



Decision Document

Environmental Protection Act 1986, Part V

Proponent: Goldview Metals Limited

Licence: L8617/2011/2

Registered office: 8 May Avenue
SUBIACO WA 6008

ACN: 079 580 055

Premises address: New Orient Gold Mine
Mining Tenement M21/66 and M21/66
CUE WA 6640

Issue date: Thursday, 12 February 2015

Commencement date: Friday, 20 February 2015

Expiry date: Wednesday, 19 February 2020

Decision

Based on the assessment detailed in this document, the Department of Environment Regulation (DER) has decided to issue a licence. DER considers that in reaching this decision, it has taken into account all relevant considerations.

Decision Document prepared by: Cathy Scheib
Licensing Officer

Decision Document authorised by: Alana Kidd
Manager Licensing – (Resource Industries)



Contents

| | |
|--|----|
| Decision Document | 1 |
| Contents | 2 |
| 1 Purpose of this Document | 2 |
| 2 Administrative summary | 2 |
| 3 Executive summary of proposal and assessment | 4 |
| 4 Decision table | 5 |
| 5 Advertisement and consultation table | 10 |
| 6 Emissions and discharges risk assessment framework | 11 |

1 Purpose of this Document

This decision document explains how DER has assessed and determined the application for a works approval or licence, and provides a record of DER's decision-making process and how relevant factors have been taken into account. Stakeholders should note that this document is limited to DER's assessment and decision making under Part V of the *Environmental Protection Act 1986*. Other approvals may be required for the proposal, and it is the proponent's responsibility to ensure they have all relevant approvals for their Premises.

2 Administrative summary

| Administrative details | | |
|---|---|---|
| Application type | Works Approval <input type="checkbox"/> New Licence <input checked="" type="checkbox"/> Licence amendment <input type="checkbox"/> Works Approval amendment <input type="checkbox"/> | |
| Activities that cause the premises to become prescribed premises | Category number(s) 6 | Assessed design capacity 163,000 tonnes per annual period |
| Application verified | Date: N/A | |
| Application fee paid | Date: N/A | |
| Works Approval has been complied with | Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/> | |
| Compliance Certificate received | Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/> | |
| Commercial-in-confidence claim | Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> | |
| Commercial-in-confidence claim outcome | | |
| Is the proposal a Major Resource Project? | Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> | |
| Was the proposal referred to the Environmental Protection Authority (EPA) under Part IV of the <i>Environmental Protection Act 1986</i> ? | Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> | Referral decision No: Managed under Part V <input type="checkbox"/> Assessed under Part IV <input type="checkbox"/> |
| Is the proposal subject to Ministerial Conditions? | Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> | Ministerial statement No: EPA Report No: |



| | |
|--|---|
| Does the proposal involve a discharge of waste into a designated area (as defined in section 57 of the <i>Environmental Protection Act 1986</i>)? | Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Department of Water consulted Yes <input type="checkbox"/> No <input type="checkbox"/> |
| Is the Premises within an Environmental Protection Policy (EPP) Area Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> If Yes include details of which EPP(s) here. | |
| Is the Premises subject to any EPP requirements? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> If Yes, include details here, e.g. Site is subject to SO ₂ requirements of Kwinana EPP. | |



3 Executive summary of proposal and assessment

Mr Victor Michael Caruso was issued *Environmental Protection Act 1986* licence L8617/2011/1 in February 2011 for the New Orient Gold Mine (New Orient). The registered owner of New Orient has now been changed to Goldview Metals Limited (Goldview). Mr Caruso owns Goldview. New Orient has been assessed as 'prescribed premises' category number 6, under Schedule 1 of the *Environmental Protection Regulations 1987*.

Mining has taken place on M21/66 and M21/140 for over 100 years with a mixture of alluvial, open pit and underground operations over that time. New Orient is located on mining tenements M21/66 and M21/140 in the Murchison Goldfields, approximately 20 kilometres (km) south of Cue and 540 km north east of Perth. The nearest residence is located in the town of Cue.

No mining or dewatering has occurred at New Orient since the issuing of the licence in 2011. Goldview proposes to locate a mobile Carbon in Pulp (CIP) processing facility at New Orient for the processing of the mined ore. Ore processing at New Orient is expected to be less than 30,000 tonnes per year. Goldview will be required to submit an application to DER for the CIP facility and the associated infrastructure. This application will also include details on the refurbishment of the tailings storage facility. The next phase of development currently planned is to take bulk samples from the prospective areas on M21/66 and M21/140 to confirm that the resources can be economically mined and processed. It is likely that some dewatering of surficial aquifers will be required on M21/140 to enable bulk sampling to take place on this tenement. As the geology of this area is consistent across the area of interest there is no difference in water quality from that discharged from the currently licenced operations on M21/66 expected.

Lake Austin is a large inland saline closed basin and covers approximately 770 square kilometres. The lake has a temporary water regime and fills infrequently, generally in response to large rainfall events, and is mainly dry for extended periods of time. Both Mining Tenements are part of the Lake Austin system with the centre land mass of the lease being 7.5 metres above the highest groundwater surface. Groundwater samples from water within the existing mine pit indicate an electrical conductivity (EC) of about 240 000 $\mu\text{S}/\text{cm}$. Groundwater samples from the proposed dewatering area on M21/140 are expected to be similar.

Dewatering operations at New Orient consist of groundwater being extracted from an existing mine shaft to lower the local groundwater level. This will allow for the excavation of a future open mine pit and subsequent mining operations to occur. The extracted water will be pumped into an 80,000 litre holding tank or settling pond, from which future process water will be drawn. Excess water from this tank or pond (overflow) will then be discharged to Lake Austin. The holding tank/pond assists in settling any suspended solids in the dewatering water prior to discharge.

The potential impacts from the dewatering discharge are expected to be localised due the extensive area of Lake Austin and the relatively small discharge quantity from New Orient. Samples from all strata to be excavated during mining operations have been sampled and analysed for potential acid rock drainage. The results suggest there is no risk of acid rock drainage occurring. Water samples from below the surface of Lake Austin near the operation indicate that the EC of the water is 530 000 $\mu\text{S}/\text{cm}$. This is more than double the expected discharge quality which is approximately 240 000 $\mu\text{S}/\text{cm}$.

The quantity of water discharged to Lake Austin will be recorded monthly during operations, and entered into a log book. Water discharge to Lake Austin will also be sampled quarterly for total dissolved solids (TDS), total suspended solids (TSS) and pH. The discharge water quality will be monitored annually for a standard suite of metals. The discharge point to Lake Austin will be underlain with convoluted and ruffled matting to avoid scouring of the lake's bed.

4 Decision table

All applications are assessed in line with the *Environmental Protection Act 1986*, the *Environmental Protection Regulations 1987* and DER's Operational Procedure on Assessing Emissions and Discharges from Prescribed Premises. Where other references have been used in making the decision they are detailed in the decision document.

| DECISION TABLE | | | Reference documents |
|----------------------------------|---|---|---|
| Works Approval / Licence section | Condition number W = Works Approval L = Licence | Justification (including risk description & decision methodology where relevant) | |
| General conditions | L – no conditions | <p>Normal operation Conditions referencing the Code of Practice for the Storage and handling of dangerous goods have been removed as part of Departmental reform and updates to licence templates. In addition, the following assessment has resulted in a change to previous General Conditions.</p> <p><u>Emission Description</u> Emission: Uncontrolled release or spills of liquid chemicals, hydrocarbons and/or dewatering effluent. Impact: Potential contamination to soils and surface water, and damage to vegetation. Controls: No processing is occurring and therefore no liquid chemicals or hydrocarbons are stored on site. Dewatering effluent is limited in volume and is only released according to the conditions of this Licence.</p> <p><u>Risk Assessment</u> Consequence: Minor Likelihood: Rare Risk Rating: Low</p> <p><u>Regulatory Controls</u> A General Condition regarding maintenance of pollution control and monitoring equipment has been removed since:</p> | <p>General provisions of the <i>Environmental Protection Act 1986</i>.</p> <p><i>Environmental Protection (Unauthorised Discharges) Regulations 2004</i>.</p> |



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| | | <ul style="list-style-type: none"> • Pollution control equipment for the dewatering operation includes bundled pipelines and the discharge point Lake-bed protection. Both of these aspects are specified in other conditions (1.2.3 and 2.2.1) and visual inspection of both is also specified in condition 1.2.2. <p>A General Condition regarding immediately recovering, or removing and disposing of spills of environmentally hazardous materials outside an engineered containment system has been removed since:</p> <ul style="list-style-type: none"> • No processing is occurring on the site and therefore there are no liquid chemicals or dangerous goods stored on site; • Condition 1.2.1 limits the uses and handling of dewatering effluent; and • Condition 1.2.3 ensures that where inspections identify that an appropriate level of environmental protection is not being maintained, hat corrective action is taken. <p><u>Residual Risk</u> Consequence: Minor Likelihood: Rare Residual Risk Rating: Low</p> | |
| Premises operation | L 1.2.1 – L1.2.3 L1.2.4 | <p>Minor changes only have been made to the premises operation conditions during this amendment. Discharge points to Lake Austin require matting or rock armouring at the discharge point to reduce the risk of scouring of the lake bed. These erosion protective measures require visual inspections on a quarterly basis during discharge to ensure the integrity of the measures, and that the lake bed is protected. No other changes have been applied to conditions 1.2.1 – 1.2.3 under this amendment.</p> <p>The production or design capacity limit has been added to the Licence under condition 1.2.4 to ensure the operation remains within the approved</p> | General provisions of the <i>Environmental Protection Act 1986</i> . <i>Environmental Protection (Unauthorised Discharges) Regulations 2004</i> . |

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| | | capacity of the Licence. This is added as standard to updated format licences. | |
| Emissions general | L 2.1.1 | General emission conditions are included in the licence as standard. Condition L2.1.1 requires the Licensee to record and investigate the exceedance of any descriptive or numerical limit specified in section 2 of the Licence. | General provisions of the <i>Environmental Protection Act 1986</i> . |
| Point source emissions to air including monitoring | L – no conditions | There are no point source emissions to air from the premises that require regulation through this section. General provisions of the <i>Environmental Protection Act 1986</i> apply. | General provisions of the <i>Environmental Protection Act 1986</i> . |
| Point source emissions to surface water including monitoring | L 2.2.1 | <p>Normal operation <u>Emission Description</u> <i>Emission:</i> Dewatering effluent from dewatering underground workings to facilitate bulk sampling or mining. <i>Impact:</i> Localised, short-term water quality impacts may occur to Lake Austin if dewatering effluent contains elevated suspended sediment or metals. <i>Controls:</i> Dewatering effluent is limited in volume, and will be discharged after being stored in a settling pond. Discharge points will be protected by erosion control measures to reduce suspended sediment load and prevent scouring of the Lake bed. Discharge volumes will be recorded and monitoring of water quality will be conducted.</p> <p><u>Risk Assessment</u> <i>Consequence:</i> Minor <i>Likelihood:</i> Unlikely <i>Risk Rating:</i> Moderate</p> <p><u>Regulatory Controls</u></p> | <p>General provisions of the <i>Environmental Protection Act 1986</i>.</p> <p><i>Environmental Protection (Unauthorised Discharges) Regulations 2004</i>.</p> |



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| | | <p>Condition L2.2.1 is included in the Licence to identify the authorised location of the two dewatering discharge points, adding SW2 under this amendment. L2.2.1 also specifies that the dewatering discharge point be protected by matting or rock armouring to ensure the lake bed is not scoured by the discharging activity. Under this amendment, the monitoring parameters in condition L3.2.1 were updated to reflect:</p> <ol style="list-style-type: none"> i. No cyanide is used on the site as no processing is occurring. Dewatering to facilitate exploration activities and bulk sampling are the only activities occurring on site and therefore the requirement to monitor WAD cyanide has been removed. This requirement would be added to the Licence again if processing were to start and cyanide were to be used; and ii. A standard suite of metals has been added to the monitoring requirements on an annual basis; to assess potential impacts to Lake Austin from input of elevated metals. Where data shows that water quality is acceptable and stable, the need for this requirement should be reassessed. <p><u>Residual Risk</u> Consequence: Minor Likelihood: Unlikely Residual Risk Rating: Moderate</p> | |
| Point source emissions to groundwater including monitoring | L – no conditions | There are no point source emissions to groundwater authorised by this Licence. General provisions of the <i>Environmental Protection Act 1986</i> apply. | General provisions of the <i>Environmental Protection Act 1986</i> . |
| Emissions to land including monitoring | L – no conditions | There are no point source emissions to land authorised by this Licence. General provisions of the <i>Environmental Protection Act 1986</i> apply. | |

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|---|---|--|--|
| Fugitive emissions | L – no conditions | No significant fugitive emissions are anticipated during the dewatering operations. General provisions of the <i>Environmental Protection Act 1986</i> apply. | |
| Odour | L – no conditions | No odour emissions are anticipated during the dewatering operations. General provisions of the <i>Environmental Protection Act 1986</i> apply. | |
| Noise | L – no conditions | No significant noise emissions are anticipated during the dewatering operations. The Licencee is required to comply with the <i>Environmental Protection (Noise) Regulations 1997</i> . | <i>Environmental Protection (Noise) Regulations 1997</i> |
| Monitoring general | L 3.1.1 – 3.1.2 | Condition 3.1.1 has been updated to remove requirements for WAD Cyanide monitoring since this is no longer a requirement of the Licence (since no processing is occurring and no cyanide is used on site). Condition 3.1.2 has been updated to cover annual (during discharge) monitoring added under condition 3.2.1. | General provisions of the <i>Environmental Protection Act 1986</i> . |
| Monitoring of inputs and outputs | L – no conditions | No specified conditions relating to the monitoring of inputs or outputs are required to be added to the licence, since the volume of dewatering effluent discharge is captured under condition L3.2.1. | N/A |
| Process monitoring | L – no conditions | No specified conditions relating to process monitoring are required to be added to the licence, since the volume of dewatering effluent discharge is captured under condition L3.2.1. | General provisions of the <i>Environmental Protection Act 1986</i> . |
| Ambient quality monitoring | L – no conditions | Since surface water emission water volumes and quality are assessed under condition 3.2.1, and as the previous licence did not require ambient quality monitoring, no specified conditions have been included in this section. | General provisions of the <i>Environmental Protection Act 1986</i> . |
| Meteorological monitoring | L – no conditions | No specified conditions have been included in this section. | N/A |

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| Improvements | L – no conditions | No improvement conditions are currently required. | N/A |
| Information | L4.1.1 – 4.1.4 L4.2.1, L4.3.1 | Reporting and notification conditions are included as standard. Updates have been made to the requirements under current departmental reform and updates to licence templates. No other changes have been made during this amendment. | N/A |
| Licence Duration | N/A | No changes have been made to the licence duration during this amendment. | N/A |

5 Advertisement and consultation table

| Date | Event | Comments received/Notes | How comments were taken into consideration |
|------------|---|--|--|
| 12/11/2015 | Proponent sent a copy of draft instrument | Goldview Metals Limited replied on 18/11/2015 to request the issue of the amended licence with no changes. | N/A |



6 Emissions and discharges risk assessment framework

Note: This matrix is taken from the DER Corporate Policy Statement No. 07 – Operational Risk Management

Table 1: Emissions Risk Matrix

| Likelihood | Consequence | | | | |
|----------------|---------------|----------|----------|----------|---------|
| | Insignificant | Minor | Moderate | Major | Severe |
| Almost Certain | Moderate | High | High | Extreme | Extreme |
| Likely | Moderate | Moderate | High | High | Extreme |
| Possible | Low | Moderate | Moderate | High | Extreme |
| Unlikely | Low | Moderate | Moderate | Moderate | High |
| Rare | Low | Low | Moderate | Moderate | High |