



# Amendment Notice #1

**Works Approval Number** W5651/2014/1

**Works Approval Holder** Northern Star Resources Ltd

**ACN** 092 832 892

**File Number:** DER2014/000773-1

**Premises**  
Paulsens Gold Mine  
Mining Lease M08/99 and M08/196  
Nanutarra-Munjina Road  
PARABURDOO WA 6754

**Date of Amendment** 15/05/2019

## 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
Amendment Notice	refers to this document
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 10, Joondalup DC WA 6919 <a href="mailto:info@dwer.wa.gov.au">info@dwer.wa.gov.au</a>
Delegated Officer	an officer under section 20 of the EP Act
DWER	Department of Water and Environmental Regulation
EP Act	<i>Environmental Protection Act 1986 (WA)</i>
Mtpa	Million tonnes per annum
Prescribed Premises	has the same meaning given to that term under the EP Act.
Premises	refers to the premises to which this Decision Report applies, as specified at the front of this Decision Report.
TDS	Total Dissolved Solids
TSF	Tailings Storage Facility
Works Approval Holder	Northern Star Resources Ltd

## 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.

This notice is limited only to an amendment to extend the expiry date of the Works Approval. No changes to the aspects of the original Works Approval have been requested by the Works Approval Holder.

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

- *Guidance Statement: Regulatory Principles* (July 2015);
- *Guidance Statement: Setting Conditions* (October 2015);
- *Guidance Statement: Land Use Planning* (February 2017);
- *Guidance Statement: Licence Duration* (August 2016);
- *Guidance Statement: Decision Making* (February 2017);
- *Guidance Statement: Risk Assessment* (February 2017); and
- *Guidance Statement: Environmental Siting* (November 2016).

## Amendment description

The Works Approval currently expires on 24 August 2019. The Works Approval Holder has requested that this be extended. This Works Approval provides construction approval for Stage 7, 8 and 9 embankment rises on the TSF. Stage 7 has been completed in 2015 and as part of this, an additional groundwater monitoring bore was added at the northwest perimeter of the extended embankment. This can be added onto the Licence when next amended. Stage 8 and 9 have not commenced as the site went into Care and Maintenance in 2018.

The Works Approval Holder is currently in exploration onsite ready to reopen the operations and once this occurs the Stage 8 embankment rise will be required to provide capacity for tailings deposition.

It should be noted that the Licence (L7969/2004/3) was previously subject to a Groundwater Management Plan improvement condition due to potential seepage issues with the TSF. Elevations in TDS, sulfate/chloride, magnesium/sodium and calcium/sodium ions and lower alkalinity have been noted in the groundwater surrounding the TSF.

A sulfate trigger value of 5,000mg/L is present on the Licence for the TSF groundwater monitoring bores (PMB1-PMB10) and a sulfate trigger value of 2,000mg/L for Production Bore PB45 (located between the TSF and nearest downstream pastoral bore PB70 that is currently used for livestock drinking water), with seepage recovery initiated if these trigger values are exceeded. The trigger values were not exceeded during the 2017-2018 reporting period.

Following a water quality review and groundwater modelling exercise at the mine, Contaminated Sites Branch provided technical advice and found that "Groundwater quality problems in the mine area are probably mostly caused by the drawdown of the water table rather than by seepage from the TSF" (CSB, 2016).

## Amendment history

Table 2 provides the amendment history for W5651/2014/1.

**Table 2: Works Approval amendments**

Instrument	Issued	Amendment
W5651/2014/1	15/05/2019	Amendment Notice 1 Extension of the expiry date.

## Decision

The TSF lifts 7, 8 and 9 were assessed during the original Works Approval assessment. Lift 7 has been completed and implemented onto the operating Licence L7969/2004/3.

The Works Approval expiry date has been extended for an additional five years to allow for the additional lifts to occur. Potential seepage issues have been identified and monitoring is occurring to ensure that seepage recovery management measures are implemented if trigger values are exceeded. Monitoring results were within set trigger values during the 2017-2018 reporting period. It has been noted, however, that it is more likely groundwater drawdown that is impacting on groundwater quality, as opposed to TSF seepage.

## Works Approval Holder's comments

The Works Approval Holder was provided with the draft Amendment Notice on 14 May 2019. The Works Approval Holder responded on the 14 May 2019 waiving the remaining comment period with no comment (until 9 June 2019).

## Amendment

1. The Works Approval expiry date has been extended from Saturday, 24 August 2019 until **Saturday, 24 August 2024.**

## Appendix 1: Key documents

	Document title	In text ref	Availability
1	Works Approval W5651/2014/1– Paulsens Gold Mine	W5651/2014/1	accessed at <a href="http://www.dwer.wa.gov.au">www.dwer.wa.gov.au</a>
2	DER, July 2015. <i>Guidance Statement: Regulatory Principles</i> . Department of Environment Regulation, Perth.	N/A	accessed at <a href="http://www.dwer.wa.gov.au">www.dwer.wa.gov.au</a>
3	DER, October 2015. <i>Guidance Statement: Setting Conditions</i> . Department of Environment Regulation, Perth.	N/A	
4	DER, August 2016. <i>Guidance Statement: Licence Duration</i> . Department of Environment Regulation, Perth.	N/A	
5	DER, November 2016. <i>Guidance Statement: Risk Assessments</i> . Department of Environment Regulation, Perth.	N/A	
6	DER, November 2016. <i>Guidance Statement: Decision Making</i> . Department of Environment Regulation, Perth.	N/A	
7	Email Works Approval W5651 amendment application dated 26/02/2019 3:37pm and authored by Northern Star Resources Ltd	N/A	DWER records (A1767425)
8	Email W5651/2014/1 Compliance Documentation dated 29/04/2019 10:44am and authored by Northern Star Resources Ltd	N/A	DWER records (A1784064)
9	Groundwater quality review and modelling, Paulsen's Gold Mine	CSB, 2016	DWER records (A1190723)
10	Email RE: APPLICANT NOTIFICATION - W5651/2014/1 - NOTICE OF PROPOSED AMENDMENT TO WORKS APPROVAL	N/A	DWER records (A1788787)