Government of Western Australia
Department of Water and Environmental Regulation

Amendment Notice 1

Licence Number	L8412/2010/2
Licence Holder	Regis Resources Limited
ACN	009 174 761
File Number:	2012/006893
Premises	Moolart Well Legal description – Mining tenements M38/354, M38/498, M38/499, M38/500 and M38/589 LAVERTON WA 6440
Date of Amendment	18 September 2018

Amendment

The Chief Executive Officer (CEO) of the Department of Water and Environmental Regulation (DWER) has amended the above Licence in accordance with section 59 of the *Environmental Protection Act 1986* (EP Act) as set out in this Amendment Notice. This Amendment Notice constitutes written notice of the amendment in accordance with section 59B(9) of the EP Act.

[redacted]

Tim Gentle

Manager Resource Industries

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

Definitions and interpretation

Definitions

In this Amendment Notice, the terms in Table 1 have the meanings defined.

Table 1: Definitions

Term	Definition
AACR	Annual Audit Compliance Report
ACN	Australian Company Number
Amendment Notice	refers to this document
Category/ Categories/ Cat.	categories of Prescribed Premises as set out in Schedule 1 of the EP Regulations
CEO	means Chief Executive Officer. CEO for the purposes of notification means: Director General Department Administering the *Environmental Protection Act 1986* Locked Bag 33 Cloisters Square PERTH WA 6850 info@dwer.wa.gov.au
Delegated Officer	an officer under section 20 of the EP Act
Department	means the department established under section 35 of the *Public Sector Management Act 1994* and designated as responsible for the administration of Part V, Division 3 of the EP Act.
DWER	Department of Water and Environmental Regulation
EPA	Environmental Protection Authority
EP Act	*Environmental Protection Act 1986* (WA)
EP Regulations	*Environmental Protection Regulations 1987* (WA)
Existing Licence	The Licence issued under Part V, Division 3 of the EP Act and in force prior to the commencement of and during this Review
Licence Holder	Regis Resources Limited
m^3	cubic metres
Occupier	has the same meaning given to that term under the EP Act.
Prescribed Premises	has the same meaning given to that term under the EP Act.

Premises	refers to the premises to which this Decision Report applies, as specified at the front of this Decision Report.
Risk Event	as described in *Guidance Statement: Risk Assessment*

Amendment Notice

This amendment is made pursuant to section 59 of the *Environmental Protection Act 1986* (EP Act) to amend the Licence issued under the EP Act for a prescribed premises as set out below. This notice of amendment is given under section 59B(9) of the EP Act.

This notice is limited only to an amendment for Category 85 and addition of Category 6. No changes to the aspects of the original Licence relating to Category 5, 73, 89 have been requested by the Licence Holder.

The following guidance statements have informed the decision made on this amendment:

- *Guidance Statement: Regulatory Principles (July 2015)*
- *Guidance Statement: Setting Conditions (October 2015)*
- *Guidance Statement: Decision Making (February 2017)*
- *Guidance Statement: Risk Assessment (February 2017)*

Amendment description

Regis Resources Limited (the Licence Holder) submitted an application to amend licence L8412/2010/2 on 22 January 2018. The amendment is for the addition of Category 6 Mine dewatering and an increase in throughput for Category 85 sewage facility.

Dewatering:

The Licence Holder currently operates five gold mines at the Duketon Gold Project, in the Mt Margaret Mineral Field, 80km north of Laverton, Western Australia. Additional mines are proposed to open in 2018.

Water is supplied to these operations principally by open pit dewatering and recycled from Tailings Storage Facility. Long term water balance modelling for the entirety of the Duketon Project has shown that water supplied by necessary open pit dewatering will exceed water required by operations. To overcome this excess, the Licence Holder is proposing to discharge water into pit voids at the Moolart Well Gold Mine. Water balance modelling predicts an excess of up to 18,408,600m^3 over the course of seven years (2018-2024).

Moolart Well mine site is a collection of open pits which cover a 185.8 Ha area. The maximum designed depth is to 90m. The Licence Holder is proposing to discharge dewater at three separate locations South, Central and North as shown in Figure 1 with a potential storage of 26,733,862m^3 beneath the natural groundwater level (525mAHD) . The Licence Holder is proposing an annual discharge of 2,629,800m^3 over 7 years that is a total of 18,408,600 m^3 at the three pits (South, Central and North).

Wastewater treatment plant:

The Licence Holder is also proposing to increase the approved premises production for the wastewater treatment plant (Category 85) from 77m^3/day to 90m^3/day and an increase of treated wastewater irrigation limit from 60m^3 to 75m^3. The expected increase of emissions to land are shown in Figure 2, there is no change proposed to current licence limit for total phosphorus or total nitrogen.

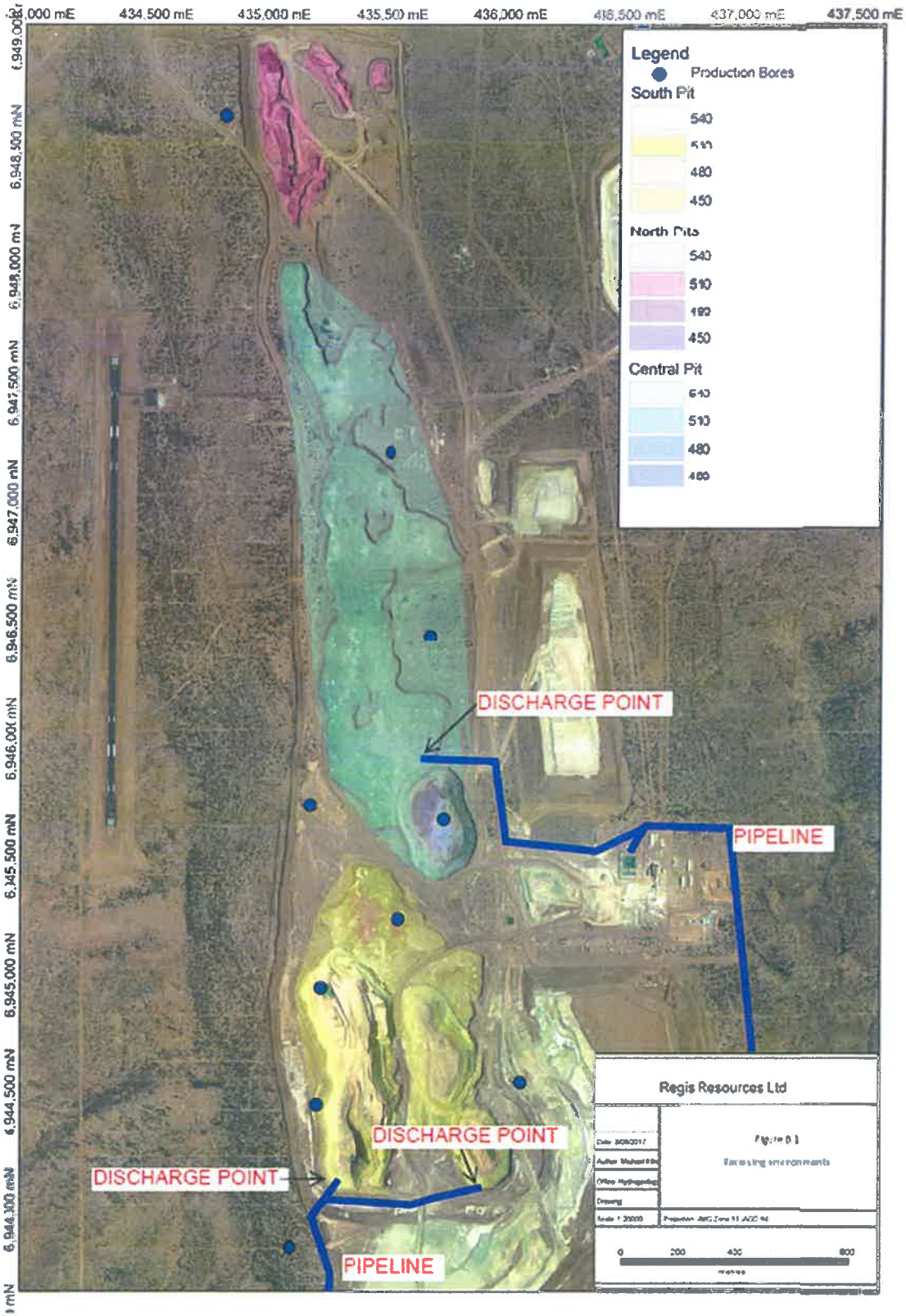


Figure 1: Discharge points

	Total Nitrogen	Total Phosphorus	Total Suspended Solids (TSS)	BOD	Oil & Grease	Surfactants
Water Quality Protection Note 22 Guidelines - Criteria	480 kg/ha/year[4]	120 kg/ha/year	N/A	N/A	N/A	N/A
2016 AER data	220.8 kg/ha/year	56.7 kg/ha/year[3]	1169.2 kg/ha/year	506.3 kg/ha/year	101.6 kg/ha/year	6.0 kg/ha/year
Licence Amendment 75m³ per day	301.1 kg/ha/year	77.3 kg/ha/year	1594.4 kg/ha/year	690.4 kg/ha/year	138.5 kg/ha/year	8.2 kg/ha/year
Increase	80.3 kg/ha/year	20.6 kg/ha/year	452.2 kg/ha/year	184.1 kg/ha/year	36.9 kg/ha/year	2.2 kg/ha/year

[4]Irrigated over a 1ha evaporation basin.

Figure 2: Projected emissions to land

Table 2 below outlines the proposed changes to the Licence:

Table 2: Proposed design / throughput capacity changes

Category	Current throughput capacity	Proposed throughput capacity	Description of proposed amendment
6	N/A	2,642,857m³ / year	New category on licence
85	77m³ / day	90m³ / day	Increase in design capacity

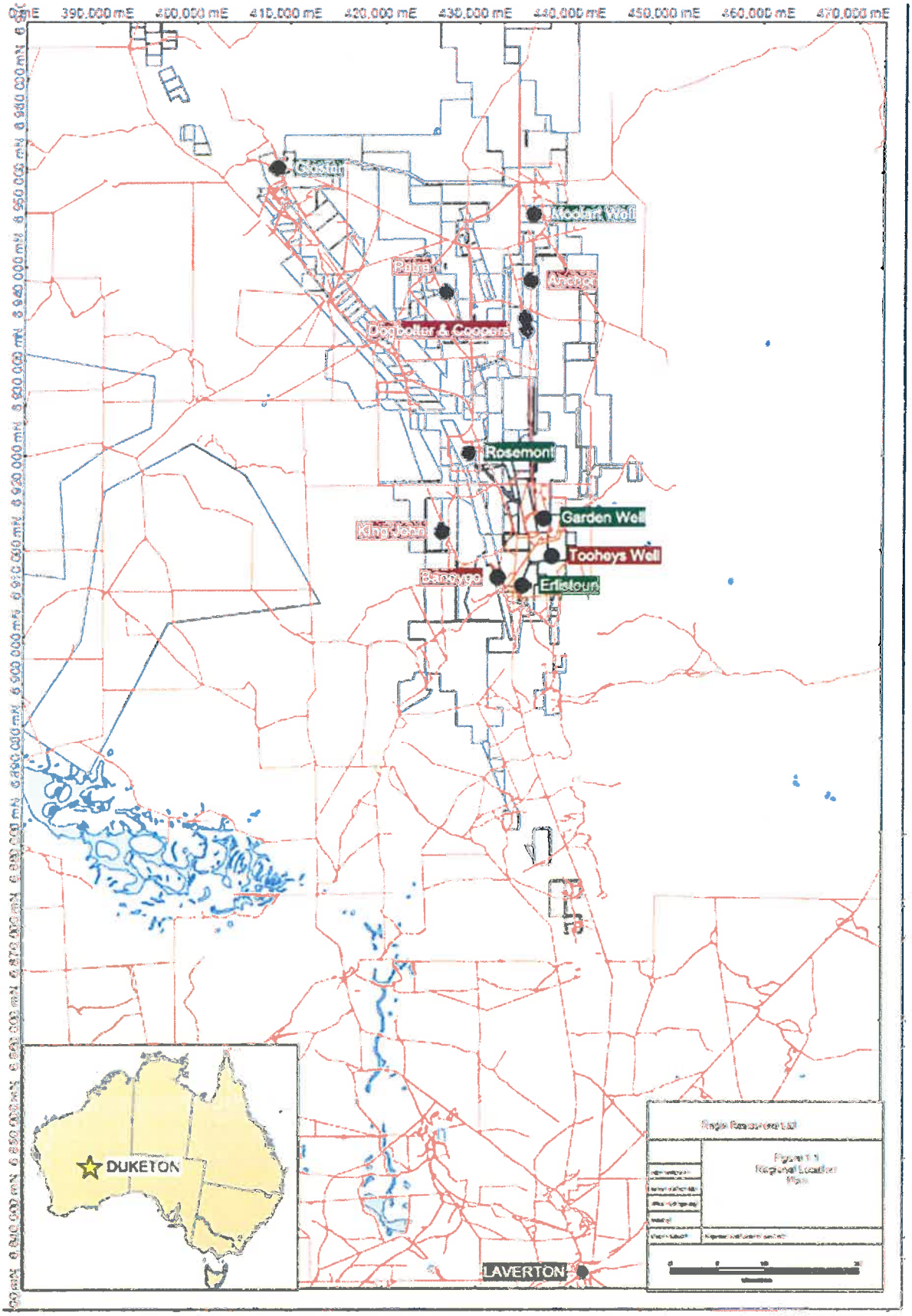


Figure 3: Regional location

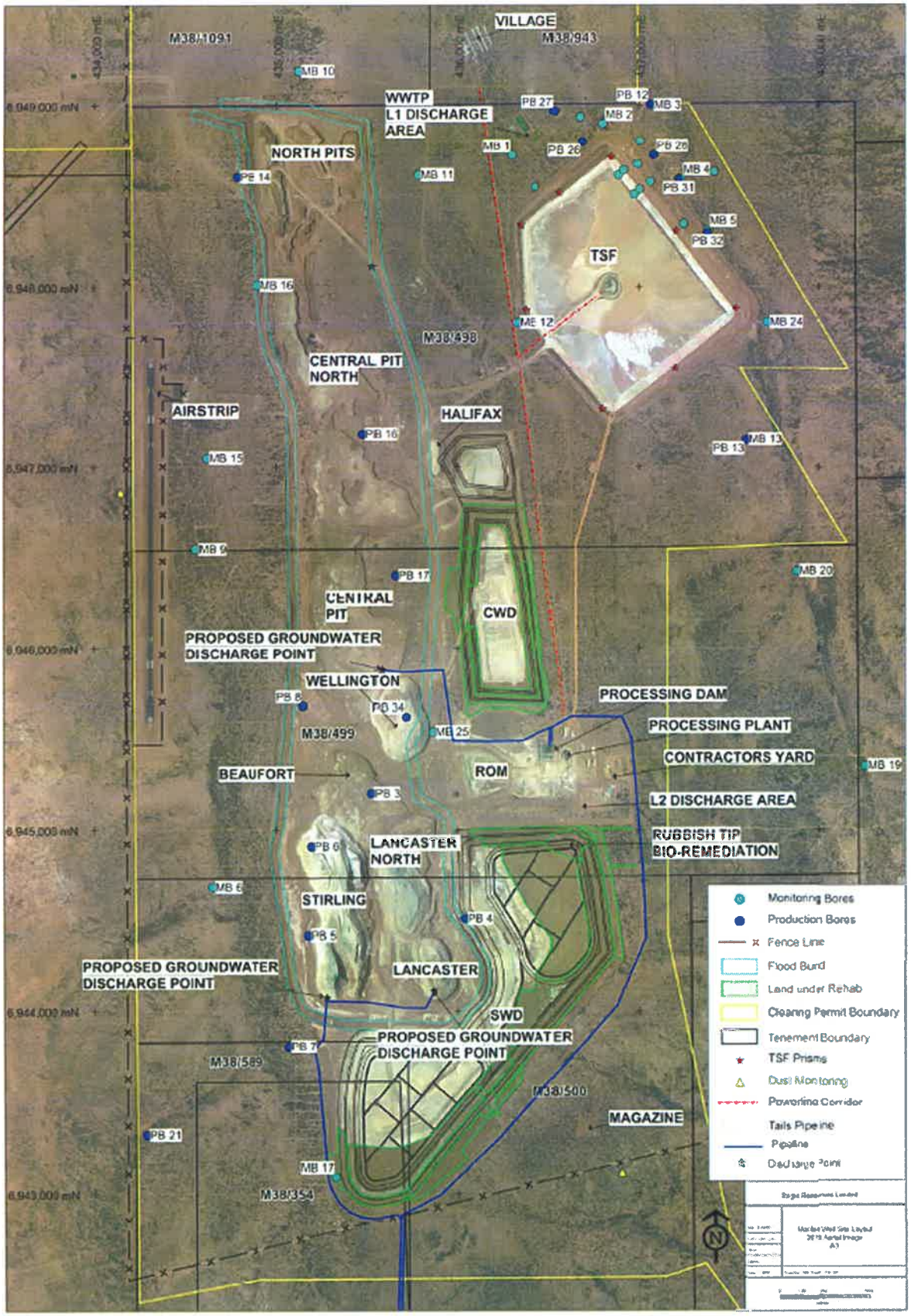


Figure 4: Moolart Well Site Plan

Other approvals

The Licence Holder has provided the following information relating to other approvals as outlined in Table 3.

Table 3: Relevant approvals

Legislation	Number	Approval
RIWI Act 1914	1. GWL169314(2) Moolart Well 2. GWL180893 (1) Garden Well and Erlistoun 3. GWL175928(1) Rosemont 4. GWL182924(1) Gloster	1. Approval to extract 5,000,000kL for mine dewatering at and dust suppression 2. Approval to extract 12kL of water for dewatering for mining purposes; dust suppression for mining purposes; mineral ore processing and other mining purposes; mining camp processes and rehabilitation processes 3. Approval to extract 1,300,000kL for mineral ore processing and other mining purposes and dewatering for mining purposes and dust suppression for mining purposes 4. Approval to extract 1,095,750kL of water for dewatering for mining purposes and dust suppression for mining purposes
Mining Act 1978	Mining Proposal	Mining Lease 38/354, 38/498, 38/499, 38/500, 38/589

Amendment history

Table 4 provides the amendment history for L8412/2010/2.

Table 4: Licence amendments

Instrument	Issued	Amendment
L8412/2010/2	*31/03/2016*	*Amendment to correct the limit for the treated wastewater discharged to the irrigation area.*
L8412/2010/2	*24/08/2018*	*Amendment Notice 1*

Location and receptors

Table 5 below lists the relevant sensitive land uses in the vicinity of the Prescribed Premises which may be receptors relevant to the proposed amendment.

Table 5: Receptors and distance from activity boundary

Residential and sensitive premises	Distance from Prescribed Premises
Banjawarn Station	>50km North east
Erlistoun Station	>100km south west
Mulga Queen (community)	55 km north east

Table 6 below lists the relevant environmental receptors in the vicinity of the Prescribed Premises which may be receptors relevant to the proposed amendment.

Table 6: Environmental receptors and distance from activity boundary

Environmental receptors	Distance from Prescribed Premises
Major watercourses / waterbodies	*Within the Goldfields – Lake Carey Groundwater Management Unit.* *The alluvium overlies calcrete, palaeochannel and fractured rock aquifers. The groundwater flow direction is north to north-westerly, though during mine dewatering this will swing to a westerly direction.* *Moolart Well is located within the northern catchment of the Western Plateau Drainage Division of the Salt Lake Surface Water Management Area; a large arid central inland catchment. Drainage lines in the area are relatively small, resulting in slow moving sheet flow during periods of high rainfall. Sheet flow moves in a northerly direction toward a local drainage depression and eventually to Lake Wells.*
Groundwater	*Average groundwater depth is 15mbgl with salinity measures of 1400 to 2200 mg/L (considered to be potable to brackish in the Goldfields).*
Pastoral bore	*2km west-northwest of the Moolart Well tailings storage facility and 4km north-northwest of the process plant*
Fauna	*Three species of conservation significant fauna have been sighted within the Duketon Gold Project area; the Australian bustard (Ardeotis australis), the Fork-tailed Swift (Apus pacificus), and the rainbow bee-eater (Merops ornatus).*
Flora	*Two priority flora species Baeckea sp. Melita Station and Eremophila pungens occur within the area.*

Risk assessment

Tables 7 and 8 below describe the Risk Events associated with the amendment consistent with the *Guidance Statement: Risk Assessments*. Both tables identify whether the emissions present a material risk to public health or the environment, requiring regulatory controls.

Table 7: Risk assessment for proposed amendments during construction

Risk Event						Consequence rating	Likelihood rating	Risk	Reasoning
Source/Activities		**Potential emissions**	**Potential receptors**	**Potential pathway**	**Potential adverse impacts**				
Cat 6 *Construction, mobilisation and positioning of infrastructure*	*In-pit dewater pipelines to Moolart Well*	***Noise***	*No residences or other sensitive receptor in proximity*	*Air/ wind dispersion*	*Health and amenity impacts*	*N/A*	*N/A*	*N/A*	*No receptor present*
		Dust							

Table 8: Risk assessment for proposed amendments during operation

Risk Event						Consequence rating	Likelihood rating	Risk	Reasoning
Source/Activities		**Potential emissions**	**Potential receptors**	**Potential pathway**	**Potential adverse impacts**				
Cat 6 *Mine dewatering: premises on which water is extracted and discharged into the environment to allow mining of ore*	*Discharge to In-pit Moolart Well*	*Groundwater contamination from acid & metalliferous drainage (AMD) with water table rebound*	*Groundwater*	*Lateral movement of pit lake water through pit walls*	*Contamination of groundwater*	*Minor*	*Unlikely*	*Medium*	The discharge of mine dewatering effluent over a seven year period into mine pits at the Moolart Well site is likely to cause the water table to locally rise by up to 6 metres, potentially causing contaminated water in the pits to migrate into the surrounding saprolite aquifer; Contaminated groundwater is unlikely to travel more than a few hundred metres away from the pits before the hydraulic gradient on the water table reverses, and groundwater flows back towards the pits; and Consequence from the discharge of dewatering effluent to mine pits at the site considered to be minor due to the limited potential for contaminated groundwater to travel far from the pits. **Applicant controls conditioned.**

Risk Event						Consequence rating	Likelihood rating	Risk	Reasoning
Source/Activities		Potential emissions	Potential receptors	Potential pathway	Potential adverse impacts				
		Exceeding the natural groundwater level in the vicinity of the receiving pit	*Surrounding native vegetation*	*Lateral movement of pit lake water through pit walls*	*Decline / death of vegetation via saline water uptake from roots*	*Minor*	*Unlikely*	*Medium*	The discharge of mine dewatering effluent over a seven year period into mine pits at the Moolart Well site is likely to cause the water table to locally rise by up to 6 metres. Mounding can increase groundwater levels from lateral seepage through pit walls. Under worst case scenario, the discharge quality will be on average 5,000mg/L TDS with a maximum of around 8,500mg/L TDS. The receiving environment has a salinity of approximately 1,400mg/L to 2200mg/L TDS. In the event that natural groundwater levels are exceeded, this can impact on any surrounding vegetation if it reaches depth of roots and can cause vegetation stress or death. The modelled discharge will result in approximate natural ground water depth (525mAHD), ground level is approximately 540mAHD around all pits. Mulga communities consistent with that found at Moolart Well typically have root systems <5m, therefore it is unlikely that the changing level of groundwater will have a significant effect on vegetation. **Applicant controls conditioned.**
		Overtopping of pit saline water	*Native vegetation adjacent to the pipeline alignment*	*Direct discharge*	*Decline / death of vegetation via inundation*	*Minor*	*Unlikely*	*Medium*	Overtopping could occur in abnormal operation events if dewatering is not managed in conjunction with major rainfall events. Under worst case scenario, the discharge quality will be on average 5,000mg/L TDS with a maximum of around 8,500mg/L TDS. The receiving environment has a salinity of approximately 1,400mg/L to 2200mg/L TDS. The Licence Holder is proposing to discharge 2,629,800m^3 per year over 7 years (total

Risk Event						Consequence rating	Likelihood rating	Risk	Reasoning
Source/Activities		Potential emissions	Potential receptors	Potential pathway	Potential adverse impacts				
									18,408,600m^3). The total volume of potential storage at Moolart Well beneath groundwater level is (525mAHD) is 26,733,862m^3. The climate in the area is arid to semi-arid. The annual average evaporation in the area is approximately 3800mm which exceeds annual average rainfall of approximately 250mm. Given the capacity of the pits and the Licence Holder's proposal to maintain a minimum vertical freeboard of 15m below the lowest crest level at all times, the likelihood of an overtopping event of pit is assessed as unlikely and therefore the overall risk of overtopping is medium. **Applicant controls conditioned.**
		Dewatering effluent containing toxic metals / acid drainage discharged to pit	*Birds drinking the water or feeding on organisms in the pit lake*	*Birds drinking the water or feeding on plants or invertebrates in the in the pit lake*	*Poisoning of birds*	*Minor*	*Unlikely*	*Low*	Overall risk rated as low because the pit lake would only be likely to be attractive to water fowl if there are shallow areas or islands. The pit lakes will not include such features. If insects breed in the lake this may attract insectivorous birds such as the conservation–significant fork tailed swallow which may then be impacted by toxins contained in their food. However, even if this did occur, given that this species is migratory it is unlikely that they would remain in the area for a sufficient time for there to be significant impacts on the health of these birds
	Dewatering pipeline	*Rupture of pipeline causing discharge to land*	*Native vegetation adjacent to pipeline alignment*	*Direct discharge*	*Decline / death of vegetation via inundation*	*Moderate*	*Possible*	*Medium*	Rupture or failure of the pipeline may occur during abnormal operating events causing the discharge of mine dewater to native vegetation. The Licence Holder is proposing to construct the dewatering pipeline from HDPE with a thickness ranging from 25-47mm and fiberglass with a thickness of 10mm.

Risk Event						Consequence rating	Likelihood rating	Risk	Reasoning
Source/Activities		Potential emissions	Potential receptors	Potential pathway	Potential adverse impacts				
									The pipelines will be located in a v-drain along an active haul road. Monitoring will be conducted via water line pressure and flowmeters, pipeline differential flowmeter alarm and visual inspections once every 24hours, any faults will be reported immediately. **Wording of existing condition has been updated to make adequate containment mandatory and requiring written record of each inspection signed by responsible person.**
Cat 85 *Sewage Facility*	*Treated wastewater*	*Wastewater associated with effluent treatment and disposal*	*Soil and Native vegetation*	*Direct discharge to land*	*Nutrient load and impacts on native vegetation health, reduction in soil quality resulting in plant deaths.*	*Moderate*	*Possible*	*Medium*	Nutrient rich wastewater discharged to land through waterlogging / soil eutrophication causing impacts to native vegetation and soil. The Current controls on the Licence include: • The irrigation area to be inspected daily to ensure no ponding is occurring. • The boundary of the fence will also be inspected daily to ensure no treated effluent is ponding and running through the perimeter; and • A visual and operation check on the sprinkler system to ensure it is functioning in the manner in which it was designed. The expected emissions to land will increase for the daily averaging period from 60m³/day to 75m³/day, however total Nitrogen is expected to rise to 301.1kg/ha/year which is still within the Water Quality Protection Note 22 of 480kg/ha/year and total phosphorus is expected to increase to 77.3kg/ha/year which is still within the current licence limit of *120kg/ha/year.* **Existing conditions adequate**

Risk Event						Consequence rating	Likelihood rating	Risk	Reasoning
Source/Activities		Potential emissions	Potential receptors	Potential pathway	Potential adverse impacts				
Cat 5 Processing or beneficiation of ore	*Discharge of tailings to the tailings storage facility (TSF)*	*Tailings and decant water containing cyanide*	*Birds or bats*	*Birds or bats drinking the decant water*	*Cyanide poisoning*	*Major*	*Possible*	*High*	Because the groundwater and tailings are of relatively low salinity the shallow water in the decant pond is likely to be attractive to birds (or bats at night) with consequent risk of wildlife poisoning. Research has indicated that gold processing tailings with residual WAD-CN in solution above 50 mg/L, with a salinity of less than 50,000 mg/L present a risk to wildlife health (Adams et al 2008).. Consistent with other similar operations and noting that the applicant is not a signatory to the International Cyanide Management Code, there is a need for additional information to ensure that cyanide levels will be managed to protect birds and other wildlife at all times. The applicant has advised that while birds are often present on the TSF there have been no observations of bird deaths. However, research by Donato et al has shown that, in the absence of systematic surveys by appropriately trained personnel, bird deaths may occur at gold mines without mine personnel being aware of it. **This matter to be addressed in a separate amendment.**

Decision

The Delegated Officer has determined that the key emissions associated with the dewatering discharge to open void pit is groundwater mounding, and accidental discharge of saline dewatering to land from overtopping and pipeline failure.

The Delegated Officer has included new conditions and amended existing conditions in the licence including addition of category 6, insertion of a condition for installation requirements, inclusion of containment infrastructure and additional mine dewatering monitoring requirements.

In addition it is noted that the Applicant is not a signatory to the International Cyanide Code. Poisoning of birds which come in contact with the water in the TSF decant pond has therefore been identified as a risk requiring management controls. This issue will be addressed in a separate amendment.

Licence Holder's comments

The Licence Holder was provided with the draft Amendment Notice on 19 July 2018 and 24 August 2018. Comments received from the Licence Holder have been considered by the Delegated Officer as shown in Appendix 2.

Amendment

1. Prescribed premises category table of the Licence is amended by the insertion of the red underline text as shown below:

Category number	Category description	Category production or design capacity	Approved Premises production or design capacity
5	Processing or beneficiation of metallic or non-metallic ore	50 000 tonnes or more per year	3 000 000 tonnes per annual period
6	Mine Dewatering: premises on which water is extracted and discharged into the environment to allow mining of ore	50 000 tonnes or more per year	2,629,800m^3 per year
73	Bulk storage of chemicals	1 000 m^3 in aggregate	1 500 m^3
85	Sewage facility	More than 20 but less than 100 m^3 per day	~~77~~ 90 m^3 per day
89	Putrescible landfill	More than 20 but less than 5 000 tonnes per year	200 tonnes per year

2. Condition 1.2.1 of the Licence is amended with the insertion of the text shown in red underline below to provide greater clarity:

1.2.1 The Licensee shall ensure that all pipelines containing tailings, decant water, saline water including mine dewatering and effluent are ~~either:~~
- (a) equipped with telemetry systems and pressure sensors along pipelines to allow the detection of leaks and failures; and/or
- (b) equipped with automatic cut-outs in the event of a pipe failure; ~~or~~ and
- (c) provided with secondary containment sufficient to contain any spill for a period to the time between routine inspections.

3. Condition 1.2.2 of the Licence is amended with the insertion of the text shown in red underline below:

1.2.2 The Licensee shall ensure that tailings, decant water, mine dewater and effluent are only discharged into containment cells, ponds or mine voids with the relevant infrastructure requirements and at the locations specified in Table 1.2.1 and identified in Schedule 1.

Table 1.2.1: Containment infrastructure		
Containment point reference	**Material**	**Infrastructure requirements**
Tailings storage facility	Tailings	Clay lined to achieve a permeability of at least $<10^{-9}$ m/s
Process water pond	Decant Water	HDPE lined to achieve a permeability of $<10^{-9}$ m/s
Primary oxidation pond	Effluent from WWTP	HDPE lined to achieve a permeability of $<10^{-9}$ m/s
Secondary oxidation pond	Effluent from WWTP	HDPE lined to achieve a permeability of $<10^{-9}$ m/s
South, Central and North pits	Mine dewater	A minimum vertical freeboard of 15m must be maintained below the lowest crest level at all times.

4. Condition 1.2.5 of the Licence is amended with the insertion of the text shown in red underline below:

1.2.5 The Licensee shall:

(a) undertake inspections as detailed in Table 1.2.2;

(b) where any inspection identifies that an appropriate level of environmental protection is not being maintained, take corrective action to mitigate adverse environmental consequences as soon as practicable; and

(c) maintain a record of all inspections undertaken with each daily inspection record signed by the responsible person.

Table 1.2.2: Inspection of infrastructure		
Scope of inspection	**Type of inspection**	**Frequency of inspection**
Tailings pipelines	Visual integrity	Daily
Return water lines	Visual integrity	Daily
Embankment freeboard	Visual to confirm required freeboard capacity is available	Daily
WWTP oxidation ponds	Visual to confirm required freeboard capacity is available	Daily
Dewatering pipelines	Visual integrity	Daily

5. Condition 2.2.2 of the Licence is amended by the deletion of the text shown in strikethrough below and the insertion of the text shown in red underline below:

2.2.2 The Licensee shall not cause or allow emissions to land greater than the limits listed in Table 2.2.2.

Table 2.2.2: Emission limits to land			
Emission point reference	**Parameter**	**Limit (including units)**	**Averaging period**
L1	Treated wastewater from WWTP	75m³ ~~60m³~~ per	Daily

		day	
L1	Total nitrogen	480 kg/ha	Annual
L1	Total phosphorous	120 kg/ha	Annual

6. Licence L8412/2010/2 is amended by the insertion of the following Condition 3.5.1:

3.5.1 The Licence Holder must undertake the monitoring in Table 3.5.1 according to the specifications in that table.

Table 3.5.1: Mine dewatering monitoring

Monitoring point and reference locations	Parameter	Limit	Units	Averaging period	Frequency
At discharge point at South, Central and North pits (Location of discharge points shown on Schedule 2)	pH[1]	6.0 – 9.0	-	Spot sample	Quarterly
	Standing water level (SWL)	>15	metres below crest level		
	Total dissolved solids (TDS)	<15000	mg/L		
	Arsenic (As)	0.5			
	Antimony (Sb)	-	mg/L	Spot sample	Six monthly
	Bicarbonate (HCO_3)	-			
	Calcium (Ca)	-			
	Carbonate (CO_3)	-			
	Cadmium (Cd)	-			
	Chloride (Cl)	-			
	Chromium (Cr)	-			
	Cobalt (Co)	-			
	Copper (Cu)	-			
	Iron (Fe)	-			
	Lead (Pb)	-			
	Magnesium (Mg)	-			
	Mercury (Hg)	-			
	Molybdenum (Mo)	-			
	Nickel (Ni)	-			
	Nitrate (NO_3)	-			
	Potassium (K)	-			
	Selenium (Se)	-			
	Sodium (Na)	-			
	Sulphate (SO_4)	-			
	Thallium (Tl)	-			
	Zinc (Zn)	-			

Note 1: In-field non-NATA accredited analysis permitted.

7. Condition 4.2.1 of the Licence is amended by the insertion of the text shown in underline below:

4.2 Reporting

4.2.1 The Licensee shall submit to the CEO an Annual Environmental Report by 31 March in each year. The report shall contain the information listed in Table 4.2.1 in the format or form specified in that table for the annual period.

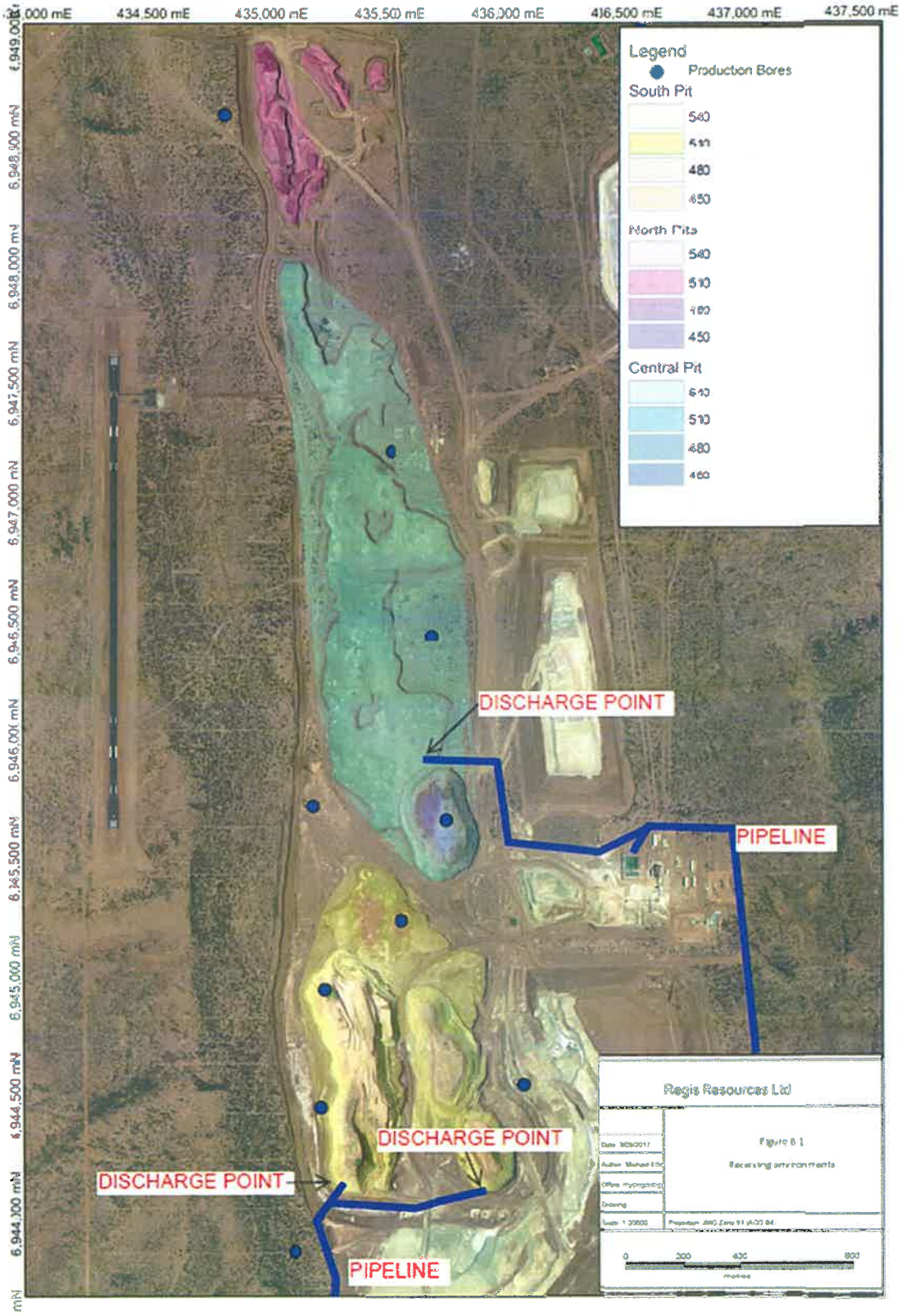
Table 4.2.1: Annual Environmental Report

Condition or table (if relevant)	Parameter	Format or form[1]
-	Summary of any failure or malfunction of any pollution control equipment and any environmental incidents that have occurred during the annual period and any action taken	None specified
Table 3.2.1	Monitoring of emissions to land	
Table 3.3.1	Process monitoring	
Table 3.4.1	Monitoring of ambient groundwater quality	
Table 3.4.1	Limit exceedances	
Table 3.5.1	Mine dewatering monitoring	
4.1.2	Compliance	Annual Audit Compliance Report (AACR)
5.1.4	Complaints summary	None specified

Note 1: Forms are in Schedule 2

Schedule 2: Moolart Well Dewatering Map

Map of dewatering in-pits at Moolart Well



Appendix 1: Key documents

	Document title	Availability
1	Licence L8412/2010/2 – Moolart Well	accessed at www.dwer.wa.gov.au
2	DER, July 2015. *Guidance Statement: Regulatory principles.* Department of Environment Regulation, Perth.	accessed at www.dwer.wa.gov.au
3	DER, October 2015. *Guidance Statement: Setting conditions.* Department of Environment Regulation, Perth.	
4	DER, November 2016. *Guidance Statement: Risk Assessments.* Department of Environment Regulation, Perth.	
5	DER, November 2016. *Guidance Statement: Decision Making.* Department of Environment Regulation, Perth.	
6	Licence Amendment application	DWER internal A1601269
7	Additional information provided	DWER internal A1638032
8	Department of Water and Environmental Regulation, Contaminated Sites Advice, Moolart Well	DWER Internal A1666259
9	Adams, M.D., Donato D.B., Schulz, R.S. and Smith, G.B., (2008) *Influences of Hypersaline Tailings on Wildlife Cyanide Toxicosis;* MERIWA Project M398 (II) 'Cyanide Ecotoxicity at Hypersaline Gold Operations' Final Report Volume 2 – Definitive Investigation, 26 August 2008	Accessed at: https://www.mriwa.wa.gov.au/publications/previous-project-reports/
10	Adams, M.D., Donato D.B., Schulz, R. S. and Smith, G.B., Gibbons T., Davies S., Hillier D., (2013) *Hypersaline-Induced Reduction in Cyanide Ecotoxicity at Gold Operation, thereby Obviating Detoxification Plants,* World Gold Conference, Brisbane Qld 2013, 489 – 501.	Accessed at: http://www.reserachgate.net/.../314284310_Hypersaline-Induced_Reduction_in_Cyanide
11	2018-07-26 L8412/2010/2 Notice of proposed amendment to Licence – Regis Response	DWER internal A1707253
12	Additional information provided by Licence Holder specifically updated maps.	DWER internal A1718359

Appendix 2: Summary of Licence Holder comments

The Licence Holder was provided with the draft Amendment Notice on 20 July 2018 for review and comment. The Licence Holder responded on 26 July 2018, with the following comments received on the draft Amendment Notice.

Condition	Summary of Licence Holder comment	DWER response
Figure 4	Updated version of figure 4 provided	Noted. Revised figure inserted into the amendment notice.
Table 3	Four groundwater abstraction licences provided: • GWL169314(3): Moolart Well • GWL180893(1): Garden Well and Erlistoun • GWL175928(1): Rosemont • GWL182924(2): Gloster	Noted. Table 3 updated.
Table 5	Data provided on distances to Banjawarn and Erlistoun Stations and Mulga Queen	Noted. Table 5 updated.
1	Add in the unit per year category 6 approved premises production or design capacity of 2,629,800m^3 per year	Noted. Additional text of "*per year*" added.
1.2.12	The amendment application is for the discharge of groundwater into open pit voids not process water. A set limit of 50mg/L WAD cyanide is not required. Regis operations has been operating for 8 years with no fauna (birds/bats) deaths occurring within the decant pond. With this knowledge and a record of consistent low WAD cyanide levels in the decant pond and groundwater the consequence of and likelihood rating of the decant water having an impact on fauna is much lower reducing the risk.	Agreed that monitoring of cyanide in the groundwater discharged to the pit voids is not necessary. Condition removed. Requirement for cyanide monitoring of the TSF decant pond has been removed from the current amendment. This matter to be addressed through a separate licence amendment.
Table 3.5.1	Remove monitoring of WAD cyanide limit of 50mg/L from table 3.5.1 as per above	As above.
3.5.2	Regis believes a groundwater flow model for the pits is not required as the standing water level in the open pits will be maintained below the level of pre-mining groundwater (~15mbgl), it is considered highly unlikely that groundwater mounding above this level will occur. Water balance modelling included in the licence amendment application predicts in the worst case scenario that the volume of	Agreed. This condition has been removed, Condition 3.5.1 maintains a limit that the standing water level is below 15 metres below crest level and will be required to be monitored on a quarterly basis.

Condition	Summary of Licence Holder comment	DWER response
	water discharged to the open pits will be only 68.9% of the available volume beneath the pre-mining water levels.	
Attachment 2 and Receiving Environment Figure.	Updated figures provided.	Amendment Notice updated with new figures.