



Licence Number L5029/1992/11

Licence Holder Northern Star (Kamowna) Pty Limited

ACN 010 511 789

File Number: DER2015/002027

Premises Kamowna Belle Gold Mine
M27/18, 22, 23, 37, 49, 57, 92, 103, 122, 123, 127,
159, 164, 232, 245, 287, 420 and L27/87, 83, 62
KALGOORLIE WA as depicted in Schedule 1

Date of Amendment 7 December 2017

Amendment

The Chief Executive Officer (CEO) of the Department of Water and Environmental Regulation (DWER) has amended the above Licence 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.

Date signed: 7 December 2017

Paul Byrnes
Manager Licensing (Process Industries)
REGULATORY SERVICES (ENVIRONMENT)

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

Amendment Notice

This amendment is made pursuant to section 59 of the *Environmental Protection Act 1986* (EP Act) to amend the Licence issued to Northern Star (Kanowna) Pty Ltd for the Kanowna Belle Gold Mine. This notice of amendment is given under section 59B(9) of the EP Act.

Amendment description

Northern Star (Kanowna) Resources Pty Limited lodged an application to amend Licence L5029/1992/11 for the Kanowna Belle Gold Mine on 27 September 2017. Appendix 1 contains a list of the documents that form the application.

The Applicant is seeking approval to increase the throughput of ore processed at the Kanowna Belle Gold Mine from 2,000,000 tonnes per annum (tpa) to 2,500,000 tpa. The carbon-in-pulp process is used to extract gold from the ore which includes roasting to increase the rate of recovery of gold if the ore contains a high sulfur content. Ore processed at the Kanowna site is received from both the Kundana Gold Mine (L7323/1998/12) and the Kanowna Gold Mine. The proposed increase in ore to be processed will be provided from the Kundana Gold Mine (L7323/1998/12) which is a low sulfur ore and does not require roasting.

The proposed increase in rate of throughput will be achieved from improved ore handling procedures and efficiencies in milling practices, enabling the plant to operate for extended periods.

The additional tailings (500,000 tpa) to be generated will be directed to the existing Waldon Pit that is an in-pit TSF. The proposed increased rate of throughput is expected to reduce the life of the Waldon Pit TSF to approximately 2.5 years with final capacity being reached during 2019.

The volume of reagents used over an annual period will increase through this amendment however the overall volume that is stored onsite at any one time will not change. The total volume of wastewater is not expected to change as process wastewater and decant water will continue to be recycled through the plant.

Amendment history

Table 1 provides the amendment history for L5029/1992/11.

| Table 1: Instrument log | | |
|-------------------------|------------|--|
| L5029/1992/11 | 03/10/2013 | Licence granted |
| L5029/1992/11 | 20/11/2014 | Licence amendment to include REFIRE format. |
| L5029/1992/11 | 21/05/2015 | Licence amendment to reduce in-pit TSF freeboard. |
| L5029/1992/11 | 02/06/2016 | Licence amendment to allow construction of TSF1 embankment rise of 2m. |
| L5029/1992/11 | 15/07/2016 | Licence amendment to allow the dewatering and transfer of tailings supernatant from Waldon Pit to the Consols Pit and Ballarat Last Chance Pits. |
| L5029/1992/11 | 26/08/2016 | Licence amendment to allow Waldon Pit to be converted into an In-pit TSF. Removal of <i>category 85: sewage facility</i> |
| L5029/1992/11 | 17/7/2017 | Amendment Notice 1: to include Mining Tenement M27/123 |
| L5029/1992/11 | 7/12/2017 | Amendment Notice 2: to increase the throughput of ore to 2.5 Mtpa. |

Decision

The Delegated Officer has considered the information contained within the Application and determined that the key discharge associated with the increase in throughput is an increase in the rate of tailings discharged to the TSF. The tailings are to be disposed in the existing Waldon Pit TSF that does not require any additional works to accommodate the proposed increased rate of deposition.

In the decisions making process, the Delegated Officer considered the risk assessment associated with the amendment notice granted on 26 August 2016. The Delegated Officer considers that the increase throughput will not cause a material alteration in the risks to the environment as the primary change will be limited to the increased rate of filling of the void within the TSF. The groundwater in the area is approximately 30mbgl and has limited environmental value due to it being hypersaline. Although some mounding is expected to occur within 100m of the TSF, regulatory controls are included on the licence to ensure mounding does not occur within 6m of the ground surface where it can cause harm to deep rooted vegetation species (Condition 1.3.10). The vegetation monitoring was been extended to include the potential impact zone from the Waldon Pit TSF (condition 1.3.8) and limits are placed on the maximum elevation level of the supernatant pond and tailings surface within the TSF (Condition 3.4.1) to minimise outflow of supernatant from the TSF into the surround soil and groundwater. These regulatory control are considered sufficient to manage risks associated with the increased rate of throughput and deposition of tailings into the Waldon Pit TSF that will occur as part of this amendment

Licence Holder's comments

Northern Star (Kamowna) Pty Limited was provided with the draft Amendment Notice on 6 December 2017. DWER received correspondence from the Licence Holder dated 7 December 2017 advising they wish to waive the consultation period and requested this Amendment Notice be issued as soon as possible. No further comments were made.

Details of the Amendment

1. The Licence is amended by the deletion of the text shown in strikethrough below and the insertion of the red text shown in underline below:

Prescribed premises category

Schedule 1 of the Environmental Protection Regulations 1987

| Category number | Category description | Category production or design capacity | Approved Premises production or design capacity |
|------------------------|---|---|---|
| 5 | Processing or beneficiation of metallic or non-metallic ore | 50 000 tonnes or more per year | 2 000 000 <u>2 500 000 tonnes per annual period</u> |
| 6 | Mine dewatering | 50 000 tonnes or more per year | 720,000 tonnes per annual period |
| 44 | Metal smelting or refining | 1 000 tonnes or more per year | 78 840 tonnes per annual period |

Appendix 1: Key documents

| | Document title | In text ref | Availability |
|---|---|--------------------------|--|
| 1 | Licence L5029/1992/11 – Kanowna Belle Gold Mine | L5029/1992/11 | accessed at www.dwer.wa.gov.au |
| 2 | Licence L5029/1992/11 – Kanowna Belle Gold Mine - Assessment for Waldon Pit TSF | Amendment 26 August 2016 | DWER records (A1154948) |
| 3 | Licence Amendment Application supporting documentation | | DWER records (A1532473) |
| 4 | Licence Amendment email correspondence | | DWER records (A1566746; A1572423) |