



November 6, 2023

Water and Air Quality Bureau
Safe Environments Directorate
Healthy Environments and Consumer Safety Branch
Health Canada

RE: Fine particulate matter (PM_{2.5}) exposure limits

We are writing on behalf of the Ontario Society of Professional Engineers (OSPE) to request a reconsideration of Health Canada's current stance on fine particulate matter (PM_{2.5}) exposure limits. We believe that the recent wildfires in Canada, which have led to devastating health consequences,^[1] necessitate a re-evaluation of the existing guidelines, with a stronger emphasis on enhanced filtration measures for buildings.

Health Canada's existing position focuses on indoor source control to minimize long-term exposure to PM_{2.5}. Because there is no level at which PM_{2.5} is safe, the current recommendation is set to keep levels as low as possible without an established exposure limit.^[2] However, we would like to draw attention to the fact that the absence of specific exposure limits can inadvertently lead to inaction rather than encouraging proactive measures to address air quality concerns. This is especially critical when PM_{2.5} levels are elevated due to severe outdoor air pollution such as wildfire smoke. In the absence of defined standards, there is no incentive for individuals, businesses, or institutions to take action to reduce indoor exposure to PM_{2.5}.

We propose that Health Canada's guidance should not solely concentrate on source control but also advocate for high-efficiency air filtration to reduce PM_{2.5} concentrations indoors. ASHRAE 62.1-2022-6.1.4.2 outlines the importance of using high-efficiency particle filters or air-cleaning devices in buildings located in areas where national PM_{2.5} standards (an annual mean of 12.0 µg/m³ for primary PM_{2.5} and a daily mean of 35 µg/m³ for primary and secondary PM_{2.5}) are exceeded.^[3,4] These filters or air cleaners must meet specific criteria, ensuring the effective removal of particulate matter. We believe that this standard should be more rigorously enforced to improve air quality in indoor environments.

Outdoor air pollution is a prominent contributor to premature deaths in Canada.^[5] However, it is a crisis that can be mitigated through the implementation of enhanced filtration measures. We propose that Health Canada consider adopting the World Health Organization's guidelines, which recommend a maximum average annual exposure of 5 µg/m³ and a maximum daily average exposure of 15 µg/m³.^[6,7] Such stringent guidelines necessitate the use of filters with at least a MERV-11 rating, if not higher, and will improve the preparedness and resilience of buildings to severe outdoor

pollution sources such as wildfire smoke and traffic pollution. It is one of the core recommendations of the OSPE to upgrade filters in air handling units to at least MERV-13.^[8]

In conclusion, we urge Health Canada to revisit its stance on fine particulate matter levels and consider implementing stricter filtration requirements, in line with international health guidelines and ASHRAE standards. By doing so, we can collectively take meaningful steps to protect the health and well-being of Canadians and mitigate the adverse effects of outdoor air pollution.

We appreciate your attention to this critical matter and are open to further discussions to ensure the successful implementation of these recommendations. Please do not hesitate to reach out to us at advocacy@ospe.on.ca for any additional information or clarifications.

Sincerely,



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Chair and President
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References

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