



DATE: June 13, 2024

TO: All Oregon OSHA Staff

FROM: Dave McLaughlin, Standards and Technical Manager

SUBJECT: Wildfire Smoke and 2024 AQI Update

In May 2022, Oregon OSHA adopted permanent rules (OAR 437-002-1081 and 437-004-9791) to reduce worker exposure to the potentially harmful health effects associated with wildfire smoke inhalation. These rules establish exposure limits for workers to wildfire smoke particulate matter (PM) with a diameter of 2.5 micrometers (μg) or less; this is commonly referred to as PM_{2.5}. Oregon OSHA's wildfire smoke requirements have an initial threshold of 35.5 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$) of PM_{2.5}, and additional thresholds at 200.9 $\mu\text{g}/\text{m}^3$ and 500.4 $\mu\text{g}/\text{m}^3$ of PM_{2.5}. When adopted, these requirements purposefully cross-referenced PM_{2.5} to the Air Quality Index (AQI) values adopted at that time by the U.S. Environmental Protection Agency (EPA). The AQI is a unitless index calculated by the EPA to communicate air quality conditions to the public.

However, in May 2024, the EPA updated its annual reporting standard for PM_{2.5} exposure, in part, to increase general public health awareness for sensitive populations. Specifically, the EPA modified how the AQI is calculated based on 24-hour exposure to PM_{2.5}. It is important to highlight that, while the EPA modified how it calculates AQI, neither the process for measuring PM_{2.5} exposure or the actual concentrations adopted by Oregon OSHA have changed.

Therefore, while Oregon OSHA's exposure limits for PM_{2.5} in its rules remain unaffected by the EPA's change to its AQI scale, the AQI values referenced in subsections (7)(c) and (7)(d), as well as appendices A and B of OAR 437-002-1081 and 437-004-9791, respectively, do not reflect the EPA's updated AQI scale.

For ease of reference, the old and new AQI scales are represented as a crosswalk in the table below along with the corresponding respiratory protection requirements:

Previous AQI values	New AQI values <i>(effective May 2024)</i>	Wildfire Smoke standards' key requirements for exposure level using new AQI values
101 - 250	101 - 276	<ol style="list-style-type: none"> 1. Assess and monitor air quality at each work location where employees are exposed 2. Provide and document employee training 3. Implement two-way communication system 4. Implement engineering and administrative controls 5. Provide NIOSH-approved filtering facepiece respirators for voluntary use
251 - 500	277 - 848	<p>Follow steps 1-4 above; and</p> <ol style="list-style-type: none"> 6. Provide NIOSH-approved filtering facepiece respirators for mandatory use by implementing a Wildfire Smoke Respiratory Protection Program in accordance with Appendix A, in the Protection from Wildfire Smoke standards
501 and above	849 and above	<p>Follow steps 1-4 above; and</p> <ol style="list-style-type: none"> 7. Provide NIOSH-approved respirators for mandatory use by implementing a Respiratory Protection Program in accordance with 29 CFR 1910.134 or OAR 437-004-1041

Adapted from fact sheet: <https://osha.oregon.gov/OSHAPubs/factsheets/fs92.pdf>

This technical guidance is effective immediately and supersedes all previous versions of policy and interpretations related to the use of AQI for determining wildfire smoke exposures for workers in Oregon. This policy will remain in effect until rescinded.

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History: TG 2024-01 Issued 6/13/2024