



Application for Licence Amendment

Part V Division 3 of the *Environmental Protection Act 1986*

Licence Number	L9124/2018/1
Licence Holder	Golden Mile Milling Pty Ltd
ACN	602 161 008
File Number	DER2018/000472-1
Premises	Lakewood Gold Processing Facility Mining leases M26/242 and M26/367 Mount Monger Road LAKEWOOD WA 6431
Date of Report	9 October 2020
Decision	Revised licence granted

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A/MANAGER RESOURCE INDUSTRIES

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

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1. Decision summary

Licence L9124/2018/1 is held by Golden Mile Milling Pty Ltd (Licence Holder) for the Lakewood Gold Processing Facility (the Premises), located on Mining Tenements M26/242 and M26/367, in Lakewood Western Australia.

This Amendment Report documents an assessment of the operational aspects of the recently installed groundwater monitoring well network surrounding the tailings storage facility (TSF) known as TSF Western Cell, TSF Eastern Cell and TSF Cell No.1. As a result of this assessment, Revised Licence L9124/2018/1 has been granted.

2. Scope of assessment

2.1 Regulatory framework

In completing the assessment documented in this Amendment Report, the department has considered and given due regard to its Regulatory Framework and relevant policy documents which are available at <https://dwer.wa.gov.au/regulatory-documents>.

2.2 Application summary

On 22 June 2020, the Licence Holder submitted an application to the department to amend Licence L9124/2018/1 under section 59 and 59B of the *Environmental Protection Act 1986* (EP Act). The following amendments are being sought:

- update the location of the groundwater monitoring bore network; and
- update the monitoring schedule of ambient groundwater quality.

The new groundwater monitoring bore network containing 15 wells was installed by the Licence Holder between 4 and 18 November 2019 following the conversion of the ten pre-existing groundwater monitoring bores (TSF1-TSF10) into TSF seepage recovery bores between 22 August 2019 and 17 September 2019.

The Licence Holder opted to convert the original groundwater monitoring bores into TSF seepage recovery bores following the identification of elevated cyanide concentration in groundwater monitoring bore TSF8. The level recorded was 1mg/L, exceeding the licence limit of 0.5mg/L. The licence limit exceedance was identified by the Licence Holder on 21 May 2019 and reported to the department on 12 July 2019. Condition 2.4.2 of the licence outlines that groundwater recovery shall be undertaken if monitoring results indicate groundwater contamination has occurred.

3. Risk assessment

The new ambient groundwater monitoring bore network does not present or result in new emissions or change the existing emissions at the Premises. The department has not undertaken any additional risk assessment of the emissions and discharges associated with the activities at the Premises.

3.1 Assessment of proposed changes

The new groundwater monitoring bore network comprises 15 wells at eight locations. Refer to Figure 2 of Schedule 1 in the Revised Licence for the location of the new groundwater monitoring bore network.

In addition to the existing ambient groundwater monitoring requirements of Licence L9124/2018/1, the Licence Holder has proposed to monitor total cyanide and increase the frequency of standing water level (SWL) measurements from quarterly to monthly.

The Delegated Officer has reviewed the Lakewood Groundwater Study (Coffey, 2020) which outlined the results of the drilling and installation of the new groundwater monitoring network, and the soil and groundwater sampling program.

The Lakewood Groundwater Study identified the following:

- The wells were drilled and installed by a licensed drilling company (National Geotech) under the supervision of a suitably qualified hydrogeologist from Coffey Services Australia Pty Ltd (Coffey). On completion of installation, all monitoring bores were surveyed by a licensed surveyor (Lone Star Surveys) on 26 November 2019.
- The new bore locations provide an aerial extent for groundwater monitoring upgradient (CMB1-CMB3), around and downgradient (CMB4-CMB8) of the TSF based on a groundwater flow to the south. Some bores have been positioned perpendicular to flow to account for lateral dispersion of contaminants. At several locations, bore clusters were installed to target a variety of depths to enable assessment of vertical contaminant migration across five hydrogeological units (surficial soils, residual clay, alluvial clay with sands and gravels, saprolite, and bedrock).
- Groundwater monitoring of the new bores was undertaken between 2 and 4 December 2019. Results showed no exceedances of weak acid dissociable (WAD) cyanide above 0.5 mg/L with detectable levels in two bore locations (both within surficial soils) around the southwest and southeast corners of the TSF. These areas correspond to where elevated soil and leachate metals concentrations were detected.

The new ambient groundwater monitoring well network appears adequate to monitor any potential contamination plume beneath the TSF. The existing ambient groundwater monitoring requirements of Licence L9124/2018/1 that includes quarterly monitoring of WAD cyanide, pH, electrical conductivity and metals are appropriate for the new groundwater well network. The Licence Holder's proposal to monitor total cyanide and increase the frequency of monitoring of SWL has been reflected in the Revised Licence with the addition of total cyanide and the SWL frequency changed to monthly.

It is noted that future monitoring results from the new groundwater well network will inform the suitability of the groundwater monitoring well network and its ability to detect and delineate groundwater impacts. Monitoring results should be continually assessed, and the network extended for a complete delineation of impacts if required.

4. Consultation

Table 1 provides a summary of the consultation undertaken by the department.

Table 1: Consultation

Consultation method	Comments received	Department response
City of Kalgoorlie-Boulder advised of proposal (6/08/2020)	N/A	N/A
Department of Mines, Industry Regulation and Safety (DMIRS) advised of proposal (6/08/2020)	N/A	N/A
Licence Holder was provided with draft amendment on	Summary of Licence Holder comments: <ul style="list-style-type: none"> • Minor errors in Licence including 	Errors identified by Licence Holder corrected in Licence (monitoring

17/09/2020	<p>monitoring bore reference missing a letter and cross reference errors to tables.</p> <ul style="list-style-type: none"> • Provided an alternative map for the Carbon Stripping Plant, (Figure 3) in the Licence. • Provided the dates when the previous monitoring wells were converted into groundwater recovery wells. 	<p>bore reference and table cross references updated).</p> <p>Figure 3 in Licence updated with the alternative map provided.</p> <p>Dates of the bore conversions added to section 2.2 of the amendment report (this document).</p>
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5. Conclusion

Based on the assessment in this Amendment Report, the Delegated Officer has determined that a Revised Licence will be granted.

5.1 Summary of amendments

Table 2 provides a summary of the amendments and will act as record of implemented changes. All changes have been incorporated into the Revised Licence as part of the amendment process.

Table 2: Summary of licence amendments

Condition no.	Amendments
1.1.2	Administrative correction – Update to reference to the department as Department of Water and Environmental Regulation in 'CEO' definition
1.3.6	Administrative correction - Insertion of reference to figure of the carbon stripping circuit
2.4.1	Ambient groundwater quality monitoring table updated to reflect the new groundwater monitoring bore network, addition of total cyanide as a parameter and updated frequency of SWL monitoring
2.4.2	Rewording of condition to reflect the operation of the groundwater recovery bore system, TSF1 to TSF10
Schedule 1	Updated map of groundwater monitoring locations including the location of the groundwater recovery bore system (Figure 2)
Schedule 1	New figure for Carbon Stripping Plant (Figure 3)

References

1. Coffey 2020, *Golden Mile Milling Pty Ltd. Lakewood Groundwater Study*, 754-PEREN235026, Perth, Western Australia, 3 June 2020.
2. Department of Environment Regulation (DER) 2016, *Guidance Statement: Environmental Siting*, Perth, Western Australia.
3. DER 2015, *Guidance Statement: Setting Conditions*, Perth, Western Australia.

Appendix 1: Application validation summary

SECTION 1: APPLICATION SUMMARY					
Application type					
Works approval	<input type="checkbox"/>				
Licence	<input type="checkbox"/>	Relevant works approval number:		None	<input type="checkbox"/>
		Has the works approval been complied with?		Yes <input type="checkbox"/> No <input type="checkbox"/>	
		Has time limited operations under the works approval demonstrated acceptable operations?		Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>	
		Environmental Compliance Report / Critical Containment Infrastructure Report submitted?		Yes <input type="checkbox"/> No <input type="checkbox"/>	
		Date Report received:			
Renewal	<input type="checkbox"/>	Current licence number:			
Amendment to works approval	<input type="checkbox"/>	Current works approval number:			
Amendment to licence	<input checked="" type="checkbox"/>	Current licence number:	L9124/2018/1		
		Relevant works approval number:		N/A	<input checked="" type="checkbox"/>
Registration	<input type="checkbox"/>	Current works approval number:		None	<input type="checkbox"/>
Date application received		22 June 2020			
Applicant and Premises details					
Applicant name/s (full legal name/s)		Golden Mile Milling Pty Ltd			
Premises name		Lakewood Gold Processing Facility			
Premises location		Mining leases M26/242 and M26/367			
Local Government Authority		City of Kalgoorlie-Boulder			
Application documents					
HPCM file reference number:		DER2018/000472-1			
Key application documents (additional to application form):		Lakewood Groundwater Study, Coffey, 3rd June 2020, (Ref: 754-PEREN235026).			
Scope of application/assessment					

Summary of proposed activities or changes to existing operations.	<p><i>Licence amendment</i></p> <p>Operation of a new groundwater monitoring well network that has been installed to meet the monitoring conditions of License L9124/2018/1. The original groundwater monitoring network has been converted to act as a groundwater recovery system for the Tailings Storage Facility.</p> <p>L9124/2018/1 should be amended to include the new groundwater monitoring well network, along with the new sampling schedule.</p>	
<p>Category number/s (activities that cause the premises to become prescribed premises)</p>		
<p>Table 1: Prescribed premises categories</p>		
Prescribed premises category and description	Assessed production or design capacity	Proposed changes to the production or design capacity
<p>Category 5: Processing or beneficiation of metallic or nonmetallic ore: premises on which:</p> <p>(a) Metallic or non-metallic ore is crushed, ground, milled or otherwise processed;</p> <p>(b) Tailings from metallic or non-metallic ore are reprocessed; or</p> <p>(c) Tailings or residue from metallic or nonmetallic ore are discharged into a containment cell or dam.</p>	900,000 tonnes per annual period.	N/A.
<p>Category 61: Liquid waste facility: premises on which liquid waste produced on others premises (other than sewage waste) is stored, reprocessed, treated or irrigated.</p>	1,300 tonnes per annual period.	N/A.
<p>Legislative context and other approvals</p>		
<p>Has the applicant referred, or do they intend to refer, their proposal to the EPA under Part IV of the EP Act as a significant proposal?</p>	<p>Yes <input type="checkbox"/> No <input checked="" type="checkbox"/></p>	<p>Referral decision No:</p> <p>Managed under Part V <input type="checkbox"/></p> <p>Assessed under Part IV <input type="checkbox"/></p>
<p>Does the applicant hold any existing Part IV Ministerial Statements relevant to the application?</p>	<p>Yes <input type="checkbox"/> No <input checked="" type="checkbox"/></p>	<p>Ministerial statement No:</p> <p>EPA Report No:</p>

Has the proposal been referred and/or assessed under the EPBC Act?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Reference No:
Has the applicant demonstrated occupancy (proof of occupier status)?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Certificate of title <input type="checkbox"/> General lease <input type="checkbox"/> Expiry: Mining lease / tenement <input type="checkbox"/> Expiry: Other evidence <input type="checkbox"/> Expiry:
Has the applicant obtained all relevant planning approvals?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/>	Approval: Expiry date: If N/A explain why?
Has the applicant applied for, or have an existing EP Act clearing permit in relation to this proposal?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	CPS No: N/A No clearing is proposed.
Has the applicant applied for, or have an existing CAWS Act clearing licence in relation to this proposal?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Application reference No: N/A Licence/permit No: N/A No clearing is proposed.
Has the applicant applied for, or have an existing RIWI Act licence or permit in relation to this proposal?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Application reference No: N/A Licence/permit No: Licence / permit not required.
Does the proposal involve a discharge of waste into a designated area (as defined in section 57 of the EP Act)?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Name: N/A. Type: N/A. Has Regulatory Services (Water) been consulted? Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/> Regional office: N/A.
Is the Premises situated in a Public Drinking Water Source Area (PDWSA)?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Name: N/A. Priority: N/A. Are the proposed activities/ landuse compatible with the PDWSA (refer to WQPN 25)? Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/>
Is the Premises subject to any other Acts or subsidiary regulations (e.g. <i>Dangerous Goods Safety Act 2004</i> , <i>Environmental Protection (Controlled Waste) Regulations 2004</i> , <i>State Agreement Act xxxx</i>)	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	N/A.

Is the Premises within an Environmental Protection Policy (EPP) Area?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	N/A.
Is the Premises subject to any EPP requirements?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	N/A.
Is the Premises a known or suspected contaminated site under the <i>Contaminated Sites Act 2003</i> ?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	<p>Classification: Possibly contaminated – investigation required (PC–IR).</p> <p>Date of classification: 13/09/2010.</p>