

Smoke and Excessive Heat Rulemaking

April 15, 2021

1pm

Agenda

- 1-230 PM, Smoke – Identification of harmful exposures discussion
- 230-235 PM, Break
- 235-330 PM, draft heat rule discussion
- 330-340 PM, Workman's compensation data
- 340-4 PM, Questions/Answers
- 4 PM, Adjourn meeting

Renee Stapleton with Oregon OSHA started the meeting at 1:03pm

Smoke – Identification of harmful exposures discussion

(Ted Bunch with Oregon OSHA read the document titled "DRAFT outline -- Smoke rule")

- Included are sections on Identification of harmful exposures and Exceptions
This is for discussion as draft information. Asked to the group:
 - "What should Oregon OSHA and OHA consider when determining an action AQI/PM2.5 level for employee protection?"
 - "What characteristics or specifications of a personal air quality monitor (option 3) should Oregon OSHA and OHA consider including the language?"
- Renee Stapleton: previous meeting discussion about whether AQI is the appropriate measurement. We are considering a 3-prong option
 1. Using a local AQI
 2. Using the PM2.5 stations that are available statewide
 3. A private meter that an employer would use personally that measures PM2.5
- Questions/Comments
 - Q. Attendee: I'm curious as to if there are valid measurements other than AQI that others have considered in contrast to the CA rule? I don't have one to suggest but thought others might.
 - A. Ted Bunch: Not to my knowledge, but I believe that WA state might be taking a different approach. Meeting tomorrow with them and that will be discussed.
 - Q. Comment. Attendee: Have put the AQI graph in their wildfire policy.
 - Q. Attendee: Suggest using the AQIs from the EPA found in Table 2 of Title 40 CFR, Part 58 - similar to what CA has done. Having similar action levels as CA would be helpful for those employers/employees who work in both States.
 - A. Ted Bunch: This chart is from 40 CFR.
 - Q. Attendee: WAQA is being discussed by WA, differs from AQI.
 - A. Ted Bunch: WA did develop their own AQI. As it compares to this chart, everything of AQI 151 and above is considered hazardous.
 - Q. Attendee: For workers who move to different locations during their work. Is this AQI threshold going to be applied to a threshold number of workers in one location?
 - A. Ted Bunch: Yes, if there is an area of the state not experiencing high AQI vs other areas of the state that are due to wildfire smoke, it would be more by location.
 - Q. Attendee: I would imagine that the third concept [that Renee stated] would be the best way to determine smoke levels. I worry that the location of the reader used on the various websites could be too far away from work sites.
 - A. Renee Stapleton: This is a good point about the distance and is on our list to think about. [The 3-prong option was restated.] Are these good concepts that give people flexibility based on where they are and industry type? Next step, is there a provision about proximity, location, wind?
 - Q. Comment. Attendee: OR-OSHA should determine the action AQI/PM2.5 level based in science and what we know about the health impacts, as outlined in the displayed chart. So 101 should be baseline trigger.

- Q. Attendee: What is the cost of an accurate PM 2.5 meter and what is their reliability?
- A. Ted Bunch: The air monitors that CA referenced to (Purple Air monitors) are about \$300 per unit. They tend to estimate concentrations 40-50% higher than the actual air levels. OR-OSHA does not recommend a particular air monitor.
- Q. Attendee: Can it be left up to the employer on what method is used to determine PM2.5 levels, and the rule establish the actionable levels and what is to be done at each level?
- A. Ted Bunch: Three-prong approach is meant to supply options to employers. PM2.5 microns is what the units measure; some can also measure ozone. Put out a concentration and you can use the chart from 40 CFR to convert to an AQI.
- Q. Attendee: We are dealing with a wide range of worker groups, including potentially highly vulnerable people. It seems that a 101 AQI is more appropriate than 151 for this reason.
- A. Ted Bunch: It is certainly possible that we could take a more tiered approach, meaning a threshold at each level.
- Q. Attendee: The lower we make this, the more applicable it's going to be, more days a year it is to a greater group of working Oregonians. That is a concern even from a voluntary standpoint. Roping in a lot more employers who do not currently manage a respiratory protection program or have the knowledge on how to do so.
- A. Renee Stapleton: In the tiered approach, AL may not be a respirator or filtering facepiece. It is a starting point to talk about what should be done at certain AL's.
- Q. Attendee: How often throughout the day should employers have to check the AQI? Conditions change quickly as we know.
- A. Ted Bunch: This can be found in the intro paragraph of the draft language. At start of each shift and throughout as often as needed, could vary by location, etc.
- Q. Comment. Attendee: "As often as needed" is concerning as the weather and air quality throughout the day, supervisor may not be on site. Will send their recommendations.
- Q. Attendee: What if an employer has multiple fields in different cities. Each site needs one? What about size of the land, operation?
- A. Tom Bozicevic: Three-prong approach does not imply that an employer has to select and use only one method/concept. The intent is to get the information that they need to protect workers.
- Q. Attendee: Would this rule include impact or include someone gathering carts at the grocery store when levels are above 150? Is that consecutive time in a shift or total time? Discussion on employees working longer shifts like double shifts. In the normal course of a day, we would easily be outside more than an hour total in an 8-hour day.
- A. Ted Bunch: we have some draft language on duration of exposure. See DRAFT outline Smoke rule (4) Employees exposed to a current AQI in ambient air of PM2.5 of some number or greater for a total of one hour or less during an 8-hour shift, 1 hour 15 min for a 10-hours shift, and 1 hour 30 mins for a 12-hour shift. -- That would be total time per shift.
- Q. Attendee: How does that impact employers whose employees may work much longer shifts than 8 hours? Types of respirators used – weight and wear-ability -- drastically reduces our ability to clearly communicate over radios.
- Q. Attendee comments: Cotton masks are not fire resistant. Trying to breath through a full-filtered mask on an active fire line creates a separate hazard.
- Q. Comment. Attendee: I would be opposed to anything below the CA standard for AQI. Could you articulate the CA approach again?
- A. Ted Bunch: In CA rule, there are two action levels: when it is over 151 and respirator use is voluntary and when it is over 500 and respirator use is mandatory.
- Q. Attendee: Can you provide a split from DEQ as to number of days vs. AQI level? They have had it in the past.
- A. Tom Roick with DEQ: we have compiled info on number of days in a given year of levels that exceeded AQI. We can provide this information to you. Looking at (1) Check the current AQI for PM2.5 from any of the following websites: U.S. EPA AirNow, the Oregon Department of Environmental Quality's air quality website or the Interagency Wildland Fire Air Quality Response Program's website. For those employers in Lane County, the Lane Regional Air Protection Agency (LRAPA) website also provides the current AQI. – Should be getting the same information from all about AQI. Temp fed monitors might give different info that wouldn't show up on DEQ's website. Looking at (2) Obtain AQI forecasts in ambient air for PM2.5 directly from the U.S. EPA (via

AirNow). Our resources run on land power so our monitors may be down in certain parts of the state, if power is turned off due to wildfires.

- Q. Attendee: How will you determine the AQI level only associated with wildfire smoke vs. other environmental factors. Do we only measure when there is a fire in the state of Oregon or other border states or is this a wildfire anywhere in the world that might impact our air quality?
 - A. Renee Stapleton: We need to consider is that it may include other things that aren't directly from wildfire smoke but affect air quality.
 - Q. Attendee: Wildfire smoke would be a trigger, for the rule, will PM2.5 be the identification of wildfire smoke rule applicability? I thought I remembered scope being very specific to fires? * If drive-throughs have such bad PM2.5 particulate exposures currently, engineering controls such as ventilation could and maybe should be used.
 - A. Tom Bozicevic: Understand the previous drive-thru comments to be in reference to wildfire smoke situations. Attendee on previous comments: Yes, meant to be specific to wildfire season in Oregon.
 - Q. Attendee: this impacts a great deal of employees, not solely workers who are mostly outside. Drive-thru employees are just an example to show that employees will easily be in contact with outside air and likely more than one hour per shift. Confirmed that comments are related to air quality related to wildfire smoke, not for example, vehicle emissions.
 - Q. Attendee: Bottom line for the level question is who do you need to protect? Sensitive populations vs. healthy workers. If you read the last part of each statement - at 151 and 201 everyone else should limit prolonged exertion, 301 applies to everyone. As we saw with COVID exposures some employees may self limit exposure to wildfire smoke...due to their health status which is generally not something employers want to know.
 - A. Tom Bozicevic: We are not looking to single out a group of workers. Rules would apply to all workers but we would take sensitive populations into account.
 - Q. Attendee: Would there be any exception for employers who undergo annual medical physicals?
 - A. Tom Bozicevic: Could be a tool for an employer to use to determine if they have any employees who may be more sensitive to wildfire smoke exposures.
 - Q. Attendee: What is the geographical range for the three methods?
 - A. Renee Stapleton: The question about proximity is still being discussed. Beyond the 3-prong approach, those other factors will still be discussed.
 - Q. Comment. Attendee: Farmworkers are a sensitive workforce too. They have a shorter life expectancy than average American workers and have many hazards in their jobs. These factors need to be considered when discussing a lower AQI.
 - Q. Comment. Attendee: We have electrical workers who must work in wildfire areas within the minimum approach distance (MAD) which requires FR gear and we are not aware of any FR respirators that exist. They could have to work in those areas for more than an hour.
 - A. Tom Bozicevic: We would not expect workers who do not have fire rated equipment to conduct that type of equipment. It is the same thing we run into with COVID-19, workers who are engaged in those activities if you don't have a mask/face covering that is not fire rated for the task that they are engaged in then there would be considered a greater hazard associated with.
 - Q. Comment. Curtis Cude: We are concerned what people are breathing regardless of where that smoke is coming from. We don't want us to get too caught up on the origin of the exposure.
- **Back to Document** DRAFT outline Smoke rule Ted Bunch
Exceptions 1-5: Sections include: What do the exceptions apply to? AL or voluntary use vs mandatory use?
Ted Bunch: In my mind the exceptions would be from complying with the rule.
Questions/comments?
 - Q. Attendee: ALH #5 (typo as #6), so much of it is outside by design. If there is going to be an exception, I ask for an explanation about how those ALH rules will be created and adopted.
 - Q. Attendee: In businesses where large bay doors (like distribution centers) are opened while product is loaded/unloaded: How does this rule apply to those situations? These aren't entrance/exit doors.
 - A. Ted Bunch: That seems to be the intent for #1 [of the draft document].
 - Q. Attendee: I am confused by that. This would seem to say that a distribution center whose intent is opening for loading/unloading is going to be exempt, but with the very nature of the building and work,

smoke will enter that building. So I am unsure how a blanket exemption is going to protect that type of work.

- A. Ted Bunch: At least the first two [of the document] came directly from the rule. This is thrown out there from CA rule to start the discussion.
- Q. Attendee: Exemption for risk assessment to identify conflicts / other hazards. With individual specific jobs that require other forms of protection (for example not being able to use a respirator with metal nosepiece or jobs that require walking on steel beams).
- A. Tom Bozicevic: when we talk about mitigation efforts when levels reach a certain point that would trigger action on employer's part, use of respirator isn't necessarily the first option. There are other approaches to mitigate exposures (admin controls, location reassignment).
- Attendee: that is a fair statement but I don't see how you would apply that to people not working in a climate-controlled building.
- A. Renee Stapleton: you bring up what is referred to as a "greater hazard." This is very specific for the employer to consider. For example, some employers choose to alternate their workforce's timeframes, schedules based on heat, smoke.
- Q. Attendee: When AQI is high, we restrict outdoor work to critical tasks. If critical, we resort to hierarchy of controls. During the last wildfire long stretch of several days, we stopped all outdoor tasks due to health quality of the worker. I recognize that not all employers can do this.
- Tom Bozicevic: Several comments in the chat on greenhouses. In other rules we have where we have another rule in place that would be a more vertical rule, the exceptions point to another rule that would address employees engaged in the other type of activity (firefighting example). That could possibly be incorporated in this rule once the ALH rules are fully in place.
- Q. Attendee: I object to the exception on agricultural labor housing without a parallel provision or any reference to expectation of coverage of the occupants of housing in rulemaking. Every one of the other exceptions includes an explanation. I disagree on carving out of greenhouses. One of the largest numbers of complaints from agricultural workers is when they work inside greenhouses.
- A. Tom Bozicevic: I want to clarify that we aren't talking about an entire group of workers. This rulemaking would cover workers while engaged in work activities. This exception is strictly when workers are back at the housing.
- Q. Attendee: There is a series of exceptions to current rule. I would object that a group of workers would be exempt when there is not a parallel rule in place. Keep that in mind that that group of workers in ALH are exempt assuming that there is parallel rules in place this year to also protect them.
- A. Tom Bozicevic clarified Attendee's above comments about language added to the ALH exception of the draft rule referencing a different rule.
- A. Renee Stapleton: We can make it very clear why ALH was exempt in Smoke and Heat rule but that it provides the same weight and will be addressed in a parallel rule.
- Q. Attendee: will this be proposed as a separate rule chapter or will this be amending of current rules throughout the divisions?
- A. Renee Stapleton: we are unclear at this point on that, but we will have to assess if this is one chunk and amend sections of current rules. We need to know the bones of what we are working on.
- Q. Attendee: It is difficult to comment on these specific topics at this moment when we may have statements on those in the future. Hard time following the science of what employers can do (personal meters limitations, distance from stations).
- A. Renee Stapleton: Yes, it is hard to have engaged conversations when we aren't sure what everything looks like. Tom Bozicevic: It will be challenging based on what HVAC and filtration systems cars have. We want to use those systems to better protect employees.

Break—please share additional comments about Smoke rulemaking on Oregon OSHA website.

- **Excessive Heat – Gary Robertson**

Document of *Draft* Rule on Heat was read, sections include:

- scope and application
- table of outdoor temperature action levels
- exceptions
- definitions

- provisions of water, access to shade, high-heat procedures, drinking water, ER procedures, acclimatization, training, heat illness prevention plan
- A. Comment. Renee Stapleton: Discussion was not whether a prevention plan is needed. The discussion point is, what elements of a prevention plan would be needed?
- Q. Attendee: How do you define high heat? What temperature are you thinking of?
- Attendee: I don't know that I have a concrete answer for you because that is something we still have to figure out as a group. Could be different in parts of the state.
- Q. Attendee: Where would shipyards fall under these rules?
- A. Gary Robertson: Made note of this topic. Some of this industry is Oregon OSHA jurisdiction and some is under Fed OSHA jurisdiction.
- Q. Attendee: How do you define high heat? What temp?
- A. Gary Robertson: that has no concrete answer. Could be different in areas of the state.
- Q. Attendee: How is an employer to verify how many layers of clothing an employee is wearing? Does this sort of requirement exist anywhere else in law that we can look to?
- A. Gary Robertson: Just freethinking, in looking at the table in the Draft rule document, the work the employer is doing, they might have an idea of type of PPE that needs to be worn. As this rule language is tidied up, hopefully that will become more prevalent as we move forward.
- Q. Attendee: What will the expectation be for employers to prove that they provided water of a certain temperature daily? Will they be expected to keep a log of water temperatures?
- A. Gary Robertson: looking at the table, based on the work employers are doing, might help determine types of PPE, clothing worn. Will be discussed moving forward.
- A. Renee Stapleton: one example is areas like foundries where cotton/non-synthetic clothing is required. It is not unheard of to need to have a policy/discussion. Correct that clothing layers can be hard to decipher what is being worn.
- Q. Comment. Attendee: Ag will be a challenge / not as obvious as some other industries, no real control of what clothing employees are wearing.
- A. Gary Robertson: It may depend on type of clothing/PPE required to be worn.
- Q. Attendee: Where would shipyards fall under these rules?
- A. Gary Robertson and Tom Bozicevic: Made note of this topic. Some of this industry is Oregon OSHA jurisdiction and some is under Fed OSHA jurisdiction, in connection to proximity of navigable waterway.
- A. Renee Stapleton: shipyards discussion should be added in so it is clear across the board in Oregon.
- Q. Attendee: Is there a reason why acclimatization is so long? Why not two to three days? Is there a scientific reason? The period of 14 days seems like a long time.
- A. Crystal Weston (OHA): It does take time to acclimate. Depends on if the person has done that work before, could be shorter. Worth taking another look at the 14-day length.
- Q. Attendee: What will the expectation be for employers to prove that they provided water of a certain temperature daily? Will they be expected to keep a log of water temperatures?
- A. Gary Robertson: There is nothing in the rule at this point. Onus will probably be on employer. An Igloo cooler with ice would certainly keep water to those temps for a good portion of the day. Since this is a preliminary draft of the rule, how that would look in a final draft would need to be discussed.
- Q. Attendee: So it's not just construction, ag, and forestry, because division 2 applies to all workplaces, right?
- Renee Stapleton: It does not have to lay out each type of workplace. However, the way that agriculture works is that we have to duplicate the rules that apply.
- Q. Attendee: In logging, workers bring their own water and food when working from home (which is most common in Oregon). How is the drinking water rule going to affect this?
- A. Tom Bozicevic: It is employers' responsibility that water is provided. Will look for more detail on this.
- Q. Attendee: What does it mean - access to shade at all times? Distance or permission (walked to or taken to)? What is meant by making shade available? Example given about 150 workers but only tents to cover smaller number of those workers. If there isn't enough for everyone, workers may be reluctant to use it. Also consider need for physical distancing with COVID-19 pandemic. We certainly want to see options available to relieve heat stress (in connection to misting in ag).
- A. Gary Robertson: Document Draft Rule Heat: See (6) Access to shade. Discussed options and stated that moving forward, discussion should happen on that.
- Q. Attendee: Why isn't misting considered for ag workers?

- A. Gary Robertson: Ag work seems to be more fluid. In a 200-square acre field, it is not as realistic as on a construction site.
- A. Ted Bunch: GAP and Global GAP, could be a concern with food contamination in the field. Will follow up in that regard. (questioned by meeting attendee).
- Q. Comment. Attendee: One example to regulate temp is greenhouses will have windows that can be opened to release heat. There are different mechanisms to release heat.
- Q. Attendee: What is meant by “monitor” in Item 11 of the draft rule document?
- A. Gary Robertson: The definition and duties of a monitor is something that will need to be looked at.
- Q. Attendee: Will Oregon consider historical wet bulb (humidity) measures to see if using the ambient temperature (dry bulb) is justified as they did in WA? Or will you consider using the heat index?
- A. Crystal Weston (OHA): It does seem like it would be advisable to officially justify and make sure that that would work. Humidity levels differ across the state. It would also make sense that if it is a significant factor, in a lot of cases it would reduce regulations and in other cases have more restrictions when necessary. There are some apps/websites that we could recommend to calculate that number.
- Q. Attendee: Does a vest, mesh or not count as a double layer? AIHA has some great background info on FR and similar clothing and the possible heat illness risk. A common finding was employees were more at risk because they were dehydrated when they arrived at work which made provision/availability of fluids throughout the day key.
- Q. Attendee: Need to define the roles/responsibilities of the monitor. Is this a dedicated position or can it be an added duty of someone else?
- A. Gary Robertson: We will have to figure that out moving forward.
- Q. Attendee: A comment on the start-of-shift mandatory meeting, this is not applicable to a lot of situations (remote workers, etc.).
- Q. Attendee: We rarely have high heat in most of Oregon for 14 straight days. Does the acclimatization process begin every time the temperature hits high heat in a season?
- A. Crystal Weston: It seems that we should use the wet bulb globe temp or we can use the regular temperature if the data shows that is either equal to or safer than wet bulb globe temp. It tends not to be very humid in Oregon in the summer. It might be acceptable to use this [similar or simpler, inaudible] standard but from an occupational safety standpoint it can be better to use the wet bulb global temp method. That feeds into the acclimatization. Can follow up in more detail for the next meeting.
- Q. Attendee: Is there any plan to differentiate between light duty and heavy duty work in the heat rules?
- A. Gary Robertson and Tom Bozicevic: That is a good point to discuss for this rulemaking moving forward.
- Q. Attendee: There is no job that alleviates all risk. (restated verbally from chat)
- Q. Attendee: How are mobile construction crews eg. paving the freeway, going to have access to shade when you are constantly moving down the road? Vehicles are the only option. Is there an allowance for using vehicles as shade?
- A. Gary Robertson: looking at the definition of shade is blocking direct sunlight, clarified that a car sitting in the sun does not constitute shade. Running car could constitute shade.
- Q. Attendee: exception needs to be that sitting in a car with AC running is ok.
- Q. Attendee: Comment should state that car has working AC. Dangerous to use vehicle as shade.
- Q. Comment. Attendee: We need the allowance of using a vehicle to provide shade because, for example, if a worker sits down outside of a vehicle, shaded by an overpass, the mobile crew will be 1/2 mile away when the worker sits for the minimum five minutes. Worker will need to run to catch up and possibly overheat again.
- Q. Attendee: for fire camps with 500-800 people, are employers required to provide shade tents when workers bring sleeping tents (worker provided)? Does worker-provided shade meet that requirement?
- A. Gary Robertson: This is a valid point that will need discussed moving forward.
- Q. Attendee: If employers provide water for a portion of the day, as long as they have a method bringing in additional water. I want us to have a discussion on that. Many times workers wait for water to be delivered.

Workers' compensation claim data up to 2021 - slide show

Gary Robertson read slides as SAIF representative was not on call at time of presentation

- This data represents claims filed from 2001 to 2021, some data 1979 to 2021

- Claims for heat & smoke related injuries may have been under reported for various reasons. The information contained in these slide is generic in nature.
- The emphasis of these rules is to protect “Workers”.

Slides: Outdoor workers “Heat” claim status

- by age
- by naics codes

Slides: Outdoor workers “Smoke” - claim status

- by age
- by naics codes

Slides: Forest Fires as source

- age ranges
- work descriptions (industries) where claims came from
- source

Renee Stapleton: This information has been requested, so we are providing it. Restated that cases may be underreported.

Attendee: I would ask SAIF to present on this data.

Attendee: I think it is important to identify gaps and identify when we do have access to solid information.

Meeting adjourned at 4:05pm

Next meeting scheduled for May 6, 1pm