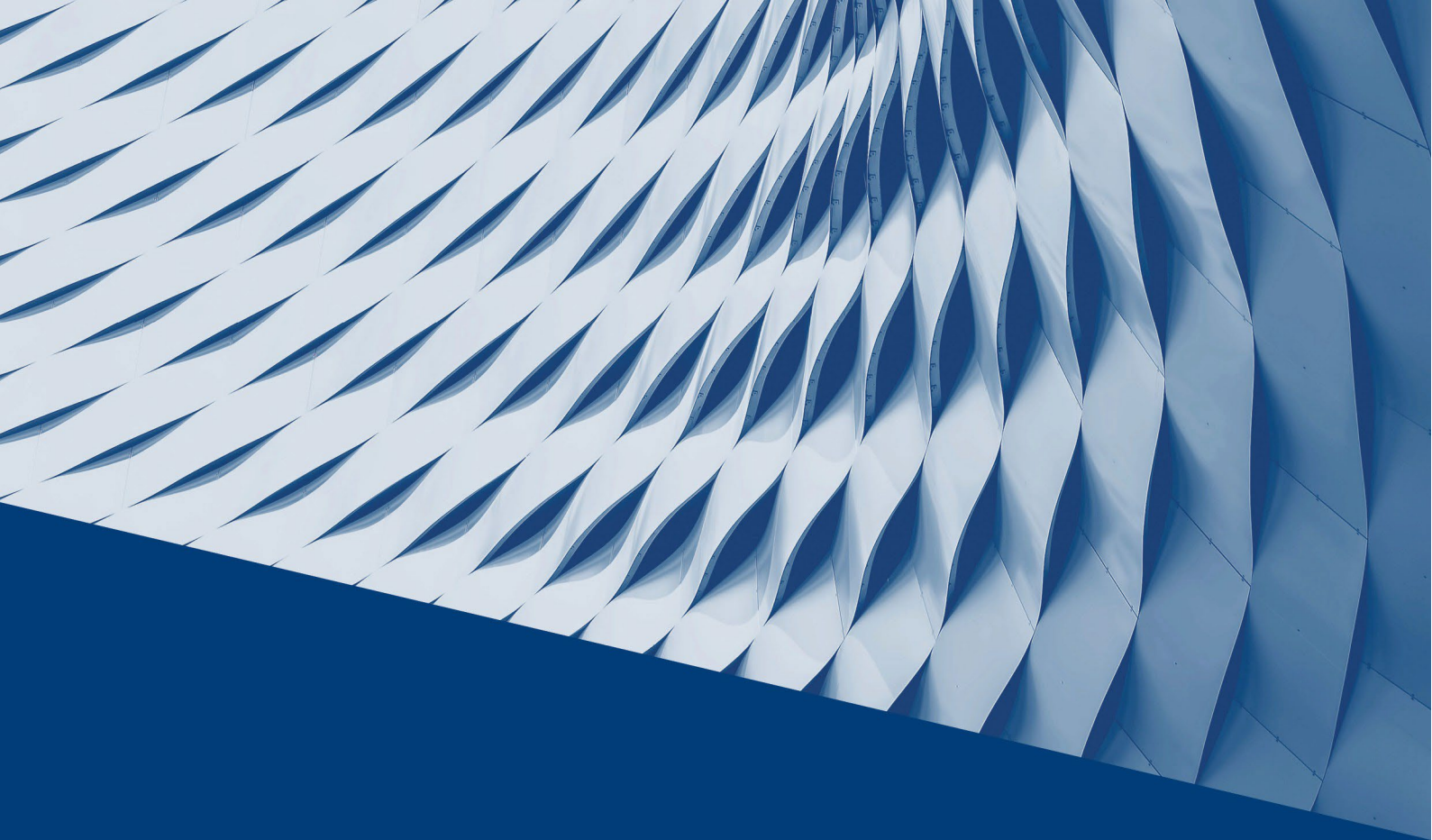




Protecting workers from exposure to lead

Response to the Safe Work Australia Consultation Paper -
September 2026

ACTU Submission, 7 Sept 2026
ACTU D. No 58/2026

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About the Australian Council of Trade Unions

The Australian Council of Trade Unions (ACTU) is Australia's sole peak body of trade unions, consisting of affiliated unions and state and regional trades and labour councils. There are currently 35 ACTU affiliates, which together have nearly 2 million members who are engaged across a broad spectrum of industries and occupations in the public and private sectors. As the collective voice of Australian workers, the ACTU plays a central role in shaping national policy and advocating for improved rights, conditions and protections at work.

The ACTU is committed to advancing work health and safety for all Australian workers through a rights-based, participatory approach. The ACTU has two member positions for Safe Work Australia, representing the interests of workers and ensuring that the voices and experiences of working people are central to national WHS policy and regulatory development.

The ACTU's strategy is focused on supporting unions to actively organise workers around healthy and safe work. This includes winning and embedding new health and safety rights at work and building the capacity of unions to use both new and existing rights to organise. By empowering unions and their members to take collective action, the ACTU seeks to ensure that work health and safety is not just a matter of compliance, but a fundamental right that is actively realised in every workplace.

The ACTU acknowledges the Traditional Owners of Country throughout Australia and recognises their continuing connection to land, waters and community. We pay our respects to Elders past and present. The ACTU's office in Melbourne is located on the lands of the Wurundjeri people of the Kulin Nation. We honour their custodianship and acknowledge that sovereignty was never ceded.

Issues and options

Safe Work Australia is seeking feedback on issues with Part 7.2 (Lead) of the model WHS Regulations (the Lead Regulations) and options to address these issues and improve the safety of workers undertaking work that may expose them to lead. The following questions are intended to guide feedback. When responding, please refer to the *Consultation paper: Protecting workers from exposure to lead* (the consultation paper) available on Consultation Hub for further information on the issues and options.

You only need to respond to the questions you wish to provide feedback on. You may include additional documents, such as supporting evidence, with your response.

Issue 1: Definition of lead process

There is uncertainty about whether activities being undertaken in workplaces meet the definition of lead process in Regulation 392. Additionally, concerns have been raised that some of the activities used to define lead process in Regulation 392 may be outdated, and some activities known to pose a high risk of exposure have not been included in the definition. See Section 3.1 of the consultation paper for further information on this issue.

Option 1(a): Broaden the definition of lead process

Under this option, the definition of lead process would be broadened to capture any activity which is likely to expose a worker to lead. This could be achieved by retaining a list of specific lead processes in Regulation 392, however making it clear this list is indicative, and including a 'catch all' process, such as '*a process that exposes, or is reasonably likely to expose, a person to lead*'.

Do you support or oppose Option 1(a)? Please select one of the options below.

☒ Support

☐ Oppose

☐ Unsure

Please explain your position and provide evidence to support your views where possible.

The ACTU supports Option 1(a), together with Option 1(c). Regulation 392 should retain an updated indicative list of lead processes, but the list must be illustrative rather than exhaustive and accompanied by a broad catch-all covering work that exposes, or is reasonably likely to expose, a worker to lead. Restrictive percentages, weights, temperatures and similar qualifications should be removed where they exclude work with a credible potential for occupational exposure. The definition should cover manufacturing, supplying, transporting,

storing, removing, using, installing, handling, treating, disposing of and disturbing lead, including non-routine maintenance, decommissioning and remediation work.

Decommissioning work at a South Australian power-generation workplace, that has been shared with Safe Work Australia previously, is an example of work associated with lead exposure that does not fit readily within the present prescriptive list. Public-sector roles supporting explosive ordnance and weapons trials further demonstrate the need to capture modern munitions and weapons-testing activities. Firearms and shooting ranges, lead-contaminated waste, transport and storage should also be expressly addressed.

What kind of impact would Option 1(a) have on you and/or your organisation? Please select one of the options below.

- ☐ Very positive impact
- ☒ Positive impact
- ☐ Neutral
- ☐ Negative impact
- ☐ Very negative impact
- ☐ Unsure

Please explain the impact, including considering anticipated changes in WHS outcomes, business costs and any other significant impacts. Please also include any feedback on potential implementation challenges associated with this option and provide evidence to support your views where possible.

Positive impact. A clearer and future-proof regulatory definition will reduce ambiguity for persons conducting a business or undertaking (PCBUs), workers, health and safety representatives (HSRs) and regulators. This will improve the identification of lead hazards before exposure occurs that will enable better controls, and support more consistent application and enforcement of the Lead Regulations. Retaining an indicative lists of tasks and processes will further ensure well known and potentially higher risk activities are clearly within the scope of Lead Regulations.

Option 1(b): Remove the definition of lead process

Under this option, the list of lead process outlined in Regulation 392 would be removed and the specific regulations to manage the risks to health and safety posed by exposure to lead in Part 7.2 of the model WHS Regulations would apply to any type of work activity which is likely to expose workers to lead.

Do you support or oppose Option 1(b)? Please select one of the options below.

- ☐ Support

☒ Oppose

☐ Unsure

Please explain your position and provide evidence to support your views where possible.

The ACTU opposes Option 1(b). Removing the list of lead processes entirely would sacrifice useful practical clarity and may create uncertainty about incidental or negligible contact with lead. The preferred approach is to retain an updated indicative list while adding a broad catch-all so that the regulations cannot be avoided merely because a particular task or emerging process is not expressly listed.

What kind of impact would Option 1(b) have on you and/or your organisation? Please select one of the options below.

☐ Very positive impact

☐ Positive impact

☐ Neutral

☒ Negative impact

☐ Very negative impact

☐ Unsure

Please explain the impact, including considering anticipated changes in WHS outcomes, business costs and any other significant impacts. Please also include any feedback on potential implementation challenges associated with this option and provide evidence to support your views where possible.

Negative impact relative to Option 1(a). A wholly open-ended formulation could reduce practical clarity for workers, PCBU's and regulators. Option 1(a) can achieve broad coverage while retaining concrete examples of the kinds of work to which the Lead Regulations apply.

Option 1(c): Develop supporting guidance

Under this option, the existing list of lead processes would be retained, however, guidance would be developed to assist with interpreting and implementing Regulation 392. The guidance would not introduce new regulatory options but would assist duty holders and regulators by outlining how to assess whether activities being undertaken at the workplace meet the definition of lead process. Safe Work Australia could also undertake national awareness initiatives to support this option.

Do you support or oppose Option 1(c)? Please select one of the options below.

☒ Support

☐ Oppose

☐ Unsure

Please explain your position, including whether you think guidance alone would be sufficient to address the identified issues.

The ACTU supports Option 1(c), but only as an adjunct to regulatory amendment. It is clear from recent examples in the South Australian power industry and from regulator feedback that there is ambiguity in the Lead Regulations that should be addressed to ensure that the regulations are legally enforceable. National guidance and a dedicated lead Code of Practice should contain practical examples, interpretation guidance and control measures. Guidance alone is not sufficient to address gaps in Regulation 392 or to ensure that new and emerging lead processes are legally captured.

What kind of impact would Option 1(c) have on you and/or your organisation? Please select one of the options below.

☐ Very positive impact

☒ Positive impact

☐ Neutral

☐ Negative impact

☐ Very negative impact

☐ Unsure

Please explain the impact of Option 1(c), including considering anticipated changes in WHS outcomes, business costs and any other significant impacts. Please also include any feedback on potential implementation challenges associated with this option and provide evidence to support your views where possible.

Positive impact. National guidance and a dedicated Code of Practice would improve consistency, awareness and practical implementation. The benefit will be greatest if the guidance accompanies, rather than substitutes for, a strengthened regulatory definition.

Issue 2: Definition of lead risk work

It can be challenging to determine the likelihood that a lead process would cause a worker's blood lead level to exceed the values prescribed in Regulation 394 and therefore be defined as lead risk work. Concerns have also been raised that appropriate health monitoring is not being provided to some workers who undertake lead risk work and the timeframe for follow-up testing may be too long. See Section 3.2 of the consultation paper for further information on the issue.

Option 2(a): Decrease the blood lead level which defines lead risk work

Under this option, the blood lead level used to define lead risk work for males and females not of reproductive capacity would be decreased from 20µg/dL to 10µg/dL. This reduction would help to ensure that the blood lead levels used to determine when health monitoring is required are sufficiently low enough that protective and preventative actions can be taken before a workers exceeds any thresholds requiring removal from work. The blood lead levels used to define lead risk work for females of reproductive capacity would not be reduced below 5µg/dL.

Do you support or oppose Option 2(a)? Please select one of the options below.

☐ Support

☒ Oppose

☐ Unsure

Please explain your position and provide evidence to support your views where possible.

The ACTU opposes Option 2(a) as the preferred reform because it would retain the predictive blood-lead threshold that determines whether health monitoring is required.

Requiring PCBU's to estimate or predict blood lead levels in relation to lead exposure is impractical and leads to an underestimation of the effects of lead exposure. This gateway leads to disputes between workers and PCBU's as to whether the tasks undertaken are likely to result in sufficient BLL increases to require health monitoring.

Regulators and unions have reported concerns at the low rates of health monitoring both in general and specifically in relation to Lead. The ACTU's preferred reform is Option 2(b), which would remove that gateway and require health monitoring for every worker undertaking lead work. However, reducing the current 20 µg/dL threshold to 10 µg/dL would still improve current arrangements. If Option 2(b) is not adopted, the reduction proposed under Option 2(a) should proceed as a minimum interim reform.

Do you support the proposed reduction from 20µg/dL to 10µg/dL or is there an alternative blood lead level which could be considered to determine if a lead process is lead risk work for females not of reproductive capacity and males?

☐ Support the proposed blood lead level

☒ Oppose the proposed blood lead level

☐ Support an alternative blood lead level

☐ Unsure

Please explain your position and provide evidence to support your views where possible.

The ACTU does not support retaining a predictive blood lead level as the gateway to health monitoring. Option 2(b) should remove the predictive threshold and require health monitoring for every worker undertaking lead work. The ACTU therefore does not nominate an alternative

threshold under Regulation 394. If Regulation 394 is retained, 10 µg/dL should be the maximum threshold for males and females not of reproductive capacity as an interim measure.

What kind of impact would Option 2(a) have on you and/or your organisation? Please select one of the options below.

- ☐ Very positive impact
- ☒ Positive impact
- ☐ Neutral
- ☐ Negative impact
- ☐ Very negative impact
- ☐ Unsure

Please explain the impact, including considering anticipated changes in WHS outcomes, business costs and any other significant impacts. Please also include any feedback on potential implementation challenges associated with this option and provide evidence to support your views where possible.

Positive impact relative to current arrangements only. Lowering the threshold would bring more workers into health monitoring earlier and reduce the risk that significant exposure is missed. This does not alter the ACTU's opposition to Option 2(a) as the preferred reform: it would remain less protective than Option 2(b), which would remove the predictive threshold entirely.

Option 2(b): Require health monitoring for all workers undertaking lead work

Under this option, the lead risk work category (Regulation 394) would be removed and PCBU's would be required to undertake health monitoring for all workers undertaking a lead process or work involving lead or lead compounds. This health monitoring should be required before the worker commences lead work, with a follow-up test a short time after commencing. This option acknowledges that any work with lead involves risk for workers which should be appropriately managed.

Do you support or oppose Option 2(b)? Please select one of the options below.

- ☒ Support
- ☐ Oppose
- ☐ Unsure

Please explain your position and provide evidence to support your views where possible.

The ACTU supports Option 2(b). Every worker undertaking lead work should receive health monitoring. Access to monitoring should not depend on a PCBU predicting whether a worker's blood lead level is likely to exceed a specified threshold. Monitoring should include a blood lead test before work begins, a follow-up no later than 30 days after commencement, and ongoing

biological monitoring at intervals no longer than 30 days. Blood lead has an average elimination half-life of approximately 30 days and therefore primarily reflects relatively recent exposure (National Research Council, 2013). Where lead work is identified only after commencement, monitoring should be provided immediately and repeated within 30 days.

CASE STUDY - Public-sector explosive ordnance and weapons trials

Workers in public-sector roles supporting explosive ordnance and weapons trials understand the hazards and controls associated with lead-risk work, the circumstances in which they may be removed, the availability of alternative duties and the process for returning once medically cleared. Baseline blood lead testing occurs before commencement; workers considered exposed receive annual blood lead testing regardless of differing levels of potential exposure; and broader heavy-metal screening occurs every two years. Results are communicated to workers. Surface testing and annual cleaning programs are undertaken, and occupational-hygiene specialists are engaged to assess and advise where the adequacy of controls or the extent of contamination is uncertain. This demonstrates that structured baseline and ongoing monitoring is practicable.

CASE STUDY - Lead mining and smelting

A major Australian lead mining and smelting operator requires workers to participate in lead biological monitoring, including pre-employment blood lead testing. Its use of 35-day testing for specified higher-risk circumstances demonstrates that intensive biological monitoring is operationally practicable in a major lead operation.

Could consideration be given to removing the requirement to undertake health monitoring for a worker undertaking lead work under Option 2(b) where PCBU's can provide evidence indicating that the worker's blood lead level is not likely to reach the removal level?

☐ Yes

☒ No

☐ Unsure

Please explain your position and outline what this evidence could include. E.g. advice from a registered health practitioner or past health monitoring results of workers undertaking the same process with the same or similar controls in place.

No. Allowing a PCBU to remove health monitoring because it predicts that a worker is unlikely to reach the removal level would recreate the current problem. Biological monitoring is necessary to determine whether exposure is occurring and whether controls are effective. Baseline and ongoing monitoring should not be displaced by assumptions about PPE, engineering controls, past results for other workers or advice that does not include the worker's own biological monitoring results.

What kind of impact would Option 2(b) have on you and/or your organisation? Please select one of the options below.

- ☐ Very positive impact
- ☒ Positive impact
- ☐ Neutral
- ☐ Negative impact
- ☐ Very negative impact
- ☐ Unsure

Please explain the impact, including considering anticipated changes in WHS outcomes, business costs and any other significant impacts. Please also include any feedback on potential implementation challenges associated with this option and provide evidence to support your views where possible.

Positive impact. Baseline and ongoing monitoring will identify exposure sooner and enable controls to be reviewed before workers reach removal levels. Monitoring arrangements in public-sector roles supporting explosive ordnance and weapons trials, including pre-commencement baseline blood lead testing, annual blood lead testing, biennial heavy-metal screening, surface testing and annual cleaning programs, together with biological monitoring used by a major Australian lead mining and smelting operator, demonstrate that structured monitoring can be incorporated into routine workplace health and safety management. The ACTU's separate proposal for a 30-day maximum interval is intended to prevent significant exposure peaks being missed between tests.

Option 2(c): Develop supporting guidance

Under this option, the existing definition of lead risk work would be retained in the Lead Regulations, however, guidance would be developed to assist with interpreting and implementing Regulation 394. The guidance would not introduce new regulatory obligations but would assist duty holders and regulators by outlining how to assess whether work activities are likely to cause the blood lead level of a worker to exceed the values prescribed in Regulation 394. Safe Work Australia could also undertake national awareness initiatives to support this option.

Do you support or oppose Option 2(c)? Please select one of the options below.

- ☒ Support
- ☐ Oppose
- ☐ Unsure

Please explain your position, including whether you think guidance alone would be sufficient to address the identified issues.

The ACTU supports Option 2(c) as supplementary to regulatory reform. Guidance should explain when baseline and follow-up monitoring is required, monitoring frequency, communication of results, the role of occupational-hygiene evidence, removal and medically cleared return-to-work procedures, and the competence required of medical practitioners. Guidance should support, not replace, mandatory monitoring for workers undertaking lead work.

What kind of impact would Option 2(c) have on you and/or your organisation? Please select one of the options below.

- ☐ Very positive impact
- ☒ Positive impact
- ☐ Neutral
- ☐ Negative impact
- ☐ Very negative impact
- ☐ Unsure

Please explain the impact, including considering anticipated changes in WHS outcomes, business costs and any other significant impacts. Please also include any feedback on potential implementation challenges associated with this option and provide evidence to support your views where possible.

Positive impact. Clear national guidance would improve consistency and assist PCBU's, workers and HSRs, particularly in workplaces where lead work is intermittent or not the core business. It should support, not replace, stronger regulatory duties.

Issue 3: Blood lead levels which trigger action

The blood lead levels used to trigger action are not based on current evidence and may be too high. This may be resulting in action not being taken to protect workers before exposure occurs at potentially harmful levels. PCBU's may also not be adequately monitoring the blood lead levels of workers at frequent enough intervals. See section 3.3 of the consultation paper for further information on this issue.

Option 3(a): Decrease the blood lead levels which trigger action

Under this option, the blood lead levels which trigger action would be reduced to ensure workers are monitored more frequently so exposure is identified early, and control measures can be implemented to manage risk. It would also ensure workers are removed from lead risk work before possible harmful health effects. Possible changes to the blood lead levels which trigger action are highlighted in Table 2 of the consultation paper.

Do you support or oppose Option 3(a)? Please select one of the options below.

☒ Support

☐ Oppose

☐ Unsure

Please explain your position and provide evidence to support your views where possible.

The ACTU supports Option 3(a) in combination with Option 3(b).

As the consultation paper outlines, the World Health Organisation states that there is no level of exposure to lead known to be without harmful effects. The current action level that requires a review of controls along with the removal and return-to-work levels are too high with workers potentially remaining exposed to levels that cause serious harm to health (NHMRC 2015).

A mandatory removal threshold must remain, and the grounds for removal on medical advice or following an apparent failure of controls must also be preserved. Removal and return-to-work thresholds should be materially more protective than the current levels and protect against harm to health. Noting the challenges outlined below in relation to certain high-risk sectors all workers, other than those engaged in lead mining, smelting and refining, these lower levels should apply equally to all workers and that ensure broader protections as opposed to employment discrimination that continues to exclude women from work (Table 1).

For workers engaged in lead mining, smelting and refining, interim action, removal and return levels should be implemented immediately in line with the Safe Work Australia proposal, including different levels by sex and reproductive capacity (Table 2).

These levels should be the subject of a targeted consultation with unions and employers to determine the most protective levels that can be reached below those proposed and a timeline to transition.

Do you support the proposed levels outlined in Table 2 in the consultation paper which trigger action or are there alternative blood lead levels which could be considered?

☐ Support the proposed blood lead levels

☐ Oppose the proposed blood lead levels

☒ Support alternative blood lead levels

☐ Unsure

Please explain your position and provide evidence to support your views where possible.

The ACTU supports an alternative framework to Table 2 in the consultation paper. Two schemes are proposed. Biological monitoring should occur at intervals no longer than 30 days, regardless of the worker's current blood lead level.

Table 1 – All workers other than those engaged in lead mining, smelting and refining

Health based levels

Trigger	ACTU proposed level (all workers other than lead mining, smelting and refining)	Required response
Action level	5 µg/dL or more	Investigate the source; consult affected workers and HSRs; review and improve controls; and increase monitoring where necessary.
Removal from lead work	10 µg/dL or more	Remove the worker from lead work. Removal must also occur on medical advice or after an apparent control failure where the worker is likely to reach the removal level.
Return to lead work	Below 7.5 µg/dL	Return only after medical clearance. A removed worker must suffer no adverse effect to pay, status or conditions.

Table 1 is health-based. The NHMRC *Information Paper: Evidence on the Effects of Lead on Human Health* (2015) finds that blood lead levels greater than 10 µg/dL can have harmful effects on many organs and bodily functions, and that a level greater than 5 µg/dL should prompt investigation and reduction of the source of exposure. The same paper, together with the WHO position recorded in the consultation paper and the US EPA and NTP assessments cited there, associates lead with adverse neurological, cardiovascular, renal, reproductive and gastrointestinal effects. Those findings support an action level of 5 µg/dL, removal at 10 µg/dL and return below 7.5 µg/dL for workers outside lead mining, smelting and refining.

Table 2 — Workers engaged in lead mining, smelting and refining

For workers in lead mining, smelting and refining, the ACTU supports the Safe Work Australia proposal for action, removal and return, including different levels by sex and reproductive capacity.

Trigger	Females of reproductive capacity	All other workers
Action Level	5 µg/dL or more	10 µg/dL or more
Removal from lead work	7.5 µg/dL or more	15 µg/dL or more
Return to lead work	Below 5 µg/dL	Below 10 µg/dL

Return remains subject to medical clearance. A removed worker must suffer no adverse effect to pay, status or conditions.

The proposed trigger levels must be lowered

As the consultation paper outlines, the World Health Organisation states that there is no level of

exposure to lead known to be without harmful effects and that the current monitoring, removal and return-to-work levels are too high.

The National Health and Medical Research Council (2015) notes that it is well established that blood levels greater than 10 µg/dL can have harmful effects on many body organs and functions. This includes increased blood pressure, abnormal kidney function and long-term kidney damage as well as serious neurological issues.

Action Level

Action levels are critical points for reviewing controls. The NHMRC (2015) notes that background lead levels in Australia are estimated to be less than 5 µg/dL. Noting individual differences, which would be revealed in baseline monitoring, establishing an action level of 5 µg/dL is a level which is most likely indicative of occupational exposure if exceeded. A rise above this trigger point is indicative of a failure to control exposure and warrants an immediate investigation and review of controls.

Removal and return Levels.

The ACTU believes that the proposed levels outlined in the consultation paper are neither health-based nor sufficiently protective and should be further reduced. The current and proposed approaches are inconsistent with the primary duty to ensure health so far as is reasonably practicable. The health end-points outlined above should be considered serious and require PCBUs to take strong action to protect against and specifically when considering the removal of workers from, and subsequent return of workers to, lead risk work.

Accordingly the ACTU believes that the removal level should be revised down to 10 µg/dL in order to protect against these serious health effects and to establish a return level of 7.5 µg/dL.

Sex-differentiated approaches

Provisions establishing restrictions on women's work have been features of lead risk control for more than a century. These provisions have led to a focus on employment discrimination in favour of generally applicable protective measures.

It is acknowledged that lead is a reproductive toxin that affects women and pregnancy and that these risks have driven the sex-differentiated approaches to lead exposure. However, it should also be acknowledged that lead exposure affects male reproductive capacity including through reduced sperm count, semen quality along with reducing libido.

Sex and gender-differentiated risks are not unique to lead exposure. There are range of hazards that present risks that disproportionately affect different sexes and in particular pregnant and breastfeeding workers such as ionizing radiation, manual handling and occupational violence. These risks, like lead exposure, should be managed through comprehensive maternity standards where workers are empowered to seek work adjustments to address these risks rather than

blanket exclusions from work.

As part of its consolidation of instruments on chemical hazards scheduled for the 15th session of the ILC in 2027 the ILO has identified strong support from member states (ILO 2025) for ending employment discrimination that is a feature of its instruments relating to lead. The ACTU along with other unions have advocated for the removal of these provisions from the relevant instruments.

Relevantly, Australia has some of the most gender segregated labour markets in the OECD with just 21% of occupations considered 'gender balanced' (JSA 2025). The current and proposed sex-differentiated approaches will continue to have the effect of employment discrimination in lead exposed industries and perpetuate gender segregation.

The ACTU believes that Australia's lead regulations should be protective for all workers and, other than in facilitating a transition to lower levels in key industries as outlined below, not establish different levels for removal and return to work. Instead, we should establish comprehensive maternity protections that enable workers who are trying to conceive, pregnant or breastfeeding to adjust working conditions to eliminate these risks.

These approaches not only permit men to be exposed to lead at levels that present both reproductive health risks along with the well-established risk to key organs and bodily functions but will deny employment opportunities to women.

Interim trigger levels for mining, smelting and refining

The ACTU acknowledges the unique nature of lead mining, smelting and refining workplaces and the environmental contamination that persists in these communities. These challenges mean that the action, removal and return blood lead levels proposed in Table 1, at least in the short term, may not be feasible.

Despite this, unions report that many of the lead management policies at the major lead mines, smelters and refineries set removal and return blood lead levels lower than the current regulations and in some cases lower than those proposed in the consultation paper. Given these challenges the ACTU believes that these industries can and should, as an interim measure, move to the proposed Safe Work Australia levels outlined in Table 2 and that Safe Work Australia undertake further targeted consultation with unions and employers to determine an achievable pathway to the more protective levels. This process would allow for a more thorough consideration of the unique challenges faced in these workplaces and communities in achieving more protective standards.

What kind of impact would Option 3(a) have on you and/or your organisation? Please select one of the options below.

☐ Very positive impact

☒ Positive impact

☐ Neutral

☐ Negative impact

☐ Very negative impact

☐ Unsure

Please explain the impact, including considering anticipated changes in WHS outcomes, business costs and any other significant impacts. Please also include any feedback on potential implementation challenges associated with this option and provide evidence to support your views where possible.

Positive impact. Lower thresholds will require earlier intervention, stronger exposure controls and earlier removal where controls fail, reducing the period in which workers remain exposed at elevated blood lead levels. A major Australian lead mining and smelting operator already applies internal removal levels below the current model regulatory levels and requires medical clearance before return, demonstrating that stronger internal requirements are operationally practicable. Workers should retain pay, status and access to suitable duties during removal and return only after medical clearance.

Option 3(b): Set an action level

Under this option, an “action level” would be set to ensure steps are taken to protect workers before exposure occurs at levels which are harmful. PCBUs could be required to investigate and take steps to reduce the worker’s blood lead level if monitoring of the worker shows that their blood lead level is, or is more than:

- 5µg/dL for females of reproductive capacity, and
- 10µg/dL for all other workers.

If a worker’s blood lead level is recorded above the action level, but below the removal level, PCBUs would be required to review control measures and take steps to reduce future exposure to lead, such as implementing additional control measures.

Do you support or oppose Option 3(b)? Please select one of the options below.

☒ Support

☐ Oppose

☐ Unsure

Please explain your position and provide evidence to support your views where possible.

The ACTU supports Option 3(b), implemented together with Option 3(a). As outlined above a prescribed action level is necessary so that investigation and control review occur before a worker reaches the removal level. For workers other than those engaged in lead mining, smelting

and refining, the action level should be 5 µg/dL for every worker at or above that level, the PCBU should be required to investigate the source, consult affected workers and HSRs, review and improve controls, increase monitoring where necessary and take steps to reduce exposure. A major Australian lead mining and smelting operator already uses formal lead-management action levels linked to control reinforcement and more frequent testing, demonstrating that an action-level mechanism is practicable. A national regulatory requirement is necessary to ensure preventive action occurs consistently.

Do you support the proposed blood lead levels outlined above for the action level or could alternative blood lead levels be considered? Please select one of the options below.

- ☐ Support the proposed blood lead levels
- ☐ Oppose the proposed blood lead levels
- ☒ Support alternative blood lead levels
- ☐ Unsure

Please explain your position and provide evidence to support your views where possible.

The ACTU supports an alternative action level of 5 µg/dL for every worker other than those engaged in lead mining, smelting and refining. The proposed 10 µg/dL action level for other workers is too high and would delay investigation and control review. Outside mining, smelting and refining, a single action level is more protective and avoids gender-differentiated arrangements that create privacy, discrimination and exclusion risks.

What kind of impact would Option 3(b) have on you and/or your organisation? Please select one of the options below.

- ☐ Very positive impact
- ☒ Positive impact
- ☐ Neutral
- ☐ Negative impact
- ☐ Very negative impact
- ☐ Unsure

Please explain the impact, including considering anticipated changes in WHS outcomes, business costs and any other significant impacts. Please also include any feedback on potential implementation challenges associated with this option and provide evidence to support your views where possible.

Positive impact. A mandatory early-action trigger would require investigation and review of controls before a worker reaches the removal level, supporting earlier intervention to prevent further exposure.

Option 3(c): Develop supporting guidance to assist PCBUs to proactively manage the risks of lead exposure

Under this option, the existing blood lead levels which trigger action would be retained, however, guidance would be developed to assist with interpreting and implementing the Lead Regulations, including explaining that workers undertaking lead risk work must be appropriately monitored and when they must be removed. The guidance would also emphasise the pivotal role of control measures in eliminating or minimising the risks of lead exposure. Safe Work Australia could also undertake national awareness initiatives to support this option.

Do you support or oppose Option 3(c)? Please select one of the options below.

☒ Support

☐ Oppose

☐ Unsure

Please explain your position, including whether you think guidance alone would be sufficient to address the identified issues.

The ACTU supports Option 3(c), but not as an alternative to lower regulatory thresholds. Guidance should explain the relationship between action, removal and return-to-work levels, monitoring frequency, control review, medical supervision and worker consultation. It should also address reproductive health without creating discriminatory or exclusionary employment practices.

What kind of impact would Option 3(c) have on you and/or your organisation? Please select one of the options below.

☐ Very positive impact

☒ Positive impact

☐ Neutral

☐ Negative impact

☐ Very negative impact

☐ Unsure

Please explain the impact, including considering anticipated changes in WHS outcomes, business costs and any other significant impacts. Please also include any feedback on potential implementation challenges associated with this option and provide evidence to support your views where possible.

Positive impact. Supporting guidance would improve consistent implementation of revised thresholds and assist PCBUs and workers to understand when preventive action, removal and

return are required. Guidance alone would not address the inadequacy of the current regulatory levels.

Additional issues, options and data

Safe Work Australia is interested in hearing from stakeholders if there are additional issues with the Lead Regulations which should be explored and addressed at the national level, or if there are any additional options which could be considered.

Safe Work Australia also welcomes additional data from stakeholders which can assist to quantify occupational exposures to lead in Australia and the harmful health effects this may be causing.

Are there additional issues with the Lead Regulations which should be explored and addressed at the national level? Please select one of the options below.

☒ Yes

☐ No

Please include further detail and provide any relevant evidence, if available.

Yes. The ACTU identifies the following additional issues that should be addressed nationally:

- Consequential protections under Option 2(b). Removing the 'lead risk work' category must not remove or weaken the existing notification, monitoring, reporting, medical-removal, examination, return-to-work, cost-payment, consultation, recordkeeping or confidentiality duties that attach to lead-risk work. Those protections should apply to the broader category of lead work.
- Identification and timing. The interaction between Regulations 403 and 405 can result in health monitoring commencing only after lead-risk work is identified in circumstances where work has already begun. Baseline monitoring must occur before planned lead work, and late identification must trigger immediate monitoring rather than operate as permission to defer it.
- Public-sector maritime operations case study. Workers in a Commonwealth maritime operations unit were affected by the 2017 detection of elevated lead levels in potable-water systems aboard patrol vessels. Worker testing occurred after the contamination was identified. The incident supports prevention through baseline testing, routine monitoring, early intervention and prompt communication with affected workers. See ABC News, 1 December 2017.
- Containment, cleaning and clearance. Regulations 396-397 do not provide a sufficiently prescriptive contamination, cleaning and clearance regime for lead-contaminated areas.

- Lead-specific medical competence. Health monitoring should be undertaken or supervised by a registered medical practitioner specifically competent and experienced in lead health monitoring. General occupational-health experience alone is insufficient.
- Privacy, discrimination and exclusion. Gender-differentiated thresholds and reproductive-capacity classifications create direct employment, privacy, discrimination and exclusion risks. At one major Australian lead mining and smelting operation, the employer's lead-management policy excludes pregnant and breastfeeding women from lead-risk jobs and prevents women of reproductive capacity from working full time in operational lead-smelter roles outside office areas. A woman seeking classification as not of reproductive capacity must provide medical documentation to the employer's human resources and occupational hygiene functions. These arrangements create pressure to disclose sensitive reproductive information or risk exclusion from lead work. Outside lead mining, smelting and refining, a single equally protective threshold should apply (Table 1). Gender-differentiated removal and return levels for mining, smelting and refining are set out in Table 2.
- Lead identification and management. Lead may be present in workplace materials and locations without being readily apparent, particularly during maintenance, demolition, decommissioning and remediation work. The regulations should therefore establish a systematic identification and management framework for lead, drawing on the asbestos management requirements in Chapter 8 of the model WHS Regulations. This should include identification by a competent person, presumptive treatment where a material's lead status cannot be established, a lead register, labelling of affected locations, and a lead management plan accessible to workers and HSRs.
- Lead-specific controls. The regulations should prescribe lead-specific requirements for respiratory protective equipment (RPE), fit testing, protective clothing, clean-in/clean-out arrangements, laundering, worker and equipment decontamination, cleaning and disposal. A major Australian lead mining and smelting operator already applies documented risk assessments, lead-management plans, fit testing, clean-in/clean-out systems, company laundering, decontamination and detailed cleaning requirements, demonstrating that these controls are practicable.
- Harmonisation. The general work health and safety (WHS) Regulations, the Queensland mining framework and Northern Territory requirements should be harmonised at the most protective level so workers receive equivalent protection across jurisdictions.

Are there any additional non-regulatory and/or regulatory options that could be considered?
Please select one of the options below.

☒ Yes

☐ No

Please include further detail.

Yes. The ACTU proposes the following additional regulatory and non-regulatory measures:

- Worker information and training. Regulation 395 should require a standardised, authoritative education package on lead's health risks and toxic effects before lead work begins, together with task- and workplace-specific information identifying where lead is present, how exposure will be eliminated or minimised, the applicable controls, monitoring arrangements and how workers can access the lead-management plan, Code of Practice and guidance.
- Dedicated Code of Practice. A national lead Code of Practice should accompany the regulatory amendments and provide practical guidance on identification, controls, health monitoring, worker consultation and remediation.
- Contamination and remediation standard. Regulations 396-397 should require appropriate surface-wipe sampling, analysis by a laboratory accredited by the National Association of Testing Authorities (NATA), cleaning and repeat testing. A lead-process area should not return to ordinary use until testing confirms that the prescribed clearance level has been achieved.
- Advance notification. Written notification should be given to the regulator at least seven days before planned lead work begins, rather than after work has been determined to be lead-risk work, so the regulator has an opportunity to inspect or intervene before exposure occurs.
- Medical supervision. Health monitoring should be undertaken or supervised by a registered medical practitioner specifically competent and experienced in lead health monitoring.
- Lead-specific controls. The regulations should prescribe appropriate respirator classifications, fit testing, protective clothing, worker decontamination, safe removal and bagging of contaminated clothing and PPE, company-controlled laundering where required, and safe storage or disposal.
- Lead register and management plan. A competent person should identify lead at the workplace; material should be presumed to contain lead where its status cannot be established; samples should be analysed where necessary; and the presence and location of lead should be recorded, labelled, regularly reviewed and made accessible to workers and HSRs through a workplace lead register and lead-management plan.
- Preservation of existing protections. Consequential amendments arising from Option 2(b) should apply the substance of Regulations 403-418 to lead work, including notification and access to notices, employer-funded health monitoring, the existing health-monitoring report duties, removal on numerical and non-numerical grounds, medical examination, medically cleared return and confidential records retained for the prescribed period.

- Monitoring frequency and action. Biological monitoring should occur at intervals no longer than 30 days for workers undertaking lead work, regardless of the current blood lead level. Lead has an approximate 30-day half-life in blood, and longer intervals can record a result only after an exposure peak has begun to decline. Monitoring must trigger investigation and control improvement; it must not merely record continuing exposure.
- National occupational lead surveillance. The lack of comprehensive national occupational lead exposure data is itself a regulatory weakness. Jurisdictional regulators receive notifications relating to lead-risk work and worker removal, public health authorities may receive notifications of elevated blood lead levels, and PCBU's hold biological monitoring data. Safe Work Australia should establish a national de-identified surveillance framework bringing these data together by industry, occupation, jurisdiction and exposure source. This is particularly important in jurisdictions such as the Northern Territory, where lead mining and processing occurs alongside Defence, construction, maintenance, firearms and remote-work activities, but the actual prevalence of occupational exposure is difficult for workers, HSRs and unions to assess. Safe Work Australia should also obtain de-identified data from NT WorkSafe on lead-risk-work notifications and removals, and from NT Health on elevated blood-lead notifications where occupation or probable exposure source can be identified.
- Remote and regional access to monitoring. Universal health monitoring will only provide equal protection if workers can actually access testing and medical supervision. In remote and regional locations, including the Northern Territory, workers may be hundreds of kilometres from occupational physicians and pathology services. All costs associated with required monitoring should be borne by the PCBU, including reasonable travel, accommodation and paid work time where monitoring cannot be accessed locally. This should be stated in the regulations and the Code of Practice, and is particularly relevant if biological monitoring is required at intervals no longer than 30 days.
- HSR access to exposure information. Lead registers and lead-management plans should be accessible to workers and HSRs. HSRs should also have access to relevant de-identified biological monitoring trends, air-monitoring results, surface testing and occupational hygiene reports for their work group. Workers and HSRs should not have to wait until a worker records an elevated blood lead level before they are given evidence that controls may be failing. This is consistent with the duty to consult HSRs on health and safety matters.
- Take-home contamination. Controls must prevent workers carrying lead home on clothing, footwear, equipment or vehicles, including where they travel between industrial or remote worksites and their homes or communities. Clean-in/clean-out systems, employer-controlled laundering, decontamination and management of contaminated PPE should expressly have prevention of secondary or take-home exposure as an objective.

Do you have any additional data which can assist to quantify occupational exposure to lead in Australia and/or the harmful effects this may be causing? Please select one of the options below.

☐ Yes

☒ No

Please include further detail.

No quantitative exposure or health-effect dataset is provided with this submission. The qualitative case studies and operational evidence relied upon are set out in the responses above.

Supporting documentation

Have you provided additional documentation with your submission? e.g. supporting evidence or data. Please select one of the options below.

☐ Yes

☒ No

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