Government of Western Australia
Department of Water and Environmental Regulation

Amendment Report

Department initiated Amendment

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

Licence Number	L9000/2016/1
Licence Holder	Gruyere Management Pty Limited
ACN	615 728 795
File Number	DER2016/001956-1
Premises	Gruyere Gold Project Mining Tenement L38/254 and Part of L38/255 and M38/1267 COSMO NEWBERY WA 6440 As shown in Schedule 1
Date of Report	12 January 2021
Decision	Revised licence granted

Alana Kidd

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Alana Kidd
Manager, Resource Industries
an officer delegated under section 20 of the *Environmental Protection Act 1986* (WA)

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1. Decision summary

Licence L9000/2016/1 is held by Gruyere Management Pty Limited (Licence Holder) for the Gruyere Gold Project (the Premises), located at Mining Tenement L38/254 and Part of L38/255 and M38/1267, Cosmo Newberry.

This Amendment Report documents the assessment of potential risks to the environment and public health from proposed changes to the emissions and discharges during the operation of the Premises. As a result of this assessment, Revised L9000/2016/1 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 Amendment summary

On 10 July 2020, the department initiated this amendment to Licence L9000/2016/1 to include an improvement plan to facilitate Tailings Storage Facility (TSF) seepage recovery.

In December 2019, the Licence Holder advised that that there was an increase in standing water levels by approximately 10 metres in bores TSFM5, TSFM3 and TSFM2 between April and September 2019. The Licence Holder concluded that groundwater mounding was likely occurring in proximity to the TSF.

Further investigation by the Licence Holder, as directed by the department, showed that the seepage flow path was likely to be coincident with a former drainage line that flowed from south to north. The Licence Holder provided a Seepage Recovery Assessment and proposed a seepage recovery approach, based on three phases of implementation:

- Phase 1: Short-term recovery infrastructure.
- Phase 2: Medium-term investigations, based on the outcomes of Phase 1.
- Phase 3: Long-term remedial measures, based on the outcomes of Phases 1 and 2.

During the assessment of the proposed amendment, it was noted that the design capacity for Category 73 in Schedule 2, Table 13 was not consistent with Schedule 2, Table 14 of the licence. The design capacity in Schedule 2, Table 13 for Category 73 has been changed from 1,306 m^3 to 1,500 m^3, however, there is no change to the risk profile as this had been adequately assessed during the previous amendment.

The Premises relates to categories 5, 12, 54 and 64 and the assessed production capacity under Schedule 1 of the *Environmental Protection Regulations 1987* (EP Regulations) which are defined in existing Licence L9000/2016/1.

3. Risk assessment

The department assesses the risks of emissions from prescribed premises and identifies the potential source, pathway and impact to receptors in accordance with the *Guidance Statement: Risk Assessments* (DER 2017).

To establish a Risk Event there must be an emission, a receptor which may be exposed to that emission through an identified actual or likely pathway, and a potential adverse effect to the receptor from exposure to that emission.

3.1 Source-pathways and receptors

3.1.1 Emissions and controls

The key emissions and associated actual or likely pathway during premises operation which have been considered in this Decision Report are detailed in Table 1. Table 1 also details the proposed control measures the applicant has proposed to assist in controlling these emissions, where necessary.

Table 1: Proposed applicant controls

Emission	Sources	Potential pathways	Proposed controls
Operation			
Seepage/ leachate	TSF	Seepage to soil and groundwater	A seepage recovery approach based on three phases of implementation: Phase 1: Short-term recovery infrastructure. Phase 2: Medium-term investigations, based on the outcomes of Phase 1. Phase 3: Long-term remedial measures, based on the outcomes of Phases 1 and 2.

3.1.2 Receptors

In accordance with the *Guidance Statement: Risk Assessment* (DER 2017), the Delegated Officer has excluded employees, visitors and contractors of the Licence Holder from its assessment. Protection of these parties often involves different exposure risks and prevention strategies, and is provided for under other state legislation.

Table 2 provides a summary of potential receptors that may be impacted as a result of activities upon or emission and discharges from the prescribed premises *(Guidance Statement: Environmental Siting* (DER 2016)).

Table 2: Sensitive receptors and distance from prescribed activity

Environmental receptors	Distance from prescribed activity
Groundwater	Standing water levels approximately 30 mbgl

3.2 Risk ratings

Risk ratings have been assessed in accordance with the *Guidance Statement: Risk Assessments* (DER 2017) for each identified emission source and takes into account potential source-pathway and receptor linkages as identified in Section 3.1. Where linkages are in-complete they have not been considered further in the risk assessment.

Where the applicant has proposed mitigation measures/controls (as detailed in Section 3.1), these have been considered when determining the final risk rating. Where the Delegated Officer considers the applicant's proposed controls to be critical to maintaining an acceptable level of risk, these will be incorporated into the licence as regulatory controls.

Additional regulatory controls may be imposed where the applicant's controls are not deemed sufficient. Where this is the case the need for additional controls will be documented and justified in Table 3. The conditions in the issued Licence, as outlined in Table 3 have been determined in accordance with *Guidance Statement: Setting Conditions* (DER 2015).

Table 3: Risk assessment of potential emissions and discharges from the Premises during operation

Risk Event					Risk rating[1] C = consequence L = likelihood	Applicant controls sufficient?	Conditions[2] of licence	Justification for additional regulatory controls
Source/ Activities	**Potential emission**	**Potential pathways and impact**	**Receptors**	**Applicant controls**				
Operation								
Operation of TSF	Seepage/ leachate	Seepage to soil and groundwater	Groundwater located 30 mbgl	Refer to Section 3.1	C = Moderate L = Likely **High Risk**	N	Condition 11, 12 **<u>Condition 13</u>**	Seepage from the TSF is occurring at the site and impacting groundwater quality and levels. The Licence Holder has provided a seepage recovery approach (AECOM 2020) and DWER broadly agrees with the approach to be implemented. An improvement program based on the Licence Holder's seepage recovery approach has been conditioned in the licence (as a control). Additional to the Licence Holder's seepage recovery approach, DWER considers that: • recovered water should be sent back to the TSF, at least for Phase 1 of the approach. And that if an additional impervious holding area is required for the recovered wastewater, that the Licence Holder would need to consider this in a licence amendment; • a water balance is to be provided; and • groundwater level bores need to be considered further downstream of current and proposed locations to monitor and manage longer-term mounding trends.

Note 1: Consequence ratings, likelihood ratings and risk descriptions are detailed in the *Guidance Statement: Risk Assessments* (DER 2017).

Note 2: Proposed applicant controls are depicted by standard text. **<u>Bold and underline text</u>** depicts additional regulatory controls imposed by department.

4. Consultation

The Licence Holder was provided with the draft Amendment Report on 29 September 2020.

Comments received from the Licence Holder on 6 November 2020 have been considered by the Delegated Officer as detailed in Appendix 1.

5. Conclusion

Based on the assessment in this Amendment Report, the Delegated Officer has determined that an amended licence will be granted, subject to conditions commensurate with the determined controls and necessary for administration and reporting requirements.

5.1 Summary of amendments

Table 1 below provides a summary of the proposed amendments and will act as a record of implemented changes. All proposed changes have been incorporated into the Revised licence as part of the amendment process.

Table 4: Summary of licence amendments

Condition no.	Proposed amendments
Licence history	Extraneous information has been removed and the section updated to include this DWER initiated amendment.
Explanatory notes	Deleted. This guidance is available in the department's Guideline: Industry Regulation Guide to Licensing (June 2019
Definitions and interpretation	Updated based on departmental legal advice.
	Definitions added: 'L/s.'
Condition 13 – Improvements	Condition added. Implement a seepage recovery approach, based on three phases of implementation: • Phase 1: Short-term recovery infrastructure. • Phase 2: Medium-term investigations, based on the outcomes of Phase 1. • Phase 3: Long-term remedial measures, based on the outcomes of Phase 2.
Schedule 2, Table 13, Category 73 - Bulk storage of chemicals etc.	Updated to 1,500 m^3 to be consistent with Schedule 2, Table 14 of the licence.

References

1. Department of Environment Regulation (DER) 2016, *Guidance Statement: Environmental Siting*, Perth, Western Australia.
2. DER 2017, *Guidance Statement: Risk Assessments*, Perth, Western Australia.
3. DER 2015, *Guidance Statement: Setting Conditions*, Perth, Western Australia.
4. AECOM Services Pty Ltd (AECOM) 2020, *Gruyere Gold Mine Tailings Storage Facility; Seepage Recovery Assessment - May 2020*, Perth, Western Australia (DWER Ref: DWERDT289951).

Appendix 1: Summary of Licence Holder's comments on draft amendment

Condition	Summary of Licence Holder's comment	Department's response
Schedule 3: Improvement Program	Following a review of the proposed changes to the licence, we wish to note that the Phase 1 (short-term management) works specified in Schedule 3: Improvement Program relating to Improvement Reference IR1 in Table 15 have been completed. The works program and monitoring regime were detailed in the Gruyere TSF Groundwater Recovery Plan emailed to DWER on 31 March 2020. The results of which were provided in the Seepage Recovery Assessment report (May 2020) prepared by AECOM Services Pty Ltd and further reported in the Gruyere Management Pty Ltd Annual Environmental Report submitted on 30 September 2020. Three new recovery bores have since been installed along with two additional monitoring bores, as shown in the attached map. Existing bore TSFM2 is scheduled to be converted to a recovery bore to increase recovery capacity in December 2020. Based on the above, Gruyere Management Pty Ltd requests that DWER consider removing Improvement Reference IR1 from the draft licence amendment.	No change to IR1 is proposed. DWER notes that the Gruyere Management Pty Ltd Annual Environmental Report (AER) submitted on 30 September 2020 does not include all the information required within IR1. DWER also notes that the reporting period for the AER is 1 July 2019 to 30 June 2020 and that Phase 1 was likely to have continued past the latter date. DWER considers that the reporting under IR1 point 13 and the plan required under IR1 point 14 is required and should be submitted as soon as practicable, considering that Phase 1 has been completed.
Condition 11, Table 10	Gruyere Management Pty Ltd also suggests that DWER consider removing all recovery bores from Table 10 of the licence instrument and replace these bores with newly installed monitoring bores TSFM12, TSFM14, TSFM15, and existing bore GRY17/17A.	No change to Condition 11, Table 10, is proposed. Any updates to the licence will need to be considered after the implementation of the improvement program.