



Decision Document

Environmental Protection Act 1986, Part V

Proponent: OZ Youanmi Gold Pty Ltd

Licence: L8275/2008/2

Registered office: Level 1, 16 Ord Street
WEST PERTH WA 6005

ACN: 163 165 697

Premises address: Youanmi Mine
SANDSTONE WA 6639
Tenements M57/10 and M57/51

Issue date: Thursday, 12 December 2013

Commencement date: Sunday, 15 December 2013

Expiry date: Friday, 14 December 2018

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 and legal requirements and that the licence and its conditions will ensure that an appropriate level of environmental protection is provided.

Decision Document prepared by: Nicole Smith
Regional Environmental Officer (Goldfields)

Decision Document authorised by: James Milne
Regional Leader – Industry Regulation
(Goldfields)



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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 it has all relevant approvals for the premises.

Works approval and licence conditions

DER has three types of conditions that may be imposed on works approvals and licences. They are as follows:

Standard conditions

DER has standard conditions that are imposed on all works approvals and licences regardless of the activities undertaken on the premises and the information provided in the application. These are included as the following conditions on works approvals and licences:

Works approval conditions: 1.1.1-1.1.4, 1.2.1, 1.2.2, 5.1.1 and 5.1.2.

Licence conditions: 1.1.1-1.1.4, 1.2.1-1.2.4, 5.1.1-5.1.4 and 5.2.1.

For such conditions, justification within the Decision Document is not provided.

Optional standard conditions

In the interests of regulatory consistency DER has a set of optional standard conditions that can be imposed on works approvals and licences. DER will include optional standard conditions as necessary and are likely to constitute the majority of conditions in any licence. The inclusion of any optional standard conditions are justified in section 4 of this document.

Non-standard conditions

Where the proposed activities require conditions outside the standard conditions suite DER will impose one or more non-standard conditions. These include both premises and sector specific conditions and are likely to occur within few licences. Where used, justification for the application of these conditions will be included in section 4.



2 Administrative summary

Administrative details									
Application type	Works approval <input type="checkbox"/> New licence <input type="checkbox"/> Licence amendment <input checked="" type="checkbox"/> Works approval amendment <input type="checkbox"/>								
Activities that cause the premises to become prescribed premises	<table border="1"> <thead> <tr> <th>Category number(s)</th> <th>Assessed design capacity</th> </tr> </thead> <tbody> <tr> <td>6</td> <td>1,480,000 tonnes per annual period</td> </tr> <tr> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> </tr> </tbody> </table>	Category number(s)	Assessed design capacity	6	1,480,000 tonnes per annual period				
	Category number(s)	Assessed design capacity							
	6	1,480,000 tonnes per annual period							
Application verified	Date: 22 November 2013								
Application fee paid	Date: 26 November 2013								
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 checked="" type="checkbox"/> No <input type="checkbox"/>								
Was the proposal referred to the Environmental Protection Authority (EPA) under Part IV of the <i>Environmental Protection Act 1986</i> ?	<table border="1"> <tr> <td>Yes <input type="checkbox"/> No <input checked="" type="checkbox"/></td> <td> Referral decision No: Managed under Part V <input type="checkbox"/> Assessed under Part IV <input type="checkbox"/> </td> </tr> </table>	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"/>						
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?	<table border="1"> <tr> <td>Yes <input type="checkbox"/> No <input checked="" type="checkbox"/></td> <td> Ministerial statement No: EPA Report No: </td> </tr> </table>	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Ministerial statement No: EPA Report No:						
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>)?	<table border="1"> <tr> <td>Yes <input type="checkbox"/> No <input checked="" type="checkbox"/></td> <td>Department of Water consulted Yes <input type="checkbox"/> No <input type="checkbox"/></td> </tr> </table>	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Department of Water consulted Yes <input type="checkbox"/> No <input type="checkbox"/>						
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

Youanmi mine is located approximately 125 km southeast of Mt Magnet in the East Murchison Goldfields of Western Australia. The mine and evaporation ponds occur on tenements M57/10 and M57/51. The Youanmi licence relates to dewatering to allow access to the Youanmi open pit and underground mines and covers the:

- evaporation pond area to the east, south-east of the mine waste dump;
- containment dams and seepage interceptor drains to the north of tailings storage facility (TSF) 2;
- bundled pipeline route extending from the source to the two storage/evaporation pond areas; and
- five monitoring bores installed as a licence condition (NMB1, NMB2, SMB1, SMB2 and SMB3).

The premises has not been in operation since 1997 and continues to be under care and maintenance.

Dewatering at Youanmi mine commenced in February 2008 with water quality from the mine workings historically found to be approximately 17,000mg/L TDS. Groundwater is between 19m – 35m below ground level (BGL). Standing water levels prior to mining in 1989 are not known. In October 1993 prior to the commencement of mining operations, water levels ranged from 444.8 m AHD to 414 m AHD. The groundwater salinity varies with freshwater within the upper weathered horizon and in bedrock north of the Hillend Fault and highly saline water in the deeper fractures and shears in the Youanmi Deeps underground mine connected to the Main pit.

The evaporation ponds are unlined and constructed in a series of ponds with interconnecting poly pipes. The ponds run at low water levels (~1m depth) to achieve maximum evaporation. A freeboard of 300mm will be maintained for all of the ponds with exception of ponds 2.4 and 3.5 which will be operated at a freeboard of 500mm. These two ponds sit at the lowest point of the whole series of ponds therefore the additional freeboard height provides safeguards to avoid overtopping. Pond embankment wall integrity and pipeline integrity will also be checked 12 hourly. To mitigate against flooding a cut off drain has been installed along the waste rock dump hill slope on the north western side of the southern evaporation ponds to control runoff to that group of ponds. The nearest surface water body is a salt lake, Lake Noondie, approximately 20km to the east of the Youanmi mine.

Vegetation in the Youanmi area is of Mulga (*Acacia anuera*) sheet wash plain. Flora of conservation significance were identified within the Youanmi area including priority flora *Euryomyrtus recurva* and *Baeckea sp.* London Bridge and *Euryomyrtus patrickiae*. However these species of flora are not within the vicinity of the evaporation ponds or the location of dewatering.

On 23 February 2012 an inspection of the Youanmi mine was undertaken and the licensee was found to be non-compliant in the following areas:

- failed to provide to the Director an Annual Environmental Report containing the monitoring data and other collected data required by any condition of this licence by 31 December 2011;
- failed to, by 31 December 2011; provide to the CEO an Annual Audit Compliance Report;
- failed to take measurement of standing water level (SWL) and representative water samples from the compliance monitoring bores;
- were found to be storing more than 100 used tyres on the site in the absence of a licence granted under section 57 of the *Environmental Protection Act 1986* for a prescribed premises category 57 as stated in Schedule 1, Part 1 of the Environmental Protection Regulations 1987; and
- were found to have had a substantial quantity of fuel leaked from the on-site diesel tank.

The first two non-compliances above were rectified by submission of the reports on time for the 2012 reporting year.



4 Decision table

All applications are assessed under the *Environmental Protection Act 1986*, the *Environmental Protection Regulations 1987*, DER's *Policy Statement - Limits and targets for prescribed premises (2006)* and the risk matrix found in section 6. Where other references have been used in making the decision they are detailed in the decision table.

OSC: Optional standard conditions

NSC: Non-standard conditions

DECISION TABLE				
Works approval / licence section	Condition number W = works approval L = licence	OSC or NSC	Justification (including risk description & decision methodology where relevant)	Reference documents
General conditions	L1.2	NSC	Operation Additional standard general conditions will be included on the REFIRE licence L8275/2008/2	
Emissions general	L2	N/A	Operation No specified conditions relating to general emissions have been applied to the licence or as additions to licence L8275/2008/2. This site is currently managed under care and maintenance.	Environmental Protection (Unauthorised Discharges) Regulations, 2004.
Point source emissions to air including monitoring	L2 and L3	N/A	Operation <i>Emission significance – 1</i> <i>Socio-political context – No</i> <i>Risk assessment – E, No regulation, other management mechanisms</i> No significant point source air emissions are expected from the care and maintenance of the Youanmi mine. No specified conditions relating to point source emissions to air or the monitoring of these emissions are required to be added to the licence.	Environmental Protection (Unauthorised Discharges Regulations, 2004). Application supporting documentation

	<p>east from the project site. No specified conditions relating to point source emissions to water or the monitoring of such emissions are required to be added to the licence.</p>	
N/A	<p>Operation <i>Emission significance – 1</i> <i>Socio-political context – No</i> <i>Risk assessment – E, no regulation required.</i></p> <p>A number of monitoring bores are located around the in-pit TSF to detect any changes in water quality or the groundwater levels. Monitoring of these bores will continue to occur while the mine is in care and maintenance. No improvements are required and the monitoring of these bores will remain on the licence.</p>	<p>Environmental Protection (Unauthorised Discharges) Regulations, 2004.</p>

	Due to the potential occurrence of emissions to land occurring groundwater monitoring occurs around the Youanmi mine. evaporation ponds.	
OSC	<p>Operation <i>Emission significance – 1</i> <i>Socio-political context – No</i> <i>Risk assessment – E, No regulation, other management mechanisms</i></p> <p>Minor dust emissions will be generated from vehicles activities during the care and maintenance of the Youanmi mine.</p> <p>No specified conditions relating to fugitive emissions or the monitoring of these emissions are required to be added to the works approval or licence.</p>	General provisions of the <i>Environmental Protection Act 1986</i>
N/A	<p>Operation <i>Emission significance – 1</i> <i>Socio-political context – No</i> <i>Risk assessment – E, No regulation, other management mechanisms</i></p> <p>There will be no odour emissions expected to occur during the care and maintenance of the Youanmi mine. No specified conditions relating to odour emissions have been applied to the licence.</p>	General provisions of the <i>Environmental Protection Act 1986</i>

	Noise emissions are not considered to pose a significant impact due to the remoteness of the operation.	
NSC OSC	<p>Operation <i>Emission significance – 1</i> <i>Socio-political context – No</i> <i>Risk assessment – E, No regulation, other management mechanisms</i></p> <p>Standard general conditions relating to monitoring will be placed on the licence.</p> <p>The licence currently contains a NSC to monitor the water quality and water levels around the site's evaporation ponds. The site water quality monitoring will be ongoing during the care and maintenance of the site.</p> <p>No additional conditions will be placed on the licence relating to monitoring.</p>	General provisions of the <i>Environmental Protection Act 1986</i>
N/A	<p>Operation N/A</p>	General provisions of the <i>Environmental Protection Act 1986</i>

	N/A	<p>Operation The risk assessment of dust emissions and odour emissions were identified to be minor. No meteorological monitoring will be required during the operation of the Youanmi mine.</p>	General provisions of the <i>Environmental Protection Act 1986</i>
	N/A	<p>Operation At this stage, no specific improvement actions are required. The Youanmi mine is currently in care and maintenance. DER will review the environmental performance of the premises when the mine becomes operational again to determine the requirement to include specific improvement conditions in the future.</p>	General provisions of the <i>Environmental Protection Act 1986</i>
	SC	<p>Operation Standard general conditions as well as conditions regarding records, reporting and notifications will be included on the licence under which the Youanmi mine operates.</p>	General provisions of the <i>Environmental Protection Act 1986</i>



6 Emissions and discharges risk assessment matrix

Note: These matrix are taken from the DER Officer's Guide to Emissions and Discharges Risk Assessment (2006).

Table 3: Measures of significance of emissions

Emissions as a percentage of the relevant emission or ambient standard		Worst case operating conditions (95 th percentile)			
		>100%	50 – 100%	20 – 50%	<20%*
Normal operating conditions (50 th percentile)	>100%	5	N/A	N/A	N/A
	50 – 100%	4	3	N/A	N/A
	20 – 50%	4	3	2	N/A
	<20%*	3	3	2	1

*For reliable technology, this figure could increase to 30%

Table 4: Socio-political context of each regulated emission

		Relative proximity of the interested party with regards to the emission				
		Immediately Adjacent	Adjacent	Nearby	Distant	Isolated
Level of community interest or concern*	5	High	High	Medium High	Medium	Low
	4	High	High	Medium High	Medium	Low
	3	Medium High	Medium High	Medium	Low	No
	2	Low	Low	Low	Low	No
	1	No	No	No	No	No

Note: These examples are not exclusive and professional judgement is needed to evaluate each specific case

*This is determined by DER using the *Officer's Guide to Emissions and Discharges Risk Assessment* (2006).

Table 5: Emissions risk reduction matrix

		Significance of emissions				
		5	4	3	2	1
Socio-political context	High	A	A	B	C	D
	Medium High	A	A	B	C	D
	Medium	A	B	B	D	E
	Low	A	B	C	D	E
	No	B	C	D	E	E

PRIORITY MATRIX ACTION DESCRIPTORS

A = Do not allow (fix)

B = licence condition (setting limits + EMPs - short timeframes) (setting targets optional)

C = licence condition (setting targets + EMPs - longer timeframes)

D= EIPs, other management mechanisms/licence conditions (monitoring/reporting)/other regulatory tools

E = No regulation, other management mechanisms

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