Department of **Local Government, Industry Regulation and Safety**

GOVERNMENT OF WESTERN AUSTRALIA

WorkSafe Western Australia Mines Safety

Workplace exposure limit: Impact on WA mines

New limits take effect from **1 December 2026**

Workplace exposure standards (WES) establishes a critical benchmark against which workplace exposure conditions need to be evaluated. With the introduction of workplace exposure limits (WELs), many will be considerably lower. Existing risk assessments may underestimate the health risks associated with workplace exposures. These assessments must be revised to reflect the new WEL and ensure potential health risks are accurately assessed.

There are over 600 substances with workplace exposure limits nationally. Based on Safety Regulation System (SRS) records, around 106 substances are commonly used at WA mine sites.

Introduction of the WEL will have the following impact on agents.

Category	Number of agents
Unchanged (includes those under review by Safe Work Australia)	64
Limits reduced / structural changes	38
Limits increased	2
Non-threshold genotoxic carcinogen (NTGC) [will no longer have a WEL]	2
Under review by Safe Work Australia or state-based regulator (benzene, chlorine, copper, formaldehyde, hydrogen cyanide, hydrogen sulphide, nitrogen dioxide, respirable crystalline silica, titanium dioxide and diesel particulate matter) – no change on 1 December 2026.	9+1

For a complete list of the 106 chemicals commonly used at WA mine sites, see the *List of atmospheric agents affecting mine sites*.

This list is for reference only and is based on data obtained through Safety Regulation System (SRS). As such, some chemicals have been omitted. Mine operators should refer to Safe Work Australia's WEL list and ensure all relevant chemicals at site have been identified and considered.

Examples of exposure limit changes

Types of change	WES	WEL	Substance
Structural change	Single exposure standard	Inhalable: 0.1 mg/m³ Respirable: 0.02 mg/m³	Manganese fume, dust and compounds
Limit increased	150 ppm (TWA)	200 ppm (TWA)	Methyl ethyl ketone (MEK)
NTGC	Had a WES	No WEL – exposure must be reduced to as low as reasonably practicable	Chromium (VI) compounds; polycyclic aromatic hydrocarbons mixture
Significant reduction	2 ppm TWA / 5 ppm STEL	0.25 ppm STEL	Sulphur dioxide (SO_2)

TWA = Time-weighted average; STEL = short-term exposure limit

For some substances, the new WEL will be significantly lower than the current WES. As a result, exposure levels that meet the current requirements may exceed the new limits from 1 December 2026.

New chemicals added the WEL list

There are around 31 new chemicals added to the WEL list. For more information, see Safe Work Australia's guide, Changes to workplace exposure limits.

Mine operators must take the following action:

- review the updated WEL list against all chemicals and airborne contaminants that are used, stored, processed, or generated at their operation.
- if any newly listed contaminants are present at your workplace, ensure they are incorporated into your exposure monitoring regime.
- review existing monitoring programs and risk assessments. Confirm whether these are still appropriate under the updated WEL requirements.
- notify WorkSafe of any contaminants that are not currently listed in SRS so that updates can be made.

Review health risk assessments

Review and update the airborne contaminants in your site's existing health risk assessment, addressing each substance individually. Reassessment should cover:

- **Exposure mapping by similar exposure group (SEG)**
  Identify roles, tasks and work areas where workers may be exposed to substances affected by the WEL changes, particularly those newly listed or reclassified. Strict SEG definition criteria will need to be established, and greater rigour will need to be applied to evaluating SEG composition; this may lead to the identification of 'sub-SEGs' that will need to be separated from parent SEGs for the purpose of evaluating health risk within SEGs.
- **Adjustment for extended shifts**
  WELs are based on an 8-hour day and a 40-hour week. Where rosters involve longer shifts, such as 12-hour shifts, adjust the 8-hour TWA using the appropriate model for adjusting exposure standard.

- **Short-term and peak limits**

  Check whether each substances has a STEL or peak limit as well as TWA limit; select the most appropriate limit against which to evaluate exposure monitoring data.
- **Evaluating health risk**

  Establish processes to verify data integrity to support the use of existing exposure monitoring data in health risk assessments. Identify and apply a suitable statistical method to compare exposure monitoring data with exposure limits and prioritise verification of the effectiveness of control measures; this may involve using statistical hypothesis testing methods. In some cases, a new baseline monitoring program may also be necessary for certain exposure agents.
- **Control effectiveness**

  Assess the effectiveness of engineering controls such as ventilation, dust suppression systems, and enclosed cabins, along with administrative controls, in light of the revised limits. Establish criteria for evaluating exposure control performance and assess the effectiveness of these controls against those criteria.
- **Air monitoring programs**

  Verify that monitoring programs measure the relevant substances, in appropriate locations and SEGS, at a frequency sufficient to detect potential exceedances before they result in ongoing harmful exposure.
- **Health monitoring**

  In consultation with your registered medical practitioner, ensure health monitoring addresses any newly listed substances where appropriate.

Act now – Actions required before 1 December 2026

01 Identify

- Identify all airborne contaminants generated or used on site
- Check each against the WEL list
- Review existing sampling data.

02 Assess

- Conduct air monitoring, if required
- Compare monitoring results to the new WEL
- Update risk assessment in consultation with workers.

03 Control

- Apply the hierarchy of controls where non-compliance is found: elimination, substitution, engineering controls, administrative controls and personal protective equipment.

04 Document

- Update health management plans
- Review the sampling schedule
- Update compliance records (e.g. RPE fit testing, health monitoring, training).

Note: These documents may be requested by inspectors to determine compliance.

05 Review

- Verify control effectiveness on an ongoing basis
- Monitor WorkSafe and Safe Work Australia websites for updated guidance.