quality and corresponding AQI risk category.

NOTE: For indoor work environments that are not exempt from these rules under section (1)(A)(a), the method used for exposure assessment must directly measure indoor air concentration for PM2.5 as covered under section (3)(c) unless the employer chooses to use means under (3)(a) or (3)(b) when applicable.

(4) Information and training. ~~Unless the~~The employer ~~predetermines~~must ensure that ~~operations involving wildfire smoke exposure will be suspended before~~ employees ~~are~~who may be exposed to a workplace ambient air concentration for PM2.5 at or above 35.5 ug/m³ (AQI 101), ~~the employer must ensure that employees who may be exposed to such levels~~ have been trained. The ~~information and~~ training must be provided to all ~~affected~~exposed employees annually, before exposure, in a manner and language they readily understand. ~~Employers must ensure that such, and provide an opportunity for feedback and questions. The training includes~~must include at least the following ~~elements~~information:

(a) Symptoms of wildfire smoke exposure, including:

(A) Eyes: burning sensations, redness, and tearing of the eyes caused by irritation and inflammation of the eyes that can temporarily impair one's vision.

(B) Respiratory system: runny nose, sore throat, cough, difficulty breathing, sinus irritation, wheezing, shortness of breath;

(C) Fatigue, headache, irregular heartbeat, chest pain.

(b) The potential [acute and chronic](#) health effects of wildfire smoke [exposure](#), including increased risk of health effects to sensitive groups;

(c) The definition of *sensitive groups* as defined under section (2);

(d) The employee's right to report health issues related to wildfire smoke exposure and obtain medical treatment for workplace exposure to wildfire smoke without fear of retaliation;

~~(e) The procedures the supervisor must follow if an employee exhibits severe symptoms of wildfire smoke exposure, including appropriate emergency response procedures;~~

~~(f)~~

(e) How employees can obtain the current and forecasted ambient air concentration for PM2.5 and equivalent AQI level;

~~(g)~~

(f) [The importance, limitations, and benefits of using a filtering facepiece respirator when provided by the employer, and how to properly put them on and perform a seal check as explained in Appendix B.](#)

(g) The employer's methods to protect employees from wildfire smoke, including NIOSH-approved filtering facepiece respirators required to be available for voluntary use if employees are exposed to an ambient air concentration for PM2.5 at or above 35.5 ug/m³ (AQI 101);

(h) How to effectively operate and interpret any air quality monitoring device provided by the employer to comply with these rules, for each employee designated by the employer to operate such devices;

~~(h) The employer's methods to protect employees from wildfire smoke;~~

~~(i) The~~

(i) The procedures the supervisor must follow if an employee exhibits severe symptoms of wildfire smoke exposure, including appropriate emergency response procedures; and

(j) The employer's two-way communication system for wildfire smoke hazards covered under section (4); and 6).

~~(j) The importance, limitations, and benefits of using a filtering facepiece respirator when provided by the employer, and how to properly put them on.~~

Note: Oregon OSHA provides a Wildfire Smoke Online Course in English and Spanish materials employers can use to address ~~those~~ training elements reflected by under (4)(a) through ~~(d), (f), and (j)~~.

(5) Certification of training. The employer must verify compliance with section (4) by preparing a written certification record. The written certification record must contain the name or identification of each employee trained, the date(s) of the training, and the name of the person who conducted the training. Such written certification must be maintained for at least three years.

(6) Employer two-way communication. Before employees are exposed to current or forecasted ambient air concentration ~~air~~ for PM2.5 ~~is~~ at or above 35.5 ug/m³ (AQI 101), the employer must develop and implement whenever feasible, a system to communicate wildfire smoke hazards that must include the following:

~~(a) Notifying employees when work location ambient air concentration for PM2.5 is at or above 35.5 ug/m³ (AQI 101);~~

~~(b) Notifying employees when work location ambient air concentration for PM2.5 is (A) Is at or above 35.5 ug/m³ (AQI 101);~~

(B) Is at or above 55.5 ug/m³ (AQI 151);

~~(c) Notifying employees when work location ambient air concentration for PM2.5 is (C) Is at or above 500.4 ug/m³ (AQI 501); and~~

~~(d) Notifying employees when ambient air concentration for PM2.5 drops (D) Drops below levels requiring exposure control; and~~

~~(e) (b) Enabling and encouraging employees to inform the employer if any of the following occurs:~~

(A) When air quality improves and worsens to verify AQI level; and

(B) ~~Severe health~~ Health symptoms ~~that~~ which may be the result of wildfire smoke exposure that could necessitate medical attention such as, but not limited to, asthma attacks, difficulty breathing, and chest pain.

(67) Exposure controls.

(a) Control by voluntary use of respirators. Whenever employee exposure to PM_{2.5} is at or above 35.5 ug/m³ (AQI 101), the employer must maintain a sufficient number and [selection of](#) sizes of NIOSH-approved [filtering facepiece](#) respirators that effectively protect wearers from PM_{2.5} at each work location where employees are exposed. Such respirators must be provided at no cost and be ~~readily~~ available for voluntary use to all exposed workers at their request.

(b) Engineering and administrative controls. Employers must use engineering or administrative controls to reduce employee PM_{2.5} exposure to less than 55.5 ug/m³ (AQI 151) whenever feasible. Engineering controls include providing enclosed buildings, structures, or vehicles where the air is adequately filtered. Administrative controls include relocating work to an outdoor location where the current ambient air concentration of PM_{2.5} is less than 55.5 ug/m³ (AQI 151) or changing work schedules to a time when ambient air concentration of PM_{2.5} is less than 55.5 ug/m³ (AQI 151).

(c) Control by required use of respirators. Whenever employee exposure to PM_{2.5} is at or above 55.5 ug/m³ (AQI 151), even after the application of engineering and administrative controls, the employer must ensure that employees wear NIOSH-approved ~~respirators. For~~ [filtering facepiece respirators. For such](#) respirators used exclusively to protect employees from wildfire smoke, the employer need not implement a full Respiratory Protection Program provided that the Wildfire Smoke Respiratory Protection Program described in the Appendix to this standard is followed. The requirements of section ~~(67)~~(c) do not apply to residents of employer-provided housing while they are in the housing.

(d) Control by required use of NIOSH-approved respirators. Whenever employee exposure to PM_{2.5} is at or above 500.4 ug/m³ (AQI 501), even after the application of engineering and administrative controls, the employer must ensure that employees wear NIOSH-approved respirators. For [filtering facepiece](#) respirators used exclusively to protect employees from wildfire smoke, the employer must implement a complete Respiratory Protection Program, in compliance with 1910.134.

~~(7) Recordkeeping.~~ *NOTE: Elastomeric respirators, such as half facepiece or full facepiece tight-fitting respirators are not included for use under section (7)(a) and (c). Use of such respirators for wildfire smoke protection must comply with all applicable requirements under 1910.134, Respiratory Protection.*

Appendix
Mandatory Workplace Guidance for
THE USE OF FILTERING FACEPIECE RESPIRATORS TO ADDRESS WILDFIRE SMOKE

This appendix applies only to employers that require NIOSH-approved filtering facepiece respirators, including N95, P95, and R95, to be used by their workers for protection exclusively for wildfire smoke exposures when workplace ambient air concentrations of PM_{2.5} is at or above 55.5 ug/m³ (AQI 151) but below 500.4 ug/m³ (AQI 501).

Note: KN-95s previously approved under the FDA's Emergency Use Authorization can be used to substitute for NIOSH-approved filtering facepiece respirators for exposures under 500.4 ug/m³ (AQI 501) [only if N95s are not available](#).

Filtering facepiece respirators are disposable, negative-pressure, air purifying respirators where an integral part of the facepiece or the entire facepiece is made of air contaminant filtering material. This appendix does not apply to other types of respirators, including but not limited to elastomeric tight-fitting respirators, nor does it apply to situations where workers use filtering facepiece respirators for protection against air contaminants other than PM_{2.5} from wildfire smoke.

Employers whose workers are required to wear filtering facepiece respirators to protect against wildfire smoke exposures when workplace ambient air concentrations of PM_{2.5} is at or above 55.5 ug/m³ (AQI 151) must develop either a respiratory protection program in accordance with the Respiratory Protection Standard (29 CFR 1910.134); or a Wildfire Smoke filtering facepiece respiratory protection program in accordance with the following requirements when workplace ambient air concentrations of PM_{2.5} are under 500.4 ug/m³ (AQI 501):

- (A) Employee training.** Employers must ensure that employees wearing filtering facepiece respirators are trained in the proper use of the respirators, including putting them on and removing them, any limitations on their use, how to care for the respirator, and the ability to demonstrate a seal check as described in (B) below.
- (B) Filtering facepiece respirator user seal check.** Each employee who uses a filtering facepiece respirator must perform a user seal check to ensure that the respirator is properly sealed to the face is achieved each time the respirator is put on. Either the positive or negative pressure checks listed in this appendix or the respirator manufacturer's recommended user seal check method must be used.
1. Instructions for positive pressure user seal check. Once you have properly donned the respirator, place your hands over the facepiece, covering as much surface area as possible. Exhale gently into the facepiece. The face fit is considered satisfactory if a slight positive pressure is being built up inside the facepiece without any evidence of outward leakage of air at the seal. Examples of evidence that it is leaking could be the feeling of air movement on your face along the seal of the facepiece, fogging of your glasses, or a lack of pressure being built up inside the facepiece. If the particulate respirator has an exhalation valve, then performing a positive pressure check may not be possible. In such cases, a negative pressure check must be performed.
 2. Instructions for negative pressure user seal check. Negative pressure seal checks are typically conducted on particulate respirators that have exhalation valves. To conduct a negative pressure user seal check, cover the filter surface with your hands as much as possible and then inhale. The facepiece should collapse on your face and you should not feel air passing between your face and the facepiece.

Correcting problems discovered during the seal check. In the case of either type of seal check (positive or negative), if air leaks around the nose, use both hands to readjust the nosepiece by placing your fingertips at the top of the metal nose clip. Slide your fingertips down both sides of the metal strip to more efficiently mold the nose area to the shape of your nose. Readjust the straps along the sides of your head until a proper seal is achieved.