2023

AMWU Submission on a proposed workplace exposure standard for diesel particulate matter

Your details and background

(Please leave blank if you wish to remain anonymous)

1. Name or organisation

Australian Manufacturing Workers' Union

2. Email used to log into Engage

[redacted]

Questionnaire

If you are commenting on particular aspects of the expert report, please identify the particular sections or pages concerned. Your response should, where possible, provide evidence to support your statement.

1. Do you support the proposed workplace exposure standard (WES) for diesel particulate matter (DPM) to protect workers from the adverse health effects of exposure to diesel engine emissions (DEE)?

   ○ Yes

   ◉ No

2. What are your reasons for your response to Question 1? Please provide evidence or information to support your response.

   The proposed level of 15µg/M³ does not reflect international best practice let alone anything nearing a health-based standard. The Safe Work Australia Research Report, Workplace Exposure Standard for Diesel Particulate Matter, appears to contradict itself.
   In its recommendations (starting page 4) it states, "The literature supports the view that exposure to DPM should be low. This is important to minimise the development of ill effects". The recommendation then moves on to recommend, "An 8-hour TWA of 15 µg REC/m3 for DPM as respirable elemental carbon is recommended to be applied' based on a logic that, "This is the approximate midpoint of the derivations discussed in the results section".
   The criteria been applied to the reports recommendation, reflects some sort of compromise position (midpoint), the basis of which is not set out in the paper and the accommodation for any particular interest is unspecified. The AMWU contends that the criteria should be one that is informed by the science and the research (low) and have a sole objective being to protect the health of workers.

3. Is there an alternative WES to DPM as respirable elemental carbon, or additional WES that should be considered to protect workers from DEE? Please provide evidence or information to support your response.

   The AMWU supports as an introductory level a WES of 10µg/M³ reflecting the lower end of the spectrum of exposure standards as discussed in the results section of the research report

and allows for a progressive reduction of the WES to a health-based standard, something contemporary research[1] is now suggesting being 1µg/M^3. There is strong justification for this level given its adoption in other jurisdictions. The immediacy of this adoption is of equal importance, the current absence of a WES has led to workplaces not adopting controls to reduce the level of exposure to workers to the lowest level possible.

We note Carex Canada review in December 2019[2] stated, *the absence of an OEL is of particular concern because many occupational disease prevention practices rely on the 'benchmark' that an OEL provides*.

In Australia, DEE is the second most common carcinogen workers are exposed to, behind solar UV radiation exposure. Australia's failure to set a health-based WES following diesel engine exhaust being classified as carcinogenic to humans (Group 1) in 2012, has led to likely thousands of workers developing lung cancer.

CAREX Canada estimated in that report that approximately 897,000 Canadians are exposed to DEE in their workplace. The Occupational Cancer Research Centre in Ontario has used these estimates to calculate that approximately 560 lung cancers and 200 suspected bladder cancers can be attributed to occupational exposure to DEE each year in Canada.

Predating the Canadian report is one by Australian researchers titled Estimated prevalence of exposure to occupational carcinogens in Australia (2011-2012)[3] published in 2014, which estimated that 1,599,700 workers to be occupationally exposed to diesel engine exhaust. When extrapolating the numbers of lung and bladder cancers into an Australian context this research is suggestive of there being approximately 999 lung cancers and 357 suspected bladder cancers attributed to occupational exposure to DEE each year.

4. What changes would you need to make in your workplace (over and above any controls currently in place) to ensure workers and others at the workplace are not exposed to levels of DPM above the proposed WES?
    a. Please include in your response:
        i. a description of the control measures currently in place at your workplace(s) to minimise exposure of workers and others to DEE.
        ii. details of any costs to implement the WES for DPM (e.g., upgrade of ventilation systems in area X, costing approximately $XXX).

The AMWU notes the extensive regulatory and non-regulatory guidance[4] with regards to controls for DEE spanning decades, with a notable uptick in guidance since the IARC decision in 2012 to reclassify DEE a Group 1 carcinogen (carcinogenic to humans). Much of

[1] Vermeulen R, Portengen L. Occup Environ Med 2022;79:540–542. doi:10.1136/oemed-2021-107752
[2] Setting an Occupational Exposure Limit for Diesel Engine Exhaust in Canada: Challenges and Opportunities
[3] Carey RN, Driscoll TR, Peters S, Glass DC, Reid A, Benke G, Fritschi L. Estimated prevalence of exposure to occupational carcinogens in Australia (2011-2012). Occup Environ Med. 2014 Jan;71(1):55-62. doi: 10.1136/oemed-2013-101651. Epub 2013 Oct 24. PMID: 24158310.
[4] https://www.safeworkaustralia.gov.au/system/files/documents/1702/guidance-managing-risks-exposure-diesel-exhaust-in-the-workplace.pdf

this guidance if adopted, and adopting the hierarchy of controls, should provide for workers and others at the workplace not to be exposed to levels of DPM above the proposed WES.

It is fair to say that over a decade following the reclassification of diesel, PCBU's which have workplaces still posing a risk of exposing DEE to workers and has yet to incorporate suitable controls to reduce that risk to the lowest possible level, could be best described as indifferent with regards to their workers' and others in the workplace health.

~~Is there additional evidence or information that you think should be considered?~~

5. Are there any additional comments you would like to make?

The AMWU notes with concern that despite IARC reclassifying DEE as a Group 1 carcinogen in 2012 exposure to DEE is still widespread in areas of our coverage.
We have members involved in maintenance and service of vehicles including planes, trains, boats/ships, trucks, forklifts, cars and plant in workplaces often devoid of any controls to manage DEE. In some cases, diesel engines are left running for hours and in others diesel engines are loaded as part of diagnostic testing.
Within other workplaces there are still reports of DEE contamination when delivery trucks attend loading docks and leave their engines running or enter the envelope of the workplace. There are still workplaces which rely upon diesel compressors to provide backup power and high-pressure air (for pneumatic tools etc).

<u>Additional Recommendations</u>
Our members can't afford to wait any longer for a WES of 10µg/M³ for DEE.
Further to this we recommend,

- that SWA develop & adopt a program for the purpose of measuring the prevalence of DDE exposure in Australian workplaces,
- SWA commence a project to assist facilitate workers who have developed cancer as a result of their DEE workplace exposure access compensation. The failure by all jurisdiction to compensate nearly all workers whose health has been adversely affected by DEE feeds the current complacency which exists around this carcinogen, and
- there be a review of the current SWA guidance. The exposure of nearly 1.6 million workers annually to DEE necessitates the need for a Code of Practice to assist in driving compliance. As part of this we suggest the current guides suggestions for monitoring the effectiveness of controls requires a considerable rethink.
  If it is obvious there is a problem, for example when workers report adverse health effects including headaches, dizziness, nausea or irritation of the eyes, nose or throat, control measures must be reviewed immediately.
  Waiting for workers to show signs of illness is too late, other measurements for monitoring need to be determined and/or developed.

END