[redacted]

[redacted]

[redacted]

Q7. **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

Q8. **What are your reasons for your response to Question 1? Please provide evidence or information to support your response.**

Defence supports the introduction of a workplace exposure standard for Diesel Exhaust Particulate Matter. The associated research report provides good scientific evidence to validate the proposed WES value. Although, there are some situations, such as submarines and ships, where an 8-hour exposure limit is challenging to implement. Previously completed sampling in the workplace suggests that the proposed WES (eight-hour TWA of 15 µg REC/m3) for DPM to be achievable. In general, Defence has achieved worker exposure below the level of DPM currently recommended by the Australian Institute of Occupational Hygienists (100 µg EC/m3). However, RAN Submariners are routinely exposed to their environment 24-hours per day, seven days a week, for many days at a time. Whilst guidance for the adjustment of other WES is available, the guidance for a DPM WES does not accommodate these environmental parameters.

Q9. **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.**

No

Q10. **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? 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).**

Defence uses a variety of exposure mitigation measures, including; • open ventilation of work spaces with the majority of work conducted outdoors in open air, or in large hangars, • consideration of diesel engine plant parking/storage for start-up emissions, • regular maintenance and inspections of diesel engines, • rotation of workers utilising diesel engines, • removal of unnecessary personnel from the vicinity of a diesel engine when in use, and • Maximum Permissible Concentrations have been determined over specified durations with appropriate actions should those values be exceeded. Several additional exposure controls being considered or under consideration, include: • review of storage areas for diesel engine start-up, • exhaust gas/particulate extraction ventilation systems in enclosed environments, • electric vehicle purchase for warehouse use, • increased training to create more licenced workers of diesel engine plant to encourage job rotation, • an upgrade or inclusion of real-time monitoring equipment, • replacement of, or modification to, Defence's existing real-time monitoring equipment with the ability to measure Elemental Carbon (if/when such technology exists), and • adjustments or determination of a 24 h exposure value for DPM would also be required.

Q11. **Is there additional evidence or information that you think should be considered?**

The majority of diesel engine plant used across Defence cannot be replaced with electric vehicles due to their limitations in weight or lift capacity.

Q12. **Are there any additional comments you would like to make?**

It is suggested that there would be benefits of an awareness campaign that highlights easy exhaust emission exposure reduction strategies, and consideration of a 24 hour WES or guidance on an appropriate adjustment methodology for work that exceeds 8 hours per day and more than 5 days per week.

Q13. **Upload your submission here: (PDF,DOC or DOCX)** not answered