



**Works Approval Number** W6132/2018/1

**Works Approval Holder** Wodgina Lithium Pty Ltd

**ACN** 611 488 932

**File Number:** DER2017/001949

**Premises** Wodgina Operations

Mining tenements M45/50, M45/381, M45/382,  
M45/383, M45/886, M45/887, M45/923, M45/925 and  
M45/1252

MARBLE BAR WA 6760

**Date of Amendment** **20/09/2018**

## Amendment

The Chief Executive Officer (CEO) of the Department of Water and Environmental Regulation (DWER) has amended the above Works Approval in accordance with section 59 of the *Environmental Protection Act 1986* (EP Act), as set out in this Amendment Notice. This Amendment Notice constitutes written notice of the amendment in accordance with section 59B(9) of the EP Act.

**Alana Kidd**

**MANAGER, RESOURCE INDUSTRIES**

an officer delegated under section 20 of the *Environmental Protection Act 1986* (WA).

## Definitions and interpretation

### Definitions

In this Amendment Notice, the terms in Table 1 have the meanings defined.

**Table 1: Definitions**

Term	Definition
ACN	Australian Company Number
ANZECC/ARMCANZ 2000	Australian and New Zealand Guidelines for Fresh and Marine Water Quality – Volume 1. National Water Quality Management Strategy
BOD	Biochemical Oxygen Demand
Category/ Categories/ Cat.	Categories of Prescribed Premises as set out in Schedule 1 of the EP Regulations
CEO	means Chief Executive Officer. CEO for the purposes of notification means: Director General Department Administering the <i>Environmental Protection Act 1986</i> Locked Bag 33 Cloisters Square PERTH WA 6850 <a href="mailto:info@dwer.wa.gov.au">info@dwer.wa.gov.au</a>
Condition	means a condition to which this Works Approval is subject under s.62 of the EP Act.
Decision Report	refers to this document.
Delegated Officer	an officer under section 20 of the EP Act.
Department	means the department established under section 35 of the <i>Public Sector Management Act 1994</i> and designated as responsible for the administration of Part V, Division 3 of the EP Act.
DWER	Department of Water and Environmental Regulation As of 1 July 2017, the Department of Environment Regulation (DER), the Office of the Environmental Protection Authority (OEPA) and the Department of Water (DoW) amalgamated to form the Department of Water and Environmental Regulation (DWER). DWER was established under section 35 of the <i>Public Sector Management Act 1994</i> and is responsible for the administration of the <i>Environmental Protection Act 1986</i> along with other legislation.
mg/L	milligrams per litre
TSF	Tailings Storage Facility

USEPA	Means United States Environmental Protection Agency
Works Approval Holder	Wodgina Lithium Pty Ltd
WWTF	Wastewater Treatment Facility

## Amendment Notice

This amendment is made pursuant to section 59 of the *Environmental Protection Act 1986* (EP Act) to amend the Works Approval issued under the EP Act for a prescribed premises as set out below. This notice of amendment is given under section 59B(9) of the EP Act.

### Amendment description

The Works Approval Holder, Wodgina Lithium Pty Ltd submitted a request on 31 July 2018 for an extension to the timeframe to complete specified conditions 7 and 9 of Works Approval W6132/2018/1. The application also provides an update on progress to meeting conditions 8, 10 and 11 and notes that no change to the timeframe or requirements of condition 8 are proposed. The Works Approval Holder has also advised that while no change to conditions 10 and 11 are proposed, that it does intend to undertake a different approach to wastewater treatment. This revised approach will be considered separately to this amendment.

As no changes are proposed or made in this amendment application to specified conditions 8, 10 or 11 this Decision Report does not consider them any further. All existing requirements from these conditions remain.

The following guidance statements have informed the decision made on this amendment:

- *Guidance Statement: Regulatory Principles* (July 2015)
- *Guidance Statement: Decision Making* (February 2017)
- *Guidance Statement: Risk Assessment* (February 2017)

### Amendment history

There have been no previous amendments to Works Approval W6132/25018/1.

## Decision

### Condition 7: Groundwater and surface water assessment

Condition 7 requires the Works Approval Holder to undertake an assessment of the groundwater and surface water environment and report to the Chief Executive Officer (CEO) within 3 months.

The Decision Report for the Works Approval identified that tailings from the operations are significantly enriched in beryllium, molybdenum, tin, tantalum and thallium and that these contaminants are likely to increase in concentration over time as they are not readily removed from solution. The Report also noted that tailings seepage from the Tailings Storage Facility (TSF) expansion could interact with surface water flows and impact on groundwater quality, limiting current and future use of groundwater and impact on groundwater dependent ecosystems and vegetation. The condition was implemented to address these concerns.

The Works Approval Holder has requested a 3 month extension of the timeframe to complete the assessment and submit the report to the CEO. This would extend the completion requirement time from 17 August 2018 to 17 November 2018. The Works Approval Holder has advised that the scope of the investigation has been expanded to include proposed mine expansions that were not listed in the conditions. It would be expected that this would provide additional information that will be of benefit to understanding the hydrogeology of the area. The slight time delay in completing the assessment and reporting to the CEO does not change the environmental risk and is therefore considered acceptable.

### Condition 9: Contaminant reduction in tailings

Condition 9 requires the Works Approval Holder to develop processes to reduce specified concentration of contaminants in the tailings supernatant so that concentrations expressed at the toe drain of the main embankment of the existing Tailings Storage Facility (TSF) meet specified levels.

The Decision Report for the Works Approval identified that there was a likelihood that seepage from the TSF could result in elevated levels above ANZECC/ARMCANZ trigger values for freshwater and livestock water, with this condition intended to address that.

The Works Approval Holder has requested a 3 month extension of the timeframe to complete the assessment and submit the report to the CEO. This would extend the completion time required from 17 September 2018 to 17 November 2018. The Works Approval Holder has advised that the completion of this condition is tied in with the data collection for condition 7 and condition 8 (for which the assessment period is 12 months from the date of the Works Approval). The slight time delay in completing the assessment and reporting to the CEO does not change the environmental risk and is therefore considered acceptable.

### Condition Amendment

Works Approval Holder controls on the Works Approval have been updated to refer to the new completion timeframes. No other aspects of the conditions or Works Approval have been changed.

### Works Approval Holder's comments

The Works Approval Holder was provided with the draft Amendment Notice on 11 September 2018, who advised that they had no comments and wished to waive the 21 day notification period.

## Amendment

1. Definitions of the Works Approval is amended by the insertion of the text shown in underline below:

Term	Definition
<u>ACN</u>	<u>Australian Company Number</u>
<u>BOD</u>	<u>Biochemical Oxygen Demand</u>
<u>TSF</u>	<u>Tailings Storage Facility</u>
<u>USEPA</u>	<u>Means United States Environmental Protection Agency</u>
<u>WWTF</u>	<u>Wastewater Treatment Facility</u>

2. Condition 7 (Groundwater and surface water) of the Works Approval is amended by the deletion of the text shown in strikethrough below and the insertion of the text shown in bold and underline below:

7. “Within ~~3~~ **6 (six)** months of the issue of this Works Approval, the Works Approval Holder must provide to the CEO a report on the groundwater and surface water environment which must include:
- (a) A hydrogeological characterisation of the groundwater environment beneath Tailings Storage Facility 3, Tailings Storage Facility 3 expansion, Wastewater Treatment Facility, beneficiation plant area and the Wodgina pit void.
  - (b) Detail any interactions between groundwater and surface water systems at the Premises.
  - (c) Determine and provide the baseline groundwater and surface water conditions. Provide information on the groundwater levels and concentration of aluminium, arsenic, cadmium, chromium, copper, iron, lead, selenium, mercury, nickel, zinc, manganese, silicon, cobalt, potassium, magnesium, sodium, total nitrogen, calcium carbonate, calcium, lithium, caesium, rubidium, uranium, thorium, fluoride, thallium, chloride, bromide, sulfate, total phosphorus, total dissolved solids, pH, electrical conductivity, total recoverable hydrocarbons.
  - (d) Detail potential groundwater and surface water pathways from the Tailings Storage Facility 3 expansion, Wastewater Treatment Facility, beneficiation plant area and Wodgina pit void to determine risk to receptors.
  - (e) Presentation of a conceptual site model.
  - (f) Presentation of groundwater contours for the site.
  - (g) Review and propose groundwater monitoring locations in consultation with a qualified hydrogeologist.
  - (h) Propose an appropriate surface water monitoring program in consultation with a qualified hydrologist.”

3. Condition 9 (Contaminants in Tailings) of the Works Approval is amended by the deletion of the text shown in italics and strikethrough below and the insertion of the text shown in strikethrough and insertion of the text in bold and underline below:

9. “Within ~~X4X~~**6 (six)** months of the issue of the Works Approval, the Works Approval Holder must provide to the CEO detail of proposed processes to reduce soluble concentrations of contaminants in tailings supernatant, such that downstream concentrations in any seepage expressed at the toe drain of the main embankment of the existing TSF 3 (wall 31) meet the following contaminant levels:

- (a) Aluminium 0.055 mg/L (ANZECC/ARMCANZ 2000 trigger value for protection of 95% of species in freshwater ecosystems);
- (b) Fluoride 2 mg/L (ANZECC/ARMCANZ 2000 trigger value for livestock drinking water);
- (c) Chromium 0.001 mg/L (ANZECC/ARMCANZ 2000 trigger value for protection of 95% of species in freshwater ecosystems);
- (d) Copper 0.0014 mg/L (ANZECC/ARMCANZ 2000 trigger value for protection of 95% of species in freshwater ecosystems);
- (e) Nickel 0.011 mg/L (ANZECC/ARMCANZ 2000 trigger value for protection of 95% of species in freshwater ecosystems);
- (f) Zinc 0.008 mg/L (ANZECC/ARMCANZ 2000 trigger value for protection of 95% of species in freshwater ecosystems);
- (g) Thallium 0.002 mg/L (USEPA maximum contaminant level goal for drinking water – adopted in lieu of an appropriate Australian standard);  
and
- (h) Lithium 0.7 mg/L (proposed USEPA drinking water trigger value – adopted in lieu of an appropriate Australian standard).”

## Appendix 1: Key documents

	Document title	In text ref	Availability
1	Works Approval W6132/2018/1	W6132/2018/1	Accessed at <a href="http://www.dwer.wa.gov.au">www.dwer.wa.gov.au</a>
2	Request for timeframe extension	-	DWER records (DWERDT83615)
3	DWER, July 2015. <i>Guidance Statement: Regulatory Principles</i> . Department of Water and Environmental Regulation, Perth.	DER 2015	Accessed at <a href="http://www.dwer.wa.gov.au">www.dwer.wa.gov.au</a>
4	DWER, February 2017. <i>Guidance Statement: Risk Assessments</i> . Department of Water and Environmental Regulation, Perth	DER 2016a	
5	DWER, February 2017b. <i>Guidance Statement: Decision Making</i> . Department of Water and Environmental Regulation, Perth	DER 2016b	