**OREGON OCCUPATIONAL SAFETY AND HEALTH DIVISION**
**DEPARTMENT OF CONSUMER AND BUSINESS SERVICES**

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**PROGRAM DIRECTIVE**

Program Directive A-306
Issued April 16, 2025

**SUBJECT:** Inspection and Citation Guidance for Protection from Wildfire Smoke

**AFFECTED STANDARDS/ DIRECTIVES:**

1. Division 1, General Administration
2. Division 2, Subdivision Z, Protection from Wildfire Smoke
3. Division 4, Subdivision Z, Chemicals/Toxins
4. SUMMARY OF COMMENTS AND AGENCY DECISIONS Title: Protection from Wildfire Smoke – OAR 437-002-1081 and OAR 437-004-9791
5. Oregon OSHA Field Inspection Reference Manual (FIRM)
6. Program Directive A-299 (Local Emphasis Program (LEP): Preventing Heat-Related Illness and guidance on Heat Illness Prevention rules 437-002-0156 and 437-004- 1131)
7. Program Directive A-219 (Inspection Criteria: Complaint Policies and Procedures)
8. U.S. Environmental Protection Agency (EPA) - Final Updates to the Air Quality Index (AQI) for Particulate Matter Fact Sheet and Common Questions
9. U.S. Environmental Protection Agency (EPA) – AQI-Calculator

10. U.S. Environmental Protection Agency (EPA) – Technical Assistance Document for the Reporting of Daily Air Quality – the Air Quality Index (AQI)

11. Oregon Department of Environmental Quality's (DEQ's) Air Quality Monitoring webpage at (https://aqi.oregon.gov/)

12. Oregon OSHA Strategic Plan

**PURPOSE:** To provide guidance to compliance safety and health officers (CSHOs) on conducting inspections activities related to employee exposures to wildfire smoke where the ambient air concentration for fine particulate matter (PM2.5) is at or above 35.5 $\mu g/m^3$ (Air Quality Index value of 101 for PM2.5), covered under OARs 437-002-1081 and 437-004-9791.

**BACKGROUND:** On March 10, 2020, Governor Brown issued Executive Order (EO) 20-042 that directed certain state agencies to, among other things, mitigate the impacts of climate change. EO 20-04 included a directive to the Oregon Health Authority (OHA) and Oregon OSHA to jointly develop a proposal for rules to protect employees from workplace exposures to excessive heat and wildfire smoke. In response to EO 20-04, Oregon OSHA, in collaboration with OHA and a rulemaking advisory group, developed the rules to protect employees from unhealthy and hazardous levels of wildfire smoke.

In July 2022, Oregon OSHA adopted its two permanent rules to protect workers from wildfire smoke: OAR 437-002-1081 and OAR 437-004-9791. These rules apply to all workers in Oregon covered under the Oregon Safe Employment Act (OSEA). OAR 437-004-9791 only applies to employers covered under Division 4 (Agriculture), while OAR 437-002-1081 applies to work activities covered under Division 2 (General Industry). However, because worker exposure to hazardous air quality conditions from wildfire emissions is not limited to a specific industry, work activities covered under Division 3 (Construction) and Division 7 (Forest Activities) would also be required to comply with OAR 437-002-1081, per additional applicability requirements under OAR 437-003-0005 and OAR 437-007-0004, respectively.

The requirements of both rules are nearly identical, and are based on employee exposure to fine particular matter ($PM_{2.5}$) from wildfire smoke emissions measured in micrograms per cubic meter ($\mu g/m^3$). Smoke emissions from non-wildfire events (e.g., prescribed burns, structural fires, pyrotechnic displays, etc.) that do not also contain a $PM_{2.5}$ concentration level of wildfire smoke that by itself would trigger the requirements of the rules, are not covered under the rules.

While the exposure thresholds in the rules are based on $PM_{2.5}$ concentration levels in $\mu g/m^3$, each concentration level references the corresponding Air Quality Index (AQI) value the U.S. Environmental Protection Agency (EPA) had in place at the time the rules were adopted. The AQI provides daily air quality information to the general population throughout the nation. It is used in the rules to provide employers and employees a widely available air quality level resource during wildfire smoke events to assist them in identifying when applicable rule requirements are triggered. The AQI is a recognized proxy to identify worker exposure to $PM_{2.5}$ for which traditional occupational exposure limits have not been established.

The AQI was established by the EPA in 1999 as an indicator of overall air quality, and has been updated several times to reflect the latest health-based national ambient air quality standard. In February 2024, the EPA updated the annual standard for $PM_{2.5}$ exposure to increase public health protection. The new standard changed the EPA's calculation results for converting $PM_{2.5}$ concentrations to equivalent AQI values. While the Oregon OSHA $PM_{2.5}$ exposure limits in $\mu g/m^3$ have not changed, two of three corresponding AQI values referenced in the rules are no longer equivalent as of May 2024, when the updated AQI took effect. While the EPA update to the AQI does not increase worker exposure to wildfire smoke or the rules' exposure threshold levels, the referenced AQI values in the rules have changed as follows:

| **Rules' Thresholds $PM_{2.5}$ Concentration (in $\mu g/m^3$)** | **Previous AQI values** ***(before May 2024)*** | **Updated AQI values** ***(after May 2024)*** |
|---|---|---|
| 35.5 | 101 | **101** |
| 200.9 | 251 | **277** |
| 500.4 | 501 | **849** |

The EPA calculates the AQI for five major pollutants regulated by the Clean Air Act: particle pollution (aka, $PM_{2.5}$ and $PM_{10}$), carbon monoxide, sulfur dioxide, ground-level ozone, and nitrogen dioxide, for which the EPA has established national air quality standards to protect public health. However, the wildfire smoke rules only address worker exposures to $PM_{2.5}$.

The EPA uses algorithms, called "NowCast," to relate hourly data from air quality monitoring stations from geographical areas throughout the nation that can be found on their AirNow.gov website. The NowCast AQI for $PM_{2.5}$ uses longer averages during periods of stable air quality and shorter averages when air quality is changing rapidly, such as during wildfire events. Since air quality can change during the day, the NowCast AQI can change too.

The Air Quality Index (AQI) for $PM_{2.5}$ is calculated as follows:

$$I_p = \frac{I_{Hi} - I_{Lo}}{BP_{HI} - BP_{Lo}}(C_p - BP_{Lo}) + I_{Lo}.$$

Where:

$I_p$ = the AQI for pollutant p

$C_p$ = the truncated concentration of pollutant p

$BP_{Hi}$ = the concentration breakpoint that is greater than or equal to $C_p$

$BP_{Lo}$ = the concentration breakpoint that is less than or equal to $C_p$

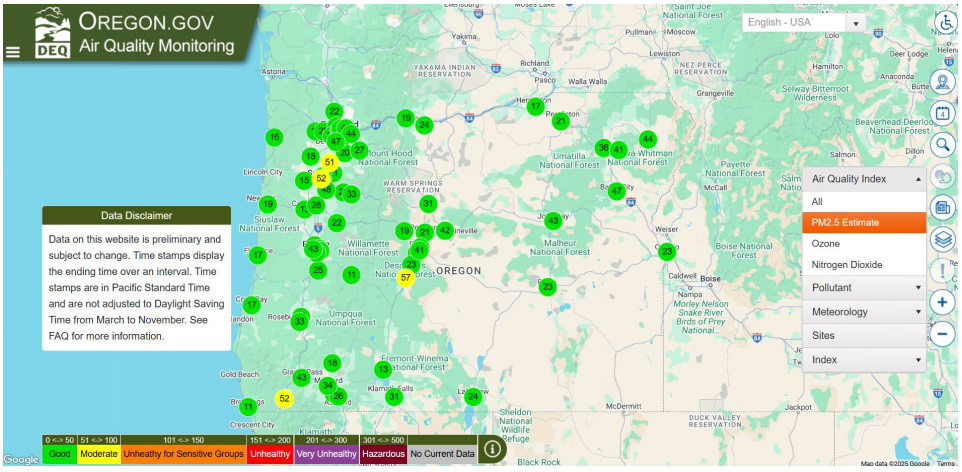
$I_{Hi}$ = the AQI value corresponding to $BP_{Hi}$

$I_{Lo}$ = the AQI value corresponding to $BP_{Lo}$

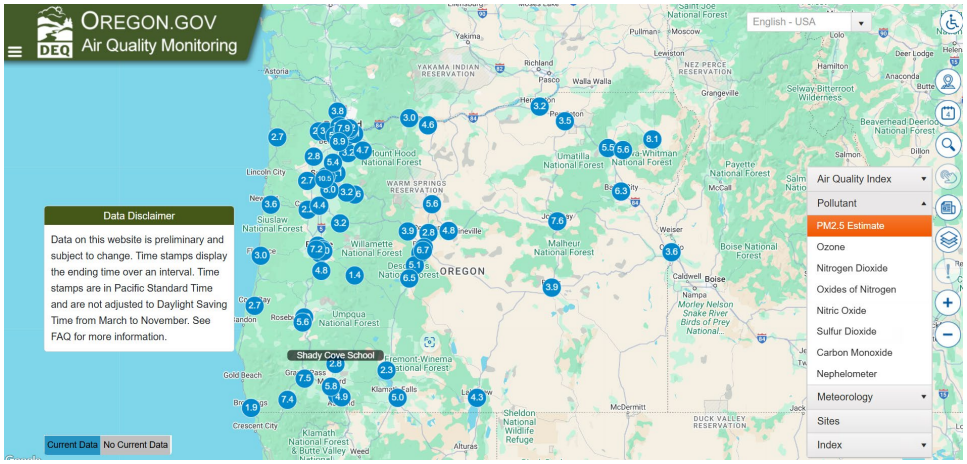
As a public service, state and local air quality forecasters provide AQI forecasts (predictions) focused on the average 24-hour $PM_{2.5}$ concentration for the next day and longer. Such forecasts are determined using tools that include, but are not limited to, air monitoring data, weather forecast models, satellite imagery, and computer models. AQI forecasts can help employers and employees plan their outdoor activities, prepare enclosed buildings and structures to minimize wildfire smoke intrusion, and ensure all applicable requirements under the rules are followed to protect exposed workers.

Current average and forecasted AQI values for $PM_{2.5}$ can be found on the Oregon Department of Environmental Quality, U.S. EPA AirNow, or Interagency Wildland Fire Air Quality Response Program websites, or equivalent sources. However, because the highest AQI risk category — "Hazardous" air quality — includes AQI values at 301 and higher, such resources may not provide AQI values above 301. As an example, it is possible that an AQI data resource would only show 301 or >301 when the current average $PM_{2.5}$ concentration is actually equivalent to an AQI value of 850.

To find the concentration of $PM_{2.5}$ in $\mu g/m^3$, go to the Oregon Department of Environmental Quality's (DEQ's) Air Quality Monitoring webpage (https://aqi.oregon.gov/). When accessing Oregon DEQ's Air Quality Monitoring website (and apps), it will default to the Air Quality Index as shown below:



To view air quality levels of $PM_{2.5}$ in $\mu g/m^3$ (and therefore any values that would be higher than the AQI 300), first select the "Station Filter" on the right side of the screen, select "Pollutant" from the panel, and then select "$PM_{2.5}$ Estimate." The map will refresh by switching from AQI to $PM_{2.5}$ in $\mu g/m^3$ as shown below:




Oregon DEQ's Air Quality Monitoring website navigation summary:

- **For $PM_{2.5}$ in $\mu g/m^3$: (Station Filter > Pollutant > $PM_{2.5}$ Estimate)**
- **For AQI: (Station Filter > Air Quality Index > $PM_{2.5}$ Estimate)**

Some AQI forecasters issue forecasts for several days; however, due to the possibility of changing conditions that can positively or negatively affect air quality forecasts, they should be checked every day.

**ACTION:**

Oregon OSHA will use this directive, as described herein, as inspection and citation guidance when conducting safety and health inspections that include addressing employee exposures to wildfire smoke where the ambient air concentration for fine particulate matter ($PM_{2.5}$) is/was at or above 35.5 $\mu g/m^3$ (AQI value of 101 for $PM_{2.5}$). This Program Directive uses the EPA's updated AQI values, effective after May 6, 2024.

**INSPECTION & CITATION GUIDANCE:**

This instruction supplements applicable guidance provided in Oregon OSHA's Field Inspection Reference Manual (FIRM). The guidance herein uses the EPA's AQI values effective May 6, 2024. The EPA AIRNow mobile app is available to Oregon OSHA staff and provides a simple interface for quickly checking current and forecasted air quality information. CSHOs may also use the EPA's AQI Calculator to assist them to convert $PM_{2.5}$ concentration levels in micrograms per cubic meter ($\mu g/m^3$) to equivalent AQI values or vice versa. The calculator can be found at: https://www.airnow.gov/aqi/aqi-calculator/

Only CSHOs who have successfully completed current annual wildfire smoke training will conduct workplace inspections where the ambient air concentration for $PM_{2.5}$ is at or above 35.5 $\mu g/m^3$ (AQI 101). During such inspections, CSHOs must have NIOSH-approved filtering facepiece respirators readily available for their use. CSHOs are encouraged to voluntarily use such respirators when the $PM_{2.5}$ concentration is below 200.9 $\mu g/m^3$ (AQI 277). However, whenever CSHOs are exposed to $PM_{2.5}$ concentrations at or above 200.9 $\mu g/m^3$ (AQI 277), they must wear NIOSH-approved filtering facepiece respirators provided to them. CSHOs are not required to wear such respirators inside enclosed vehicles in which the air is filtered by a properly maintained cabin air filter system, and when the vehicle's windows, doors, and other exterior openings are kept closed, except when it is necessary to briefly open doors to enter or exit. CSHOs should conduct opening/closing conferences and employee interviews in enclosed building/structures or other appropriate areas with better air quality conditions during wildfire smoke-related inspections when there is a safe opportunity to do so.

During wildfire smoke-related inspections where the CSHO is also exposed to excessive heat, they must take additional precautions to reduce the heat-retaining effects of wearing a respirator to prevent heat-related illness. Such precautions may include intermittently removing the respirator briefly for less than 15 minutes in an hour for a total removal time of less than one hour in a single 24-hour period.

The CSHO must ensure that any employer-designed heat illness prevention rest/break schedule used at the time of the wildfire smoke-related inspection, when the ambient heat index equals or exceeds 80 degrees Fahrenheit, integrates heat retaining effect to the employees of

any respirators in use. CSHOs must also follow Program Directive A-229, *Local Emphasis Program (LEP): Preventing Heat-Related Illness and guidance on Heat Illness Prevention rules 437-002-0156 and 437-004-1131*, for all heat illness-related inspections.

**CSHOs who experience any potentially serious health effect from either wildfire smoke or excessive heat exposure must immediately move to a location that reduces such exposure and notify their manager, or call 911 if needed.**

## Protection from Wildfire Smoke rule exemptions

CSHOs must determine and document if the employer or employee activities are covered under the wildfire smoke protection standards' full or partial exemptions under subsections (1)(a) and (b).

The following workplaces and operations are fully exempt from the Protection from Wildfire Smoke rules:

- 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 briefly open doors to enter or exit;

- Enclosed vehicles in which the air is filtered by a properly maintained cabin air filter system, and when the windows, doors, and other exterior openings are kept closed, except when it is necessary to briefly open doors to enter or exit. Buses, light rails, and other enclosed vehicles used for public transit systems where doors are frequently opened to board and deboard passengers are not included under this exemption;

- When the employer predetermines that operations will be suspended to prevent employee exposure to wildfire smoke at an ambient air concentration for PM2.5 of 35.5 $\mu g/m^3$ (AQI 101) or higher; and

- Employees working at home.

The following workplaces and operations are partially exempt and are only subject to subsections (4)(a) through (4)(g) "information and training," and subsection (7)(b) "voluntary use of filtering facepiece respirators" of the rules:

- Wildland firefighting and associated support activities such as fire camp services and fire management;

- Emergency operations that are directly involved in the protection of life or property, public safety power shutoffs, or restoration of essential services, such as evacuation, rescue, medical, structural firefighting, law enforcement, utilities, and communications; and

- Work activities involving only intermittent employee exposure of less than 15 minutes in an hour to an ambient air concentration for PM2.5 at or above 35.5 $\mu g/m^3$ (AQI 101) for a total exposure of less than one hour in a single 24-hour period.

## Evaluating employee exposure to wildfire smoke:

For inspections where the CSHO observes an employee exposed to wildfire smoke when the ambient air concentration for $PM_{2.5}$ is at or above 35.5 $\mu g/m^3$ (AQI 101), the CSHO must identify and document in the case file the air concentration for $PM_{2.5}$ by one or more of the following methods:

1. Directly measure the employee's exposure to $PM_{2.5}$ in $\mu g/m^3$ by using a $PM_{2.5}$ monitor that has been approved for such use by the agency;

2. Using the current average AQI value for the employee's location as provided by the EPA's AirNow.gov. or from an equivalent source (such as Oregon Department of Environmental Quality or Lane Regional Air Protection Agency (LRAPA)). Such documentation must at a minimum include the day, time, and source(s) used to determine the AQI value at the time of employee exposure. *See page 5 for instructions on how to find the concentration of $PM_{2.5}$ in $\mu g/m^3$ from the Oregon DEQ's Air Quality Monitoring webpage at (https://aqi.oregon.gov/)*; or

3. Using the 5-3-1 Visibility Index below only when methods 1 and 2 above are unavailable to estimate the current AQI value. Determine the limit of your visual range by looking for distant targets or familiar landmarks such as mountains, mesas, hills, or buildings at known distances (miles). The visual range is that point at which these targets are no longer visible.

| **5-3-1 Visibility Index** | | |
|---|---|---|
| AQI Values | $PM_{2.5}$ Concentration in $\mu g/m^3$ *(after May 2024)* | Visibility Index Values (How far you can see) |
| 0 – 50 | 0.0 – 9.0 | over 15 miles |
| 51 – 100 | 9.1 – 35.4 | 5 – 15 miles |
| 101 – 150 | 35.5 – 54.0 | 3 – 5 miles |
| 151 – 200 | 55.5 – 125.4 | 1 – 3 miles |
| 201 – 300 | 125.5 – 225.4 | 1 mile |
| 301- 849+ | 225.5 and higher | less than 1 mile |

The viewing of any distance target (an object or feature of a landscape or town that is easily seen and recognized from a distance) must be made with the sun behind you. Looking into the sun, or at an angle, increases the ability of sunlight to reflect off of the smoke, and thus making the visibility estimate less reliable. CSHOs must only use the 5-3-1 Visibility Index if their vision is correct (with or without prescription lenses). Photo documentation may include taking photos in the estimated direction of a distance target known to the CSHO to be within three miles from the inspection site's location (where employees are exposed), but only due to wildfire smoke conditions, and no other visual obstruction, it cannot be seen from the location at the time of the alleged violate condition.

The CSHO should return to the same approximate location when air quality improves to below a $PM_{2.5}$ concentration level of 35.5 $\mu g/m^3$ (AQI 101) to clearly photograph the previously unseen distance target less than three miles away. CSHOs should document the date and time each before and after photo was taken,

and identify the approximate average $PM_{2.5}$ concentration in µg/$m^3$ and equivalent AQI value for the inspection's location for each photo. CSHOs should document the inspection site location's latitude and longitude coordinates, the name of the distance target used, and its approximate distance from the site of the inspection. When CSHOs are determining distances of targets in relation to the site of the inspection, they must err on the side of caution when using the 5-3-1 Visibility Index to allege a violative condition. A topographical map should be included in the case file that will show the inspection's location in relation to the location of the distance target used. The map's scale must be shown to verify the distance between locations in approximate miles.

## Citation guidance for alleged wildfire smoke violations:

**CSHOs should use Appendix A, *Field Inspection Guide (FIG) – Wildfire Smoke*, in this instruction to supplement documentation of employee exposures to PM2.5 at or above 35.5 µg/$m^3$ (AQI 101).**

For wildfire smoke inspections related to a previous employee exposure to an ambient air concentration for $PM_{2.5}$ at or above 35.5 µg/$m^3$ (AQI 101), the CSHO may identify and document in the case file the EPA's Air Quality Index Daily Values Report for $PM_{2.5}$ (Pollutant) and the workplace location (Geographical Area) for the day(s) the employee exposure occurred. The Air Quality Index Daily Values Report provides daily AQI values for the specified year and location and can be found at: https://www.epa.gov/outdoor-air-quality-data/air-quality-index-daily-values-report

The CSHO should document in the case file any method(s) the employer used to determine or estimate employee exposure to wildfire smoke, and any specific failures by the employer to effectively protect employees and to comply with the applicable rule requirements appropriate for the air quality conditions at the time of exposure (see below).

When an employer failed to conduct an exposure assessment to monitor employee exposure to wildfire smoke when employees are or were exposed to an ambient air concentration for $PM_{2.5}$ at or above 35.5 µg/$m^3$ (AQI 101), CSHOs should evaluate the employer's specific method(s), if any, to monitor air quality conditions to protect exposed employees, and cite based on the provisions of the applicable rule:

- OAR 437-002-1081(3) for general industry, construction, and forest activities
- OAR 437-004-9791(3) for agriculture activities

This monitoring must be performed at the start of each shift, and as needed, to comply with two-way communication and exposure control requirements of the standards.

When an employer failed to provide wildfire smoke information and training to all employees, including new employees, supervisory and non-supervisory employees, who may be exposed to an ambient air concentration for $PM_{2.5}$ at or above 35.5 $\mu g/m^3$ (AQI 101), CSHOs should evaluate any employer effort to provide such training for affected employees, and cite based on the provisions of the applicable rule:

- OAR 437-002-1081(4) for general industry, construction, and forest activities
- OAR 437-004-9791(4) for agriculture activities

The information and training must be provided annually before employees are exposed to the hazard, in a language and vocabulary readily understood, and in a manner that facilitates employee feedback.

When an employer failed to document wildfire smoke training to verify supervisor and employee training required under section (4) of the standards, CSHOs should verify that wildfire smoke training provided to employees has been documented, and cite based on the provisions of the applicable rule:

- OAR 437-002-1081(5) for general industry, construction, and forest activities
- OAR 437-004-9791(5) for agriculture activities

The most recent annual training record for each employee must be maintained for one year (written or electronic record) that includes at least the name or identification number of each employee trained, the date(s) of the training(s), and the name of the person(s) who conducted the training.

When an employer failed to develop and implement a two-way communication system to communicate wildfire smoke information between supervisors and employees before employees are exposed to an ambient air concentration of $PM_{2.5}$ at or above 35.5 $\mu g/m^3$ (AQI 101), CSHOs should evaluate the employer's two-way communication system,

if any, and cite based on the provisions of the applicable rule:

- OAR 437-002-1081(6) for general industry, construction, and forest activities
- OAR 437-004-9791(6) for agriculture activities

The employer's two-way communication system must effectively notify exposed employees of any changes in air quality at their work location that would necessitate an increase or decrease in the level of exposure controls and allow employees to report health symptoms that may be the result of wildfire smoke exposure that could necessitate medical attention.

The employer's emergency medical plan or medical services provisions to comply with Division 2, Subdivision K, OAR 437-002-0161(4); Division 3, Subdivision D, 29 CFR 1926.50; or Division 7, Subdivision C, OAR 437-007-0220; must address the types of medical situations that employees could encounter, including those conditions related to wildfire smoke exposure. CSHOs should evaluate the employer's emergency medical plan or medical services provisions, and cite based on the provisions of the applicable rule.

When an employer failed to implement engineering and administrative controls to reduce employee $PM_{2.5}$ exposure to less than 35.5 $\mu g/m^3$ (AQI 101), CSHOs should evaluate the specific worksite conditions to implement such controls, and cite based on the provisions of the applicable rule:

- OAR 437-002-1081(7)(a) for general industry, construction, and forest activities
- OAR 437-004-9791(7)(a) for agriculture activities

CSHOs should consider and document in the case file any effort by the employer during the inspection to demonstrate, whether successful or not, that engineering and/or administrative controls are functionally impossible or would prevent the completion of work. Appropriate engineering controls may include, but are not limited to, temporarily relocating outdoor workers to available indoor areas or vehicles where the air is adequately filtered, or using portable air purifiers equipped with HEPA filters (or similar high-efficiency air filters) that are sufficient in number and performance for the size of the enclosed area where used. Appropriate administrative controls may include, but are not limited to, temporarily relocating outdoor work operations to another outdoor location with better air quality when work permits, and changing employee work schedules to

a time when better air quality is forecasted.

When an employer failed to provide NIOSH-approved filtering facepiece respirators for voluntary use whenever employee exposure to $PM_{2.5}$ is at or above 35.5 $\mu g/m^3$ (AQI 101), CSHOs should evaluate the specific conditions, and cite based on the provisions of the applicable rule:

- OAR 437-002-1081(7)(b) for general industry, construction, and forest activities
- OAR 437-004-9791(7)(b) for agriculture activities

Employers must distribute NIOSH-approved filtering facepiece respirators directly to each exposed employee, or maintain a sufficient supply of such respirators that is readily accessible and known to any exposed employee at each work location.

CSHOs should evaluate and document in the case file any employer or employee assertion that use of a filtering facepiece respirator would expose the wearer to a hazard associated with a substantially more serious injury or illness than the potential acute health effects of wildfire smoke exposure.

Voluntary use of filtering facepiece respirators under subsection (7)(b) in both standards is not subject to the requirements under the applicable Respiratory Protection Standard – 29 CFR 1910.134 or OAR 437-004-1041. However, elastomeric respirators are distinct from filtering facepiece respirators. If elastomeric respirators are used to reduce employee exposure to wildfire smoke at any $PM_{2.5}$ concentration, employers must comply with all applicable requirements under the applicable Respiratory Protection Standard. CSHOs should evaluate the specific conditions and cite based on the provisions of the applicable Respiratory Protection standard:

- 29 CFR 1910.134 for general industry, construction, and forest activities
- OAR 437-004-1041 for agriculture activities

When an employer failed to ensure NIOSH-approved filtering facepiece respirators are maintained with a sufficient supply that are readily accessible and known to exposed employees, CSHOs should evaluate the specific conditions and cite based on the provisions of the applicable rule:

- OAR 437-002-1081(7)(a)(ii) for general industry, construction, and forest activities

- OAR 437-004-9791(7)(a)(ii) for agriculture activities

NIOSH-approved filtering facepiece respirator supplies must be in a location that does not restrict or hinder employee access to respirators or discourage replacement of them when needed. If the CSHO's evaluation of the employer's supply of NIOSH-approved filtering facepiece respirators indicates a lack of adequate size selection for exposed employees, CSHOs should consider issuing a non-code related hazard letter recommending additional sizes.

When an employer failed to ensure NIOSH-approved filtering facepiece respirators are stored and maintained so that they do not present a health hazard to the user, CSHOs should evaluate the specific conditions, and cite based on the provisions of the applicable rule:

- OAR 437-002-1081(7)(b)(B) for general industry, construction, and forest activities.
- OAR 437-004-9791(7)(b)(B) for agriculture activities

When an employer failed to require the use of NIOSH-approved filtering facepiece respirators whenever employee exposure to $PM_{2.5}$ is at or above 200.9 $\mu g/m^3$ (AQI 277), CSHOs should evaluate the specific conditions, and cite based on the provisions of the applicable rule:

- OAR 437-002-1081(7)(c) for general industry, construction, and forest activities
- OAR 437-004-9791(7)(c) for agriculture activities

Oregon OSHA recognizes the difficulty employers may have to ensure their employees with facial hair, who are not otherwise required to wear respirators for non-wildfire smoke hazards, to be clean shaven to comply with the requirement for mandatory respirator use at or above an AQI of 277. In such situations, employers are encouraged to provide a supply of respirators in several sizes to better accommodate different facial hair styles. While using a filtering facepiece respirator with facial hair is normally noncompliant for all other work-related hazards that necessitates required use, Oregon OSHA strictly allows this exception only for wildfire smoke due to the effects of the exposure for the typical worker and the limited duration of filtering facepiece respirator use. While the hazard is serious to warrant efforts to reduce the risk, due to the known effects of $PM_{2.5}$ contained in wildfire smoke on the human body, it is not significant enough to represent a respiratory hazard that triggers the full requirements of the respiratory protection standard below AQI 849.

CSHOs should evaluate and document in the case file any employer or employee assertion that use of a filtering facepiece respirator would expose the wearer to a hazard associated with a substantially more serious injury or illness than the potential acute health effects of wildfire smoke exposure.

When an employer failed to require the use of respirators in accordance with the applicable Respiratory Protection Standard (29 CFR 1910.134 / OAR 437-004-1041) whenever employee exposure to $PM_{2.5}$ is at or above 500.4 $\mu g/m^3$ (AQI 849), CSHOs should evaluate the specific conditions and cite based on the provisions of the applicable rule:

- OAR 437-002-1081(7)(d) for general industry, construction, and forest activities
- OAR 437-004-9791(7)(d) for agriculture activities

All respirators used to protect employees from exposures to $PM_{2.5}$ at or above 500.4 $\mu g/m^3$ (AQI 849), must be in accordance with all applicable Respiratory Protection Program requirements of 29 CFR 1910.134 or OAR 437-004-1041 (Respiratory Protection).

When an employer failed to comply with the applicable Respiratory Protection standard requirements, whenever employee exposure to $PM_{2.5}$ is at or above 500.4 $\mu g/m^3$ (AQI 849), CSHOs should evaluate the specific conditions and cite based on the provisions of the applicable rule:

- 29 CFR 1910.134 for general industry, construction, and forest activities
- OAR 437-004-1041 for agriculture activities

**TRANING:**

Oregon OSHA will ensure that all staff whose work activities could potentially expose them to wildfire smoke receive training using Oregon OSHA's Wildfire Smoke online course. The online course satisfies 5 of the 10 training requirements found in Oregon OSHA's wildfire smoke protection rules. Managers of affected staff must ensure all applicable additional training requirements are met and documented prior to exposure. These elements include:

- The field office's methods to protect employees from wildfire smoke, including how filtering facepiece respirators are required to be made readily accessible to staff and how they can obtain such

respirators before exposure, and replace them when needed.

- Review of any job tasks performed by employees in which the use of a filtering facepiece respirator would expose the wearer to a hazard associated with a substantially more serious injury or illness than the potential acute health effects of wildfire smoke exposure, and therefore must not be used when performing such tasks.

- The procedures managers must follow when an employee reports or exhibits health symptoms that necessitate immediate medical attention such as, but not limited to, asthma attacks, difficulty breathing, and chest pain.

- How to operate and interpret exposure results based on any $PM_{2.5}$ monitoring device approved for use by the agency.

- An explanation of the field office's two-way communication system for wildfire smoke exposure control information.

**EFFECTIVE DATE:**

This directive is effective immediately and will remain in effect until canceled or superseded.

**History:** Issued 4-17-2025

## APPENDIX A

## Field Inspection Guide (FIG) – Wildfire Smoke

***Supplemental documentation for exposures to PM2.5 at or above 35.5 µg/m³ (AQI 101)***

Date_____ Employer_____ Insp #_____

Location_____

Describe operation_____

Approx EE exposure level: AQI (source/app/5-3-1)_____ Direct measurement (µg/m³)_____

**Workplace or operation exempt (mark if full or partial)**
Full: Bldg or vehicle with filtered air_____ Suspended work_____ Telework_____
Partial: WFF support_____ Emerg ops_____ Intermittent <15min/hr with <1hr total/24-hr period)_____

**If partially exempt:** (Yes/No) Info and training (4)(a)-(g)_____ FF provided for voluntary use_____

**Exposure assessment method(s):** Shift start time_____ Monitoring times/shift_____
AQI source/app _____ Test device make/model_____
5-3-1(distance target and approx miles)_____

**Information & training:** Date training conducted _____
(Yes/No): EEs & Supv_____ In language of EE_____ Annual_____
Documented (date / names of EEs / name of trainer)_____ Maintained for 1 yr_____
Training includes: (Yes/No)
Symptoms (eye irritation / resp irritation / fatigue / headache / irregular heartbeat / chest pain)_____
Potential acute/chronic effect_____ Sensitive individuals_____
Rights to report health symptoms / seek medical_____ Where to obtain AQI info_____
Importance, limitation, care of filtering facepiece (FF)_____ FF at no cost_____
Efforts employer is taking to protect employee (EE)_____ Where to obtain FF as needed _____
Assessment of any tasks where FF is contraindicated_____ Description of two-way comm_____
Supv procedure if EE reports/exhibits symptoms_____ Use/interpret monitoring equip_____

**Two-way communication:** (Yes/No)
Developed & implemented_____ Two-way AQI changes_____
Encourages EEs to report any symptoms_____ Exposure control measure issues_____

**Emergency medical plan:** (Yes/No)
Complies with applicable D2/K, D3/D, D4/K or D7/C_____ Plan includes WS injuries/illnesses_____

**Exposure controls:** (Yes/No)
Eng/admin feasible_____ Relocate indoors_____ Portable HEPA_____ Suspend work_____
EE sched change_____ FF provided for voluntary use_____ FF free of charge_____
FF is NIOSH approved (No KN95)_____ FF in selection of sizes_____ FF given directly to EE_____
FF provided at assessable location (if yes, where)_____

**When PM2.5 is at or above 200.9 ug/m³ (AQI 277) or higher:** (Yes/No)
FF required_____ FF use complies with Appendix A of 437-002-1081 or 437-004-9791_____
Donning/doffing_____ Care/maintenance_____ Storage/replacement_____ Leak check_____

****If the only contaminant is WS, fit test and med eval are not required if App A in 437-002-1081 or 437-004-9791 is used.***

**When PM2.5 is at or above 500.4 ug/m³ (AQI 849) or higher:** (Yes/No)
FF required_____ Complies with Respiratory Protection Standard 1910.134 or 437-004-1041_____

****If elastomeric respirators are worn, even voluntarily, all sections of 1910.134 or 437-004-1041 apply.***