



## Application for Licence Amendment

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

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<b>Licence Number</b>	L7404/1999/9
<b>Licence Holder</b>	Australian Nickel Investments Pty Ltd
<b>ACN</b>	119 599 323
<b>File Number</b>	DER2015/002781-1
<b>Premises</b>	<p>Cosmos Nickel Operations</p> <p>Goldfields Highway</p> <p>SIR SAMUEL WA 6437</p> <p>Legal description –</p> <p>Mining tenements L36/118, L36/159, L36/171, L36/172, M36/127, M36/212, M36/365, M36/371, M36/375, M36/376, M36/377, M36/441, M36/659, and part of M36/180 and M36/349</p> <p>As defined by the Premises maps attached to the Revised Licence</p>
<b>Date of Report</b>	5 September 2022
<b>Decision</b>	Revised licence granted

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

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# 1. Decision summary

Licence L7404/1999/9 is held by Australian Nickel Investments Pty Ltd (Licence Holder) for the Cosmos Nickel Operations (the Premises), located at Goldfields Highway, Sir Samuel, Western Australia.

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 the Premises. As a result of this assessment, Revised Licence L7404/1999/9 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.

## 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/Amendment summary

On 27 July 2022, the Licence Holder submitted an application to the department to amend Licence L7404/1999/9 under section 59 and 59B of the *Environmental Protection Act 1986* (EP Act).

The following amendments are being sought:

- Addition of Category 52 – Electric power generation.

The Licence Holder was issued with works approval W6571/2021/1 on 27 August 2021 for the construction, installation, commissioning and time limited operations of the new power generation plant. The Licence Holder has installed a combination of diesel and gas-fired power generator to upgrade the existing 8.9 MW Cosmos power plant to a combined capacity of 12.5 MW of operational power supply.

The current cosmos power plant on the existing licence consists of 8 x reciprocating dual fuel (diesel / natural gas) engine generators with maximum generating capacity of 8.9 MW. The upgrade involves the instalment of 3 x reciprocating dual fuel (diesel / natural gas) engine generators each being a Cummins 11kV KTA 50-G3 850 kW and 1 x 2 MW continuous diesel fuel engine generators each being a Cummins QSK78, bringing the total maximum generating capacity to 12.5 MW.

The generators run on a mixture of up to 80% Gas and 20% diesel. Natural gas will be sourced from the cosmos lateral gas pipeline while diesel will be sourced through regular deliveries at the Cosmos diesel storage facility. The additional engine generators have been installed in the current Cosmos powerhouse building which includes cooling, exhaust and mechanical supplementary systems.

The Licence Holder submitted a Compliance Document on 8 September 2021 stating that all the conditions of the Works approval W657/2021/1 had been complied with and that the infrastructure had been installed in accordance with the design and installation requirements. An Environmental Commissioning Report (ECR) was submitted to the Department on 23 March 2022. The ECR also included emissions monitoring for the new power plant.

The Licence Holder is currently operating the power plant under the time limited operations

condition 11 and 12 of the works approval. This licence amendment will allow the ongoing operations of the new power plant under the conditions of this licence.

This amendment is limited only to changes to Category 52 activities from the Existing Licence. No changes to the aspects of the existing Licence relating to Category 5, 6, 12, 85 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
Category 5	50,000 tonnes per annual period.	N/A	N/A
Category 6 Mine dewatering	3,000,000 tonnes per annual period	N/A	N/A
Category 12 Screening etc. of material	100,000 tonnes per annual period	NA	N/A
Category 52	N/A	12.5 MW	Addition of category 52 on this licence.
Category 85 Sewage facility	70 m <sup>3</sup> /day	N/A	NA
Category 89 Putrescible landfill	2,200 tonnes per annual period	N/A	N/A

### 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 construction and 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
Air emissions	Power station	Air / windborne	Power generators to be maintained as per manufacturer's requirements and serviced

Emission	Sources	Potential pathways	Proposed controls
	generator stacks	pathway	<p>on a regular basis.</p> <p>Emissions will be detailed in the National Pollution Inventory (NPI) report and Greenhouse and Energy Report (NGER).</p> <p>IGO Environmental Standards 6 – Air Emissions Management.</p> <p>Confirmation gas testing during commissioning (x2) to confirm generators operating within expected emission ranges.</p> <p>Low sulfur diesel will be used in equipment and generators.</p>
Noise	Heavy machinery noise and vehicle movements	Air / windborne pathway	None.
Hydrocarbon leaks and spills	<p>Maintenance activities.</p> <p>Oil / fuel leaks.</p>	<p>Infiltration.</p> <p>Overland flow via stormwater.</p>	<ul style="list-style-type: none"> <li>Power generators have been installed within an expanded powerhouse that has a services trench which drains into an oily water separator.</li> <li>The power station has been installed on a concrete hardstand that is fully bunded.</li> </ul>

### 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.

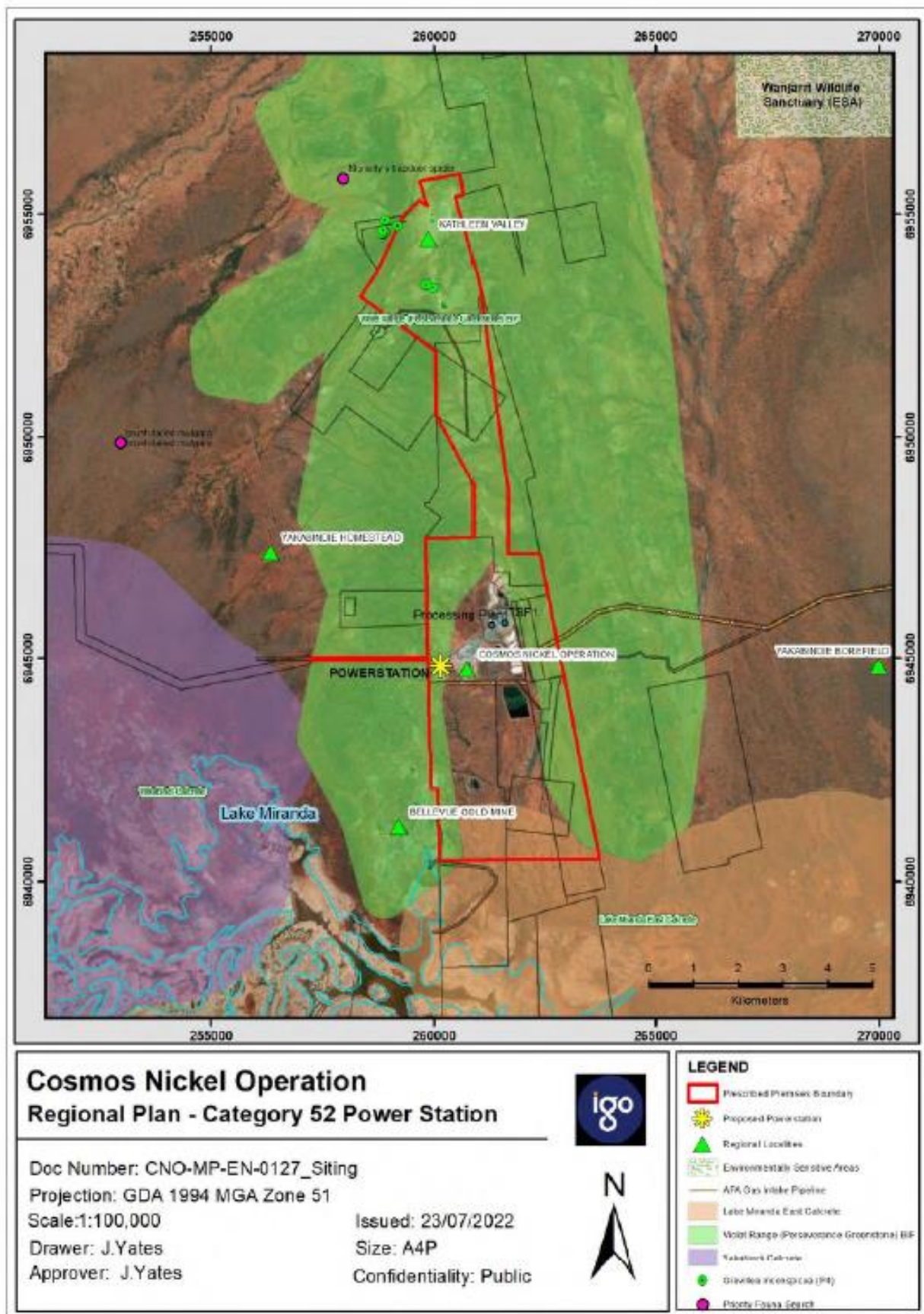
Table 3 below provides a summary of potential human and environmental receptors that may be impacted as a result of activities upon or emission and discharges from the prescribed premises (*Guideline: Environmental siting* (DWER 2020)).

**Table 3: Sensitive human and environmental receptors and distance from prescribed activity**

Human receptors	Distance from prescribed activity
Yakabindie Pastoral Station	4.5 km northwest of Cosmos mine.
Bellevue Gold Mine	3.8km southwest of Cosmos mine.
BHP Leinster Nickel Mine	25km south southeast of the Cosmos mine (not considered a receptor due to distance).
The nearest town of Leinster	Is approximately 41 km south southeast of the Premises (not considered a receptor due to distance).
Environmental receptors	Distance from prescribed activity

Threatened and Priority Ecological Communities (TECs / PECs)	<p>Edge of 500m buffer for a Priority 1 Ecological Community – Violet Range (Perseverance Greenstone Belt) vegetation complexes (banded ironstone formation) is located approximately 330m west of the power station.</p> <p>3.77km southwest of the premises boundary – Yakabindi Calcrete</p> <p>4.84km south of the premises boundary – Lake Miranda East Calcrete</p>
Threatened and / or priority flora	<i>Grevillea inconspicua</i> (priority 4) located approximately 2km west of the power station.
Threatened and / or propriety fauna	<p><i>Dasycercus blythi</i> (brush-tailed mulgara) (P4) found 8.6km from the premises boundary.</p> <p><i>Kwonkan moiartii</i> (Moriarty's trapdoor spider (p2) found 11.2km from the premises boundary.</p>
Surface water	A non-perennial watercourse (likely to flow only during high rain fall events) is located approximately 150m south of the power station.
Lake Miranda	4.5km southwest of premises boundary.
Aboriginal heritage sites	Multiple within the premises boundary.





**Figure 1: Distance to sensitive receptors**

## 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 L7404/1999/9 that accompanies this Amendment Report authorises emissions associated with the operation of the Premises i.e. Category 52 activities.

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 construction, commissioning and operation**

Risk Event					Risk rating <sup>1</sup> C = consequence L = likelihood	Licence Holder's controls sufficient?	Conditions <sup>2</sup> of licence	Justification for additional regulatory controls
Source/Activities	Potential emission	Potential pathways and impact	Receptors	Licence Holder's controls				
<b>Operation (including time-limited-operations operations)</b>								
Operation of new power generators	Noise	Air/windborne pathway causing impacts to health and amenity	Yakabindie Pastoral Station 4.5 km northwest of premises. Bellevue Gold Mine accommodation cam - 3.8km southwest of premises	Refer to Section 3.1	C = Slight L = Rare <b>Low Risk</b>	Y	N/A	N/A.
	Air emissions	Air/windborne pathway causing impacts to health and amenity	Yakabindie Pastoral Station 4.5 km northwest of premises. Bellevue Gold Mine accommodation cam - 3.8km southwest of premises	Refer to Section 3.1	C = Minor L = Unlikely <b>Medium Risk</b>	Y	Condition 1 – infrastructure operational requirements	Condition 1 Infrastructure and equipment table has been updated to include the power plant.  The Delegated Officer has considered the distance to sensitive receptors and the air emissions data provided from monitoring during environmental commissioning and time limited operations and has determined that it is unlikely that air emissions will impact human receptors. No additional monitoring conditions are required.
	Hydrocarbons spills / leaks	Infiltration. Overland runoff via stormwater flow causing ecosystem disturbance.	Soil. Native vegetation – Priority ecological community – edge of buffer 330m west of power station.	Refer to Section 3.1.1	C = Slight L = Unlikely <b>Low Risk</b>	Y	Condition 1 – infrastructure operational requirements	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
Licence Holder was provided with draft amendment on 31 August 2022	<p>The Licence Holder provided comment on the 1 September and requested the remainder of the comment period be waived, and the final instrument to be issued as soon as possible.</p> <p>Licence Holder confirmed that production capacity of Category 6: Mine dewatering should be "3,000,000 tonnes" and noted several formatting errors in the revised licence.</p>	The Delegated Officer has made the suggested formatting corrections and has changed the production capacity of Category 6: Mine dewatering to be 3,000,000 tonnes per annum in the revised licence.

## 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
Page 1	Prescribed premises category description updated to include Category 52
1	Updated to include new power plant and infrastructure requirements.
Schedule 1 Maps	Updated to include the power plant infrastructure location.

## 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.
4. Cosmos Nickel Operation – Generator Stack Emissions Monitoring, July 2022

## Appendix 2: Application validation summary

SECTION 1: APPLICATION SUMMARY					
<b>Application type</b>					
Works approval	<input type="checkbox"/>				
Licence	<input type="checkbox"/>	Relevant works approval number:		None	<input type="checkbox"/>
		Has the works approval been complied with?			Yes <input type="checkbox"/> No <input type="checkbox"/>
		Has time limited operations under the works approval demonstrated acceptable operations?			Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
		Environmental Compliance Report / Critical Containment Infrastructure Report submitted?			Yes <input type="checkbox"/> No <input type="checkbox"/>
		Date Report received:			
Renewal	<input type="checkbox"/>	Current licence number:			
Amendment to works approval	<input type="checkbox"/>	Current works approval number:			
Amendment to licence	<input checked="" type="checkbox"/>	Current licence number:	L7404/1999/1 (Category 52)		
		Relevant works approval number:	W6571/2021/1	N/A	<input type="checkbox"/>
Registration	<input type="checkbox"/>	Current works approval number:		None	<input type="checkbox"/>
Date application received					
<b>Applicant and Premises details</b>					
Applicant name/s (full legal name/s)		Australian Nickel Investments Pty Ltd			
Premises name		Cosmos Nickel Operations			
Premises location		M36/171, L36/159			
Local Government Authority		Shire of Leonora			
<b>Application documents</b>					
HPCM file reference number:		DER2015/002781-1~7			
Key application documents (additional to application form):		Attachment 3B – Proposed Activities Australian Nickel Investments – Cosmos Nickel Operation – Generator Stack Emissions Monitoring, 20 July 2022 Attachment 7 Siting and location Supporting document Licence Amendment – Power Station Category 52			
<b>Scope of application/assessment</b>					

Summary of proposed activities or changes to existing operations.	Licence amendment Operation of 52: dual fuel (diesel / natural gas): 12.5 MW Addition of category 52 on licence.	
<b>Category number/s (activities that cause the premises to become prescribed premises)</b>		
<b>Table 1: Prescribed premises categories</b>		
Prescribed premises category and description	Proposed production or design capacity	Proposed changes to the production or design capacity (amendments only)
Category 52: Electric power generations: premises (other than premises within category 53 or an emergency or standby power generating plant) on which electrical power is generated using a fuel).	12.5 MW	New
<b>Legislative context and other approvals</b>		
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 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"/>	Certificate of title <input type="checkbox"/> General lease <input type="checkbox"/> Expiry: Mining lease / tenement <input checked="" type="checkbox"/> Expiry: Other evidence <input type="checkbox"/> Expiry:
Has the applicant obtained all relevant planning approvals?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/>	Approval: Expiry date: Mining tenement If N/A explain why?
Has the applicant applied for, or have an existing EP Act clearing permit in relation to this proposal?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	CPS No: N/A No clearing is proposed.

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 No clearing is proposed.
Has the applicant applied for, or have an existing RIWI Act licence or permit in relation to this proposal?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Application reference No: Licence/permit No: Existing permits: GWL110790 (7) GWL 63896 (10) AGR 201905
Does the proposal involve a discharge of waste into a designated area (as defined in section 57 of the EP Act)?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Name: N/A Type: Proclaimed Groundwater Area/Surface Water Area Has Regulatory Services (Water) been consulted? Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/> Regional office:
Is the Premises situated in a Public Drinking Water Source Area (PDWSA)?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Name: N/A Priority: N/A Are the proposed activities/ landuse compatible with the PDWSA (refer to <a href="#">WQPN 25</a> )? Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
Is the Premises subject to any other Acts or subsidiary regulations (e.g. <i>Dangerous Goods Safety Act 2004</i> , <i>Environmental Protection (Controlled Waste) Regulations 2004</i> , <i>State Agreement Act xxxx</i> )	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Mining Act 1972
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"/>	

<p>Is the Premises a known or suspected contaminated site under the <i>Contaminated Sites Act 2003</i>?</p>	<p>Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></p>	<p>Classification: possibly contaminated – investigation required (PC–IR)</p> <p>Date of classification: 20/07/2011</p>
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