

WORK HEALTH AND SAFETY AMENDMENT (BLOOD LEAD LEVEL EXPOSURE VALUES) REGULATIONS 2025

EXPLANATORY STATEMENT

Issued by the authority of the Minister for Employment and Workplace Relations
under section 276 of the *Work Health and Safety Act 2011* (Cth)

PURPOSE AND OPERATION OF THE INSTRUMENT

The *Work Health and Safety Amendment (Blood Lead Level Exposure Values) Regulations 2025* (Amendment Regulations) amend the *Work Health and Safety Regulations 2011* (Cth) (Principal Regulations) to lower the blood lead level values provided for within Part 7.2 of the Principal Regulations.

The *Work Health and Safety Act 2011* (Cth) (the WHS Act) and the Principal Regulations provide the primary work health and safety (WHS) legislation for the Commonwealth jurisdiction and are based on model WHS laws (model laws) developed by Safe Work Australia (SWA) under the *Intergovernmental Agreement for Regulatory and Operational Reform in Occupational Health and Safety*. The model laws provide for a balanced and nationally consistent framework to secure the health and safety of workers and workplaces, in part by protecting workers and other persons against harm to their health, safety and welfare through the elimination or minimisation of risks arising from work. The model laws have been implemented in all jurisdictions across Australia, except for Victoria which has laws that are similar. Together with the states and territories, the Commonwealth regulates hazardous chemicals and lead process work through the Principal Regulations.

Blood lead levels are the concentration of lead in whole blood and are expressed in micromoles per litre ($\mu\text{mol/L}$) or micrograms per decilitre ($\mu\text{g/dL}$). Blood lead levels are used in the Principal Regulations to trigger additional WHS requirements, including biological monitoring of workers engaging in lead risk work, to be met by the person conducting a business or undertaking (PCBU). The Amendment Regulations lower the blood lead levels at which point the additional duties will apply. In particular, the Amendment Regulations reduce the blood lead levels:

- contained in the definition of ‘lead risk work’ in regulation 394,
- that determine the frequency that a PCBU must arrange for biological monitoring of workers who carry out ‘lead risk work’,
- that mandate a worker’s immediate removal from carrying out ‘lead risk work’, and
- that determine the threshold at which a PCBU may allow a worker to return to ‘lead risk work’.

These amendments give effect to a 2016 agreement between WHS Ministers to adopt lower regulatory blood lead levels which represent safer blood lead levels identified by current toxicological and epidemiological evidence and international standards. Reducing the blood

lead levels will result in a lower threshold for triggering the obligations on PCBUs and therefore decrease health risks to workers undertaking lead risk work.

Subsection 276(1) of the *Work Health and Safety Act 2011* (Cth) (the WHS Act) provides that the Governor-General may make regulations in relation to any matter relating to work health and safety (WHS) and any matter or thing required or permitted by the WHS Act to be prescribed or that is necessary or convenient to be prescribed to give effect to the WHS Act.

Sunsetting

The *Legislation (Exemptions and Other Matters) Regulation 2015* at regulation 12, item 68, provides that a regulation made under WHS Act is a legislative instrument that is not subject to sunsetting. The Amendment Regulations are a legislative instrument made under the WHS Act and is therefore exempt from sunsetting.

Commonwealth WHS regulations are exempt from sunsetting because they form part of an intergovernmental scheme for a nationally consistent framework to secure the health and safety of workers and workplaces. They are part of a system of nationally harmonised WHS laws.

Details of the Amendment Regulations are set out in Attachment A.

CONSULTATION

Section 17 of the *Legislation Act 2003* requires that any consultation considered to be appropriate, and that is reasonably practicable to undertake, has been undertaken before an instrument is made.

The blood lead level exposure values amendments are based on a model amendment developed by SWA, which were agreed to by WHS Ministers in December 2016. SWA is a tripartite body with representatives from the Australian Council of Trade Unions, Australian Chamber of Commerce and Industry, and the Australian Industry Group, as part of its membership. SWA conducted full public consultation and targeted stakeholder feedback regarding these amendments. The outcomes of that consultation are summarised in the *Decision Regulation Impact Statement – Managing risks associated with lead in the workplace: blood lead removal levels and workplace exposure standard*. State and territory regulators, relevant government agencies, industry and peak bodies were consulted in the development of this policy.

Comcare, the Commonwealth's WHS regulator, as well as a number of licensees under the WHS Act, were notified of the intention to implement SWA's model WHS changes in 2024. No concerns about the intention to adopt were raised.

The WHS Act specifies no conditions that need to be satisfied before the power to make the proposed Regulations may be exercised.

REGULATION IMPACT STATEMENT

The Office of Impact Analysis advised that an impact analysis is not required for the Amendment Regulations (Reference Numbers OIA24-08605). In 2016, SWA drafted the *Decision Regulation Impact Statement Managing risks associated with lead in the workplace: blood lead removal levels and workplace exposure standard*. This is available on SWA's website.

STATEMENT OF COMPATIBILITY WITH HUMAN RIGHTS

The Amendment Regulations are compatible with the human rights and freedoms recognised or declared in the international instruments listed in Part 3 of the *Human Rights (Parliamentary Scrutiny) Act 2011*. A Statement of Compatibility with Human Rights is set out at Attachment B.

NOTES ON SECTIONS

In these notes on sections, the following abbreviations are used

Abbreviation	Definition
Amendment Regulations	<i>Work Health and Safety Amendment (Blood Lead Level Exposure Values) Regulations 2025</i>
Model Amendments	Amendment (Blood Lead Removal Levels) 2018 – Model Provisions as published by Safe Work Australia
PCBU	person conducting a business or undertaking
Principal Regulations	<i>Work Health and Safety Regulations 2011 (Cth)</i>
SWA	Safe Work Australia
WHS	work health and safety
WHS Act	<i>Work Health and Safety Act 2011 (Cth)</i>

Section 1 – Name

1. This section provides that the title of the instrument is *Work Health and Safety Amendment (Blood Lead Level Exposure Values) Regulations 2025*.

Section 2 – Commencement

2. The table in this section sets out when the provisions of the instrument commence. The instrument commences on the day after it is registered on the Federal Register of Legislation.

Section 3 – Authority

3. This section provides that the instrument is made under the *Work Health and Safety Act 2011 (Cth)* (the WHS Act).

Section 4 – Schedules

4. This section provides that each instrument that is specified in a Schedule to the instrument is amended or repealed as set out in the applicable items in the Schedule concerned, and any other item in a Schedule to the instrument has effect according to its terms.

Schedule 1 – Amendments

Work Health and Safety Regulations 2011

Item 1 – Paragraph 394 (a)

Item 2 – Paragraph 394(b)

5. Regulation 394 defines ‘lead risk work’ as work carried out in a lead process that is likely to cause the blood lead level of a worker carrying out the work to exceed certain prescribed levels. This amending regulation would replace the blood lead levels expressed in paragraphs 394(a) and 394(b) with new, lower levels. These new values represent safer blood lead levels identified by current toxicological and epidemiological evidence. The general effect of this amendment is to lower the threshold at which PCBUs have additional duties toward workers undertaking ‘lead risk work’.

6. Item 1 removes “10µg/dL (0.48µmol/L)”, and substitutes it with “5µg/dL (0.24µmol/L)”. This amendment has the effect of lowering the blood lead level value for when work will be considered ‘lead risk work’ for a female of reproductive capacity to 5µg/dL (0.24µmol/L).
7. Item 2 removes “30µg/dL (1.45µmol/L)”, and substitutes it with “20µg/dL (0.97µmol/L)”. This amendment has the effect of lowering the blood lead level value for when work will be considered ‘lead risk work’ for any other worker, being a worker who is not a female of reproductive capacity, to 20µg/dL (0.97µmol/L).

Item 3 – Subparagraph 407(1)(a)(i)

Item 4 – Subparagraph 407(1)(a)(ii)

Item 5 – Subparagraph 407(1)(a)(iii)

Item 6 – Subparagraph 407(1)(b)(i)

Item 7 – Subparagraph 407(1)(b)(ii)

8. These items replace the blood lead levels expressed in subparagraphs 407(1)(a)(i), 407(1)(a)(ii), 407(1)(a)(iii), 407(1)(b)(i) and 407(1)(b)(ii) that determine the required frequency of biological monitoring of workers. A PCBU must arrange for biological monitoring of each worker who carries out lead risk work, to be carried out at certain times, depending on the blood lead levels identified at the last health monitoring. The effect of this amendment is to lower the threshold which activates a PCBU’s obligation to conduct biological monitoring at certain times.
9. Items 3, 4 and 5 have the effect of reducing the blood lead levels which require increasingly frequent biological monitoring for workers who are females not of reproductive capacity and males.
10. Item 3 removes “30µg/dL (1.45µmol/L)” and substitutes it with “10µg/dL (0.97µmol/L)”. The effect of this provision would be to require the PCBU to ensure that, for females not reproductive capacity and males, if the last monitoring showed a blood lead level of less than 10µg/dL (0.97µmol/L), the PCBU must arrange for biological monitoring 6 months after the last biological monitoring of the relevant worker.
11. Item 4 removes “30µg/dL (1.45µmol/L) or more but less than 40µg/dL (1.93µmol/L)” and substitutes it with “10µg/dL (0.48µmol/L) or more but less than 20µg/dL (0.97µmol/L)”. The effect of this provision would be to require the PCBU to ensure that, for females not of reproductive capacity and males, if the last monitoring showed a blood lead level of 10µg/dL (0.48µmol/L) or more but less than 20µg/dL (0.97µmol/L), the PCBU must arrange for biological monitoring 3 months after the last biological monitoring of the relevant worker.
12. Item 5 removes “40µg/dL (1.93µmol/L)” and substitutes it with “20µg/dL (0.97µmol/L)”. The effect of this provision would be to require the PCBU to ensure that, for females not of reproductive capacity and males, if the last monitoring showed a blood lead level of 20µg/dL (0.97µmol/L) or more, the PCBU must arrange for biological monitoring 6 weeks after the last biological monitoring of the relevant worker.
13. Items 6 and 7 have the effect of reducing the blood lead levels which require increasingly frequent biological monitoring for workers who are females of reproductive capacity.

14. Item 6 removes “10µg/dL (0.48µmol/L)” and substitutes it with “5µg/dL (0.24µmol/L)”. The effect of this provision would be to require the PCBU to ensure that, for females of reproductive capacity, if the last monitoring showed a blood lead level of less than 5µg/dL (0.24µmol/L), the PCBU must arrange for biological monitoring 3 months after the last biological monitoring of the relevant worker.
15. Item 7 removes “10µg/dL (0.48µmol/L) or more” and substitutes it with “5µg/dL (0.24µmol/L) or more but less than 10µg/dL (0.48µmol/L)”. The effect of this provision would be to require the PCBU to ensure that, for females of reproductive capacity, if the last monitoring showed a blood lead level of 5µg/dL (0.24µmol/L) or more but less than 10µg/dL (0.48µmol/L), the PCBU must arrange for biological monitoring 6 weeks after the last biological monitoring of the relevant worker.

Item 8 – Subparagraph 415(1)(a)(i)

Item 9 – Subparagraph 415(1)(a)(ii)

Item 10 – Subparagraph 415(1)(a)(iii)

16. Subregulation 415(1) places a duty on PCBUs engaged in lead risk work to immediately remove a worker from undertaking lead risk work if health monitoring reveals a worker’s blood lead level reading is equal to, or more than, the listed values in paragraph 415(1)(a).
17. Items 8 and 9 lower the threshold at which a PCBU must remove a worker from undertaking lead risk work.
18. Item 8 removes “50µg/dL (2.42µmol/L)” and substitutes it with “30µg/dL (1.45µmol/L)”. The blood lead level values prescribed in this subparagraph apply to workers who are females not of reproductive capacity and males. The effect of this provision would be to require the PCBU to immediately remove the worker from carrying out lead risk work if the blood monitoring indicates that the blood lead levels are 30µg/dL (1.45µmol/L) or higher.
19. Item 9 removes “20µg/dL (0.97µmol/L)” and substitutes it with “10µg/dL (0.48µmol/L)”. The blood lead level values prescribed in this subparagraph applies to female workers who are of reproductive capacity. The effect of this provision would be to require the PCBU to immediately remove the worker from carrying out lead risk work if the blood monitoring indicates that the blood lead levels are 10µg/dL (0.48µmol/L) or higher.
20. Item 10 repeals subparagraph 415(1)(a)(iii), which provided for the blood lead levels relating to pregnant or breastfeeding. The effect of this amendment is to cause the amended blood lead levels expressed in subparagraph 415(1)(a)(ii) to apply to females who are pregnant or breastfeeding. Pregnant and breastfeeding women will no longer be differentiated from females of reproductive capacity.

Item 11 – Subparagraph 417(3)(a)(i)

Item 12 – Subparagraph 417(3)(a)(ii)

21. Paragraph 417(3)(a) places a duty on PCBUs to ensure a worker who is removed from lead risk work under regulation 415 is not returned to undertaking lead risk work until their blood lead level reading is less than the listed values, with different values being provided for females of reproductive capacity and all other workers.
22. Items 11 and 12 amend paragraph 417(3)(a) to lower the threshold at which workers may return to carrying out lead risk work after being removed under regulation 415.

23. Item 11 removes “40µg/dL (1.93µmol/L)” and substitutes it with “20µg/dL (0.97µmol/L)”. The effect of this provision would be to require the PCBU to ensure females not of reproductive capacity and males are not returned to lead level work unless the worker’s blood lead level is less than 20µg/dL (0.97µmol/L).
24. Item 12 removes “10µg/dL (0.48µmol/L)” and substitutes it with “5µg/dL (0.24µmol/L)”. The effect of this provision would be to require the PCBU to ensure females of reproductive capacity are not returned to lead level work unless the worker’s blood lead level is less than 5µg/dL (0.24µmol/L).
25. The Principal Regulations provide that a registered medical practitioner with experience in health monitoring must also be satisfied that the worker is fit to return to carrying out lead risk work.

Statement of Compatibility with Human Rights

Prepared in accordance with Part 3 of the Human Rights (Parliamentary Scrutiny) Act 2011

Work Health and Safety Amendment (Blood Lead Level Exposure Values) Regulations 2025

This disallowable legislative instrument is compatible with human rights and freedoms recognised or declared in the international instruments listed in section 3 of the *Human Rights (Parliamentary Scrutiny) Act 2011*.

Overview of the Legislative Instrument

The purpose of the *Work Health and Safety Amendment (Blood Lead Level Exposure Values) Regulations 2025* (the Amendment Regulations) is to adopt lower regulatory threshold blood lead levels within Part 7.2 of the *Work Health and Safety Regulations 2011* (Cth) (the Principal Regulations).

The *Work Health and Safety Act 2011* (WHS Act) and the Principal Regulations provide the primary work health and safety (WHS) legislation for the Commonwealth jurisdiction and are based on model WHS laws developed by Safe Work Australia (SWA) under the *Intergovernmental Agreement for Regulatory and Operational Reform in Occupational Health and Safety*. The model laws provide for a balanced and nationally consistent framework to secure the health and safety of workers and workplaces, in part by protecting workers and other persons against harm to their health, safety and welfare through the elimination or minimisation of risks arising from work. The model laws have been implemented in all jurisdictions across Australia, except for Victoria which has laws that are similar. Together with the states and territories, the Commonwealth regulates hazardous chemicals and lead process work through the Principal Regulations.

Blood lead levels are the concentration of lead in whole blood and are expressed in micromoles per litre ($\mu\text{mol/L}$) or micrograms per decilitre ($\mu\text{g/dL}$). Blood lead levels are used in the Principal Regulations to trigger additional WHS requirements, including biological monitoring of workers engaging in lead risk work, to be met by a person conducting a business or undertaking (PCBU). The Amendment Regulations lower the blood lead levels at which point the additional duties will apply.

These amendments give effect to a 2016 agreement between WHS Ministers to adopt lower regulatory blood lead levels which represent safer blood lead levels identified by current toxicological and epidemiological evidence and international standards. Reducing the blood lead levels will result in a lower threshold for triggering the obligations on PCBUs and therefore decrease health risks to workers undertaking lead risk work.

Moving to lower blood lead level thresholds will allow Australia to stay up to date with the model WHS laws, other Australian jurisdictions and reflect international best practice.

Subsection 276(1) of the WHS Act provides that the Governor-General may make regulations in relation to any matter relating to WHS, and any matter or thing required or permitted by

the WHS Act to be prescribed or that is necessary or convenient to be prescribed to give effect to the WHS Act.

Human Rights Implications

This disallowable legislative instrument engages the following human rights:

- The right to the enjoyment of just and favourable conditions of work under Article 7 of the International Covenant on Economic Social and Cultural Rights (ICESCR).
- The right to the enjoyment of the highest attainable standard of physical and mental health under Article 12 of the ICESCR.

Right to enjoyment of just and favourable conditions of work

Article 7 of the ICESCR provides that everyone has the right to the ‘enjoyment of just and favourable conditions of work, which ensure, in particular...[s]afe and healthy working conditions’.

The content of the right to just and favourable conditions of work can be informed by specific obligations in treaties of the International Labour Organization, including, the *Occupational Safety and Health Convention 1981* (No. 155) which requires the adoption of a coherent national policy on occupational safety, occupational health and the working environment.

The prevention of occupational diseases is a fundamental aspect of the right to just and favourable conditions of work. Its realisation requires the adoption of a national policy for the prevention of work-related diseases and deaths by minimising hazards in the working environment and ensuring broad participation in its formulation, implementation and review, of workers and employers and their representative organisations.

Australia complies with its obligation under Article 7 of the ICESCR through the harmonised system of Commonwealth, state and territory WHS laws (including the Principal Regulations). At the Commonwealth level, this includes the WHS Act and the Principal Regulations. The WHS Act places duties on a range of entities that are designed to ensure safe and healthy working conditions.

The Amendment Regulations positively engage the right to enjoyment of just and favourable conditions of work by ensuring that workers in the Commonwealth jurisdiction who undertake lead risk work are not exposed to unacceptably high levels of lead, and where certain lead levels are exceeded, the workers are removed from the work. The Amendment Regulations will trigger existing WHS duties to apply at lower levels of exposure, increasing the likelihood of healthier outcomes. This approach helps to create safer working environments and reduce the risks associated with exposure to lead.

Right to the enjoyment of the highest attainable standard of physical and mental health

Article 12 of the ICESCR provides that everyone has the right to ‘the enjoyment of the highest attainable standard of physical and mental health.’ The right to physical and mental health expressed in Article 12 of the ICESCR is engaged by the Amendment Regulations as the United Nations Committee on Economic Social and Cultural Rights has stated that the right to health concerns safe and healthy working conditions. Where Article 12(2)(b) mentions ‘industrial hygiene’ this ‘refers to the minimisation, so far as is reasonably practicable, of the causes of health hazards inherent in the working environment’.

Article 12 of the ICESR is also engaged as promoting ‘industrial hygiene’ involves taking steps to protect the work environment by reducing workers’ exposure to substances that impact upon human health including where workplace exposure to lead results in people developing serious health conditions.

Workplace exposure to lead through ingestion or inhalation can have detrimental effects on the nervous system, increased blood pressure, heart rate variability, kidney dysfunction, changes in immune system markers, reduced sperm quality and haematological effects (Safe Work Australia, 2016). It can also increase the risk of detrimental intellectual development in unborn children, and increased risk of spontaneous abortion. Lead exposure during pregnancy can also cause reduced foetal growth and preterm birth (World Health Organisation, 2024). According to the World Health Organisation, lead also causes long-term harm in adults, including increased risk of high blood pressure, cardiovascular problems and kidney damage.

The Amendment Regulations positively engage the right to the enjoyment of the highest attainable standard of physical health by contributing towards ensuring workers are not exposed to unacceptable levels of lead when conducting lead risk work. The Amendment Regulations do so by lowering the regulatory threshold levels at which lead risk workers receive more frequent biological monitoring, when a worker must be removed from lead risk work, and when they may be returned to lead risk work. This helps to create safer working environments and is designed to reduce adverse health conditions associated with lead exposure.

Conclusion

This legislative instrument is compatible with human rights and promotes the right to safe and health working conditions.

References

Safe Work Australia (SWA) (2016) *Decision Regulation Impact Statement Managing risks associated with lead in the workplace: blood lead removal levels and workplace exposure standard*, SWA website, accessed 17 February 2025.

<https://www.safeworkaustralia.gov.au/sites/default/files/2021-11/decision-regulation-impact-statement-managing-risks-associated-with-lead-in-the-workplace.pdf>

World Health Organisation (WHO) (2024) *Fact sheet: Lead Poisoning*, WHO website, accessed 17 February 2025.

<https://www.who.int/news-room/fact-sheets/detail/lead-poisoning-and-health>