



Application for Licence Amendment

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

Licence Number	L8654/2012/1
Licence Holder	Mineral Resources Limited
ACN	118 549 910
File Number	DER2015/001584
Premises	Phil's Creek Project Mining tenements M47/1359, M47/1421 and Miscellaneous Licence L47/336 NEWMAN WA 6753 As defined by the Premises map attached to the Revised Licence
Date of Report	24 August 2021
Decision	Revised licence granted

Lauren
Edmands

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Lauren Edmands
Date: 2021.08.24
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Lauren Edmands
MANAGER RESOURCE INDUSTRIES
REGULATORY SERVICES

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

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1. Decision summary

Licence L8654/2012/1 is held by Mineral Resources Limited (Licence Holder) for the Phil's Creek Project (the Premises), located on mining tenements M47/1359, M47/1421 and miscellaneous lease L47/336, Newman WA 6753.

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 construction and operation of infrastructure at the Premises. As a result of this assessment, Revised Licence L8654/2012/1 has been granted.

The Revised Licence issued as a result of this amendment consolidates and supersedes the existing Licence previously granted in relation to the Premises. The Revised Licence has been granted in a new format with existing conditions being transferred, but not reassessed, to the new format.

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 15 April 2021, the Licence Holder submitted an application to the department to amend Licence L8654/2012/1 under section 59 and 59B of the *Environmental Protection Act 1986* (EP Act). The following amendments are being sought:

- An expansion to the existing WWTP infrastructure to facilitate the extension of the accommodation village servicing the premises; and
- An expansion to the existing irrigation area to accommodate the increased throughput of treated effluent from the WWTP expansion.

The WWTP expansion is proposed to be undertaken by installing an additional WWTP unit (Tristar Submerged Aerated Filter) which will function in unison with existing WWTP infrastructure at the premises so as to form one continuous treatment unit. An additional 32 kL balance tank will also be installed next to the existing balance tank to accommodate for the increased throughput. The additional WWTP unit is designed to meet the same treated effluent standards as the existing WWTP infrastructure on site, therefore treated effluent quality is not expected to change from what is currently being achieved on site.

The irrigation area extension will adjoin the existing irrigation area and will increase the total area gazetted for irrigation to 14,000 m². Fencing will be extended to surround the new total irrigation area with a spray buffer of 5 metres included.

This amendment is limited only to changes to Category 85 activities from the Existing Licence. No changes to the aspects of the existing Licence relating to Category 5 and 89 have been requested by the Licence Holder.

Table 1 below outlines the proposed changes to the existing Licence.

Table 1: Proposed throughput capacity changes

Category	Current throughput capacity	Proposed throughput capacity	Description of proposed amendment
5	2,400,000 tonnes per annual period	2,400,000 tonnes per annual period	No changes proposed.
85	49 m ³ /day	64 m ³ /day	Construction of new WWTP infrastructure to increase throughput capacity due to camp expansion. Increase in irrigation area.
89	100 tonnes per annual period	100 tonnes per annual period	No changes proposed.

In amending the licence, the CEO has also:

- updated the format and appearance of the Licence;
- revised licence condition's numbers, and removed any redundant conditions and realigned condition numbers for numerical consistency; and
- corrected clerical mistakes and unintentional errors.

The department has not undertaken any additional risk assessment of the Premises related to previously approved conditions within the Licence.

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 *Guideline: Risk assessments* (DWER 2020).

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 Amendment Report are detailed in Table 2 below. Table 2 also details the proposed control measures the Licence Holder has proposed to assist in controlling these emissions, where necessary.

Table 2: Licence Holder controls

Emission	Sources	Potential pathways	Proposed controls
<u>Construction</u>			
Dust	Earthworks, placement of WWTP and irrigation area infrastructure	Air/windborne pathway causing impacts to	Land disturbance will be kept to the minimum necessary for the development of the project. A water cart will be used to suppress

Emission	Sources	Potential pathways	Proposed controls
		amenity	emissions of fugitive dust.
Noise			Construction will occur in daytime hours only. All vehicles to be maintained in accordance with the manufacturer's specifications.
<u>Operation</u>			
Noise	Operation of WWTP plant	Air/windborne pathway causing impacts to amenity	WWTP units are enclosed in order to attenuate noise. WWTP to be maintained in accordance with the manufacturer's specifications.
Odour			WWTP to be maintained in accordance with the manufacturer's specifications. Sludges will be removed as controlled waste by an adequately licensed waste contractor and volumes monitored on a monthly basis. Irrigation area will be fenced and include a 5m spray drift buffer.
Sewage	Spills, leaks or overtopping from containment infrastructure	Overland run-off to surrounding soils, vegetation and waterways	WWTP will be installed on a compacted soil pad. WWTP and associated infrastructure to be constructed of impermeable material. WWTP tanks will be tested with fresh water prior to use. WWTP will be fitted with alarms to warn of high-water levels in the tank or if a pump failure occurs, in which case units can be isolated and shut down. Spills will be immediately removed and cleaned.
Treated effluent	Irrigation of treated effluent to land	Seepage to underlying soil and groundwater	Irrigation area has been designed so run-off, spray drift or other discharge does not occur beyond the irrigation area boundary. Treated effluent will be evenly distributed over the irrigation area to prevent pooling and soil erosion. Monitoring of WWTP water quality discharge parameters will be undertaken in accordance with Existing Licence conditions to ensure discharge compliance.

3.1.2 Receptors

In accordance with the *Guideline: Risk assessments* (DWER 2020), the Delegated Officer has excluded employees, visitors and contractors of the Licence Holder's from its assessment.

Protection of these parties often involves different exposure risks and prevention strategies, and is provided for under other state legislation.

Table 3 below provides a summary of potential environmental receptors that may be impacted as a result of activities upon or emission and discharges from the prescribed premises (*Guideline: Environmental siting* (DWER 2020)).

Table 3: Sensitive environmental receptors and distance from prescribed activity

Environmental receptors	Distance from prescribed activity
Proclaimed surface water area <ul style="list-style-type: none"> • Pilbara surface water area 	Premises mapped within area.
Proclaimed groundwater area <ul style="list-style-type: none"> • Pilbara groundwater area 	Premises mapped within area. Groundwater is >40 mbgl at the location of the Premises.
Threatened Fauna <ul style="list-style-type: none"> • <i>Pseudomys chapmani</i> – Western pebble-mound mouse, ngadji 	Distribution mapped adjacent to the WWTP and irrigation area of the Premises.

3.2 Risk ratings

Risk ratings have been assessed in accordance with the *Guideline: Risk Assessments* (DWER 2020) for those emission sources which are proposed to change and takes into account potential source-pathway and receptor linkages as identified in Section 3.1. Where linkages are incomplete they have not been considered further in the risk assessment.

Where the Licence Holder 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 Licence Holder'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 Licence Holder's controls are not deemed sufficient. Where this is the case the need for additional controls will be documented and justified in Table 4.

The Revised Licence L8654/2012/1 that accompanies this Amendment Report authorises emissions associated with the operation of the Premises.

The conditions in the Revised Licence have been determined in accordance with *Guidance Statement: Setting Conditions* (DER 2015).

Table 4: Risk assessment of potential emissions and discharges from the Premises during operation

Risk Event					Risk rating ¹ C = consequence L = likelihood	Licence Holder's controls sufficient?	Conditions ² of licence	Justification for additional regulatory controls
Source/Activities	Potential emission	Potential pathways and impact	Receptors	Licence Holder's controls				
Operation								
Operation of WWTP	Noise	Air/windborne pathway causing impacts to health and amenity	Threatened fauna adjacent to WWTP and irrigation area	Refer to Section 3.1	C = Minor L = Unlikely Medium Risk	Y	Noise emissions to be regulated by the <i>Environmental Protection (Noise) Regulations 1997</i>	N/A
	Sewage waste	Overland runoff from spills, leaks or overtopping of infrastructure potentially causing ecosystem disturbance	Proclaimed surface and groundwater areas Threatened fauna adjacent to WWTP and irrigation area	Refer to Section 3.1	C = Moderate L = Unlikely Medium Risk	Y	Condition 28, 29 and 30	N/A
Discharge of treated effluent to Irrigation area	Treated effluent	Seepage to underlying soils potentially causing ecosystem disturbance	Proclaimed surface and groundwater areas Threatened fauna adjacent to WWTP and irrigation area	Refer to Section 3.1	C = Moderate L = Unlikely Medium Risk	Y	Conditions 9, 10, 11, 12, 13, 18, 20, 28, 29 and 30	N/A

Note 1: Consequence ratings, likelihood ratings and risk descriptions are detailed in the *Guideline: Risk assessments* (DWER 2020).

Note 2: Proposed Licence Holder's controls are depicted by standard text. **Bold and underline text** depicts additional regulatory controls imposed by department.

4. Consultation

Table 5 provides a summary of the consultation undertaken by the department.

Table 5: Consultation

Consultation method	Comments received	Department response
Shire of East Pilbara advised of proposal 1 July 2021	None received	N/A
Licence Holder was provided with draft amendment 20 August 2021	The Licence Holder advised on 24 August 2021 that they had no comments on the draft Licence amendment and requested the Revised Licence be issued as soon as possible.	Noted.

5. Conclusion

Based on the assessment in this Amendment Report, the Delegated Officer has determined that a Revised 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 6 provides a summary of the proposed amendments and will act as record of implemented changes. All proposed changes have been incorporated into the Revised Licence as part of the amendment process.

Table 6: Summary of licence amendments

Condition no.	Proposed amendments
N/A Prescribed premises category description	Increase in Category 85 capacity to 64 cubic metres per day
Condition 1 Table 1	Increase in sewage waste acceptance quantity limit to 64 cubic metres per day
Condition 11	Remove reference to 'Section 2' of Licence as redundant with new formatting
Condition 24 Table 9	Remove reference to redundant forms, include reference and location of AACR
Conditions 28, 29 and 30	Inclusion of construction works and reporting conditions to facilitate the installation of additional WWTP infrastructure and the expansion of the irrigation area
N/A Schedule 2	Insertion of Schedule 2: N1 Notification as missing from previous Licence

Table 7: Consolidation of licence conditions in this amendment

Existing condition	Condition summary	Revised licence condition	Conversion notes
N/A	Contents and introduction	Licence History and Interpretation	Redundant text deleted and new text incorporated in line with new formatting.
1.1.1 1.1.2	Interpretation and definitions	N/A Interpretation section, Definitions section (Table 13)	Redundant condition. Revised to current licensing format.
1.1.3	Australian or other standard	N/A Interpretation section, Definitions section (Table 13)	Redundant condition. Revised to current licensing format.
1.1.4	Reference to code of practice	N/A Interpretation section, Definitions section (Table 13)	Redundant condition. Revised to current licensing format.
1.2.1 Table 1.2.1	Waste acceptance	Condition 1 Table 1	Revised to new numbering. Increase in sewage quantity limit.
1.2.2	Non-conforming waste	Condition 2	Revised to new numbering.
1.2.3 Table 1.2.2	Waste processing	Condition 3 Table 2	Revised to new numbering.
1.2.4	Landfill activity management	Condition 4	Revised to new numbering.
1.2.5 Table 1.2.3	Cover requirements	Condition 5 Table 3	Revised to new numbering.
1.2.6	Security measures	Condition 6	Revised to new numbering.
1.2.7	Windblown waste	Condition 7	Revised to new numbering.
1.2.8	Burning of waste	Condition 8	Revised to new numbering.
1.2.9	Disposal via irrigation	Condition 9	Revised to new numbering.
1.2.10	Irrigation management	Condition 10	Revised to new numbering.
2.1.1	Exceedances	Condition 11	Revised to new numbering. Reference to redundant Section 2 of Licence removed.
2.2.1 Table 2.2.1	Emissions to land	Condition 12 Table 4	Revised to new numbering.
2.2.2 Table 2.2.2	Emission limits to land	Condition 13 Table 5	Revised to new numbering.

Existing condition	Condition summary	Revised licence condition	Conversion notes
3.1.1	Water sampling requirements	Condition 14	Revised to new numbering.
3.1.2	Monthly and quarterly monitoring	Condition 15	Revised to new numbering.
3.1.3	Calibration of equipment	Condition 16	Revised to new numbering.
3.1.4	Calibration requirements not met	Condition 17	Revised to new numbering.
3.2.1 Table 3.2.1	Monitoring of emissions to land	Condition 18 Table 6	Revised to new numbering.
3.3.1 Table 3.3.1	Monitoring of inputs and outputs	Condition 19 Table 7	Revised to new numbering.
3.4.1 Table 3.4.1	Monitoring of ambient environmental quality	Condition 20 Table 8	Revised to new numbering.
4.1.1	Information requirements	Condition 21	Revised to new numbering.
4.1.2	AACR	Condition 22	Revised to new numbering.
4.1.3	Complaints management	Condition 23	Revised to new numbering.
4.2.1 Table 4.2.1	AER	Condition 24 Table 9	Revised to new numbering. Redundant references to forms deleted, AACR reference and location included.
4.2.2	AER additional requirements	Condition 25	Revised to new numbering.
4.2.3 Table 4.2.2	Non-annual reporting requirements	Condition 26 Table 10	Revised to new numbering.
4.3.1 Table 4.3.1	Notification	Condition 27 Table 11	Revised to new numbering.
N/A	Works specifications	Condition 28 Table 12	Design and installation requirements for additional WWTP infrastructure and irrigation area extension.
N/A	Environmental Compliance Report	Condition 29	Submission of report to demonstrate compliance with installation specifications.
N/A	Environmental Compliance Report requirements	Condition 30	Requirements for inclusion in the Environmental Compliance Report.
N/A Schedule 1	Premises map Map of monitoring locations	N/A Schedule 1	In text references updated.

Existing condition	Condition summary	Revised licence condition	Conversion notes
N/A	Schedule 2	Schedule 2: N1 Notification	Inclusion of N1 notification form as missing from previous Licence

References

1. Department of Environment Regulation (DER) 2015, *Guidance Statement: Setting Conditions*, Perth, Western Australia.
2. Department of Water and Environmental Regulation (DWER) 2020, *Guideline: Environmental Siting*, Perth, Western Australia.
3. DWER 2020, *Guideline: Risk Assessments*, Perth, Western Australia.

Appendix 1: Application validation summary

SECTION 1: APPLICATION SUMMARY (as updated from validation checklist)				
Application type				
Amendment to licence	<input checked="" type="checkbox"/>	Current licence number:	L8654/2012/1	
		Relevant works approval number:		N/A <input checked="" type="checkbox"/>
Date application received		15 April 2021		
Applicant and Premises details				
Applicant name/s (full legal name/s)		Mineral Resources Limited		
Premises name		Phil's Creek Project		
Premises location		M47/1359, M47/1421 and L47/336		
Local Government Authority		Shire of East Pilbara		
Application documents				
HPCM file reference number:		DER2015/001584-1~4		
Key application documents (additional to application form):		Report – "Phil's Creek Project Licence L8654/2012/1 amendment application attachments, April 2021"		
Scope of application/assessment				
Summary of proposed activities or changes to existing operations.		<p>Current licence includes Category 85 for the mine camp WWTP and associated sprayfield.</p> <p>Due to expansion of the camp a licence amendment is sought to increase the WWTP capacity from 49 cubic metres per day up to 64 cubic metres per day.</p> <p>An additional balance tank and WWTP unit will be installed adjacent to the existing WWTP facility. An additional sprayfield will be constructed adjacent to the existing sprayfield, increasing the sprayfield area by 4,286 m². Total irrigation area will be 14,000 m².</p> <p>Applicant notes the quality of the WWTP effluent is not expected to change following the proposed modifications.</p> <p>No changes are proposed in relation to Categories 5 and 89.</p>		

Category number/s (activities that cause the premises to become prescribed premises)

Table 1: Prescribed premises categories

Prescribed premises category and description	Assessed production or design capacity	Proposed changes to the production or design capacity (amendments only)
Category 5: Processing or beneficiation of metallic or non-metallic ore	2,400,000 tonnes per annual period	N/A
Category 85: Sewage facility	49 m ³ per day.	Increase the WWTP capacity from m ³ per day up to 64 m ³ per day.
Category 89: Putrescible landfill site	100 tonnes per annual period	N/A

Legislative context and other approvals

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?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Referral decision No: Managed under Part V <input checked="" type="checkbox"/> Assessed under Part IV <input type="checkbox"/>
Does the applicant hold any existing Part IV Ministerial Statements relevant to the application?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Ministerial statement No: EPA Report No:
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 checked="" type="checkbox"/> No <input type="checkbox"/>	Mining lease / tenement <input checked="" type="checkbox"/> Expiry: 2031
Has the applicant obtained all relevant planning approvals?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/>	Not required with mining tenements.
Has the applicant applied for, or have an existing EP Act clearing permit in relation to this proposal?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	CPS No: CPS 5855/1
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
Has the applicant applied for, or have an existing RIWI Act licence or permit in relation to this proposal?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Licence/permit No: GWL174940 (5)

Does the proposal involve a discharge of waste into a designated area (as defined in section 57 of the EP Act)?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Name: Pilbara groundwater/surface water areas Type: Proclaimed Groundwater Area/Surface Water Area Has Regulatory Services (Water) been consulted? Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/> Regional office: North West
Is the Premises situated in a Public Drinking Water Source Area (PDWSA)?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	N/A
Is the Premises subject to any other Acts or subsidiary regulations (e.g. <i>Dangerous Goods Safety Act 2004, Environmental Protection (Controlled Waste) Regulations 2004, State Agreement Act xxxx</i>)	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<i>Mining Act 1978</i>
Is the Premises within an Environmental Protection Policy (EPP) Area?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Is the Premises subject to any EPP requirements?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
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"/>	Classification: N/A Date of classification: N/A