Comments/Notes from Wildfire Smoke Stakeholder Meeting
March 25, 2021

Rulemaking Comments
I know we touched on this last time, but why is this an emergency rule? Is there enough data to substantiate a serious hazard to healthy employees? At what dose? The timber industry documented the only exposure Washington had in the past ten years that would require respiratory protection was in one county for one day. Without evidence substantiating a serious or acute hazard to healthy adults, and very limited exposure to the level CA is requiring respirators, why is this an emergency? This seems like a very complicated topic that should be allowed time for industry and labor to work through.
Since you are planning on doing an emergency rule rather than one that has gone thru the full APA, please go softly with requirements in the emergency rule. Without doing the full analysis required in an APA compliant rule, you may inadvertently do lot of unnecessary economic damage to both employers and employees.
As you work on this Emergency Rule, are you consulting with med professionals (docs, IHs, etc.) in WA Public Health Association, UW Center for Occupational Health, etc.? Outside experts such as UW etc. or just in-house state agencies?
Some industries might not be able to make the requirements due to building age and equipment like previously said. Might also cost a lot to the business for these types of improvement. Again, please be lenient on these items especially in an emergency ruling.
Does a request from the Governor constitute an emergency? Shouldn't the scientific data and analysis come first, then the request?
I suggest you continue with your best practices and guidelines until time can be taken to do this right. rule making needs to follow the Administrative Procedures Act
Enforcement/Consultation
If training will be required, will L&I have a training module available on the L&I website?
California Rule Comments
Would DOSH define “Pm2.5”, “Wildfire Smoke” and “Wildlands” the same as the California rule?
PM 2.5, AQI and WAQA Comments
Would this cover all air quality or just wildfire smoke? We have seen in recent years a poor air quality from smog not related to wildfires.
Using PM2.5, unknowns, how is PM2.5 going to be measured for compliance purposes?
Can the employer measure in the area they are operating and apply that to their operation?
No smog. Got it. Volcanic Eruption?
From simple PM2.5 measurements (or PM2.5 AQI), how would you differentiate a volcano vs wildfire?
When you say "reasonably expected," do you mean if there are wildfires going on in the general area, or do they take into account current air patterns and other things that may affect air quality?

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Consider that scope should define wildfire smoke is reasonably expected to contribute to 51% or more of AQI 2.5 exceeding 150.
Filtered HVAC to what level? MERV rating?
Regarding the response to MERV rating for filtration. If there is any potential for DOSH to critically examine filter choice by organizations, that detail needs to be in the rule so employers understand the baseline expectation they can be held to by the enforcement agency.
Do you know yet if Washington will use AQI or WAQA?
It is my understanding that Washington State has the presence of ethylene oxides and uses different methods for measuring air quality. Previously we have experienced difficulties with multiple employers using varying AQIs to meet their needs. Why not use Washington State AQI. The standards are all over the place and not providing the greatest protection. Isn't that the ultimate goal?
My research on AGI levels in 2020, which was probably the worst in recent history, indicated only two counties exceeded 500. Clark County 1 day and Klickitat County 4 days.
Wondering how direct measurement of PM2.5 relates to the AQI since the AQI is a 24-hr average? Or are you effectively considering 55ug/m3 to be a defacto ceiling limit?
How does one determine whether one's engineering controls are taking the AQI less than 151 if you're using the airnow website? Will you be required to use your own PM2.5 monitor to verify?
Using WACA, PM2.5 is 135 ug/m3, half of the AQI level, so very high, but not wildly high.
AQI vs. WAQA – big difference between the two, depends on what L&I goes with.
Respiratory Protection Comments
If respirators are going to be required. They are in short supply now. If an employer is having trouble finding them, like we did in COVID?
I asked last meeting and DOSH stated that in 2021 KN95 may be acceptable.
Will this become a volunteer respirator program then, allowing the company not to need to have a full program at their sites?
I'd suggest that L&I allow KF94 masks in addition to KN95 this year. They're very solid masks, and they don't have the counterfeit problems that KN95s do.
So if we need to have employees wear a respirator per this ruling what happens when someone is unfit to wear one such as a medical condition, beard or other types of unfit conditions?
A medical condition should be vetted through your HR department as a work accommodation under ADA and perhaps alternative work assigned until the hazard no longer exists. Similarly a beard is probably a collaborative discussion with HR.
If KN95 respirators are allowed under required use will they have to be fit tested. It has been my experience that KN95s will not pass a fit test.
Required use – respiratory protection – Washington's current rule was not written for this type of rule. Employers will be forced to shutdown. Find a respiratory program that fits this situation, adopt California's rule.
How is the respirator effective then if you do not have a good fit?
So it's a rule, but its voluntary if employees want to use them?
Is "emergency" defined with regard to when respirator requirements apply?
We would stop operations rather than fit every employee with an N95, don't go overboard.
Something such as "temporary use of respirators" (1-5 consecutive days) in the case of >500 that does not require fit testing, med evaluations, etc. would promote safety without overly burdening employers.

2/3 employees would need to be fit tested. California's rule is doable, don't go over 500.
At City of Seattle many departments indicate that it would be an undue burden to comply with mandatory use of respirators, over 2000 employees.
Outdoor vs Indoor Comments
Is there a distinction for outdoor vs other and what would be an "outdoor" criteria?
For places like retail stores where doors aren't necessarily "kept closed" or "kept open" - some clarity from DOSH would be helpful.
Are buildings that open doors or windows for ventilation purposes expected to be treated the same as outdoor environments in terms of the exemption? How will DOSH interpret this circumstance?
It seems this would apply to nearly all manufacturing environments that aren't climate controlled/filtered. What would the implications be to ensure levels inside buildings, where air pockets/stagnation may occur, are within the limits set forth in this potential rule? Would employers require air sampling data? Would we go by local AQI readings?
All workers, not just outdoors. Thought this would only apply to outdoors – what is the intent?
Many employers close their buildings doors and windows when it's very cold or hot outside to save money on HVAC operation. That's a reasonable precaution when there's smoke out, too. Since it's preferable for work to go on at full exertion, and since smoke health impacts are well documented at daily averages >500-ug/m3, it's ideal to filter workspace air to protect employees. Studies show filtration of indoor air to be quite effective. In a closed room, HEPA (MERV-13) typically lowers PM2.5 concentration to about 50% of the outdoor level. MERV-13s aren't very expensive.
Based on feedback and answers provided related to indoor protection and work, I second John Ehrenreich's recommendation that the scope the slimmed down to specifically outdoor work, especially for the emergency rulemaking.
If having engineering controls (filtration) exempts and employer from this, why would you even the PM2.5 readings indoors?
I appreciate your guidance on indoor air filtration. Some industrial occupancy do not have a sophisticated filtering systems. Some have an in let air supply that is not conditioned at all. Installation of these types of filters is going to be very costly.
Exemptions
An exemption for telecom or others directly supporting firefighting efforts by providing communications relays/ work would help clear up some questions and concerns that have come up in CA before.
CA also exempts workers engaged in controlled burns or prescribed fire. We will need to have that here in WA as well.
I would like to add to the emergency exempt list to include things like EMTs responding for a life-saving event or law enforcement responding to an emergency. Also, someone earlier mentioned KF94's...the European-approved filtering face piece devices also fall into that category of effectiveness and low counterfeit rate, I believe.
Utility Work
I would like to see essential power line workers added to the exempt list as well.

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Other Comments
Are these meetings recorded, or can they be?
Perhaps you're not aware of this monitoring map? https://fire.airnow.gov/ The circles show the highest quality state monitors and the little squares are "purple air" monitors. Less accurate but they are put through an EPA approved QA/QC process before being posted. If the employer buys a purple monitor, it could potentially show up on the map.
Would vehicles include machinery?
There are only three ways to communicate when the employer has employees in the field: cell phone, satellite phone or two radios. You cannot count on cell phones in a wildfire situation as the fire only needs to burn the correct cable and cell towers will be isolated and not transmit - not even text messages. Satellite phones are expensive and have topographical issues. Two-way radios are also expensive. Do use hand held radios or vehicle mounted? What range will the radios have? An employer may also have to deploy repeaters to support the two-radios, which is another big expense. These repeaters could also be destroyed during a wildfire as they will need to be placed in the field. Does DOSH have a better method for communication with field employees?
If the science showed that WF exposure showed increased rates of certain cancers or other serious diseases that could be proven to be industrial injuries, isn't that a burden on the industrial insurance fund? As in, workers making claims, survivors making claims, and so forth? We accept certain hazards in order to maintain our economy, but we should be clear what we're doing and why.
USFS and NIOSH have conducted studies on complex mixture of wildfire smoke - in part dependent on fuels. We work close to forest-urban interface in the field in WA, OR and CA. Tracking movement via NWCC (or other with arcGIS maps) prior to deploying to field &/or proximity of fire front to fixed offices is really important. Many overlapping Venn diagrams here.