



## Application to amend works approval

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

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<b>Works approval number</b>	W5180/2012/1
<b>Licence holder</b>	Poseidon Nickel limited
<b>ACN</b>	060 525 206
<b>DWER file number</b>	2012/006885-1
<b>Premises</b>	Windarra Nickel Project Mount Windarra - ML261SA, M38/1244 & M38/1245 Laverton WA 6440
<b>Date of report</b>	4 May 2020
<b>Decision</b>	Works Approval amended

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# 1. Definitions

Key terms relevant to this decision report and their associated definitions are listed in **Table 1**.

**Table 1: Definitions**

Term	Definition
applicant	Poseidon Nickel Limited
Category / categories	Categories of prescribed premises as set out in Schedule 1 of the EP Regulations.
amendment report	refers to this document.
Delegated Officer	An officer delegated under section 20 of the EP Act.
Department	The department established under section 35 of the <i>Public Sector Management Act 1994</i> and designated as responsible for the administration of Part V Division 3 of the EP Act.
DWER	Department of Water and Environmental Regulation As of 1 July 2017, the Department of Environment Regulation (DER), the Office of the Environmental Protection Authority (OEPA) and the Department of Water (DoW) amalgamated to form the Department of Water and Environmental Regulation (DWER). DWER was established under section 35 of the <i>Public Sector Management Act 1994</i> and is responsible for the administration of the <i>Environmental Protection Act 1986</i> along with other legislation.
emission	has the same meaning given to that term under the EP Act.
existing works approval	The works approval issued under Part V, Division 3 of the EP Act and in force prior to the commencement of and during this amendment
EP Act	<i>Environmental Protection Act 1986 (WA)</i>
EP Regulations	<i>Environmental Protection Regulations 1987 (WA)</i>
prescribed premises	This 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
revised works approval	the amended works approval issued under Part V, Division 3 of the EP Act, with changes that correspond to the assessment outlined in this amendment report.
Works approval holder	Poseidon Nickel Limited

## 2. Licence and amendment history

Table 2 provides the works approval and licence history for the premises.

**Table 2: Instrument history**

Instrument	Issued	Nature and extent of works approval, licence or amendment
L8173/2007/1	19/10/2007	Licence – Category 6
L8173/2007/1	24/11/2011	Licence – amendment to extend expiry period by 12 months
W5118/2012/1	23/03/2012	Works approval – Category 5 and 85
W5180/2012/1	29/06/2012	Original works approval - Category 5 and 6
L8173/2007/2	17/10/2013	Licence – Category 6 – new licence replacing expired licence L8173/2007/1
W5180/2012/1	16/12/2015	Amendment to facilitate installation of tailings booster pumps and amendment of risk assessment
W5180/2012/1	04/05/2020	Amendment initiated by occupier to extend expiry by 3 years

## 3. Purpose and scope of assessment

On 30 March 2020, an application was received on behalf of the applicant requesting an amendment to works approval W5180/2012/1 to change the expiry date from 1 July 2020 to 1 July 2023.

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.

## 4. Overview of existing Premises

**Table 3: Classification of premises and assessed design capacity**

Category	Description	Assessed production or design capacity or throughput
5	Processing or beneficiation of metallic or non-metallic ore	1,500,000 tonnes per annual period
6	Mine dewatering	400,000 tonnes per year

## 5. Description of proposed activities

### 5.1.1 Amend works approval expiry

The applicant seeks an extension of the works approval pending feasibility studies on a partial implementation of the works within its scope, comprising installation of a plant to reprocess gold tailings reclaimed from old tailings dams at the Mount Windarra mine near Laverton. The current works approval is due to expire on 1 July 2020, and the extension through to 1 July 2023 would facilitate the completion of the required works. No other changes to the works approval are proposed.

In amending the licence, the CEO has:

- extended the licence duration
- updated the format and appearance of the Licence; and
- revised licence condition numbers, and removed any redundant conditions and realigned condition numbers for numerical consistency.

## 5.2 Legislative context and other approvals

### 5.2.1 Licences and Works Approvals

Works approvals W5118/2012/1 and W5180/2012/1 were previously granted to Poseidon Nickel Limited for the establishment of a nickel concentrator plant, gold processing plant, in-pit tailings storage facility and waste water treatment plant. The Delegated Officer understands that these facilities have not yet been commissioned, and do not appear on the current operating licence (L8173/2007/2). L8173/2007/2 allows for continued annual dewatering discharge of up to 1.3GL into the Lake Irwin salina.

### 5.2.2 Clearing permit

During the assessment it was identified that the clearing permit for the premises (CPS 5110/3) expired in 2017. Should additional clearing be required to facilitate works, this needs to be either covered by a valid exemption, or undertaken in accordance with a reissued clearing permit.

### 5.2.3 Licence to Take Water

GWL160159(3) issued under section 5C of the *Rights to Water and Irrigation Act 1914*, valid from 30 May 2012 is due to expire on 29 May 2021. It is the works approval holder's responsibility to apply to renew the licence in order to continue taking water after this time.

## 6. Emission sources, receptors and pathways

### 6.1 Emissions

The change to the works approval expiry will not alter the emissions expected from the premises. The decision document, including risk assessment, prepared as part of the assessment of the existing works approval has been provided in Appendix 2.

## 7. Consultation

**Table 4: Summary of consultation**

Method	Comments received	DWER response
Applicant referred draft documents (30/04/2020)	<i>"On behalf of Poseidon Nickel Limited I accept the proposed amendments and waive our consultation period; we would be grateful for you to issue the amended Works Approval as soon as possible. Thank you for processing our application promptly"</i>	Noted

## 8. Conclusion

Based on the administrative nature of the amendment, the Delegated Officer has determined that the amendment will be granted.

### 8.1 Summary of amendments

Table 5 provides a summary of the proposed amendments and will act as record of implemented changes. All proposed changes have been incorporated into the revised works approval as part of the amendment process. The existing works approval has been reformatted as part of the amendment process. The conversion map provided in Table 6 outlines the modifications made to the conditions of the works approval.

**Table 5: Works approval amendments**

Condition No.	Proposed amendments
-	Expiry date amended from 1 July 2020 to 1 July 2023

**Table 6: Works approval conversion map for new licence format**

Existing licence condition	Condition Summary	Revised licence condition	Conversion notes
1.2.1	Construction requirements	1	No change
1.2.2	Environmentally hazardous material storage requirements	-	Condition is considered ultra vires as it refers to the requirements of the <i>Dangerous Goods Safety (Storage and Handling of Non-explosives) Regulations 2007</i>
1.2.3	Commissioning	2	No change
1.2.4	Commissioning period	3	No change
5.1.1	Compliance document submission	4	Reference to compliance document changed to environmental compliance report. No change to condition requirements.
5.1.2	Compliance document specifics	5	Reference to compliance document changed to environmental compliance report. No change to condition requirements.
5.2.1	Notification requirements	6	No change

Abbie Crawford  
 Senior Environmental Officer, Industry Regulation  
 Regulatory Services

*an officer delegated by the CEO under section 20 of the EP Act.*

## Appendix 1: Key documents

Document title	Availability
Works approval W5180/2012 - Poseidon Nickel Limited - Windarra Nickel Project	accessed at <a href="http://www.dwer.wa.gov.au">www.dwer.wa.gov.au</a>
DER, July 2015. <i>Guidance Statement: Regulatory principles</i> . Department of Environment Regulation, Perth.	
DER, October 2015. <i>Guidance Statement: Setting conditions</i> . Department of Environment Regulation, Perth.	
DER, August 2016. <i>Guidance Statement: Licence duration</i> . Department of Environment Regulation, Perth.	
DER, February 2017 <i>Guidance Statement: Risk Assessments</i> . Department of Environment Regulation, Perth.	
DWER, June 2019. <i>Guidance Statement: Decision Making</i> . Department of Water and Environmental Regulation, Perth.	

## Appendix 2: Original decision document





# Decision Document

## *Environmental Protection Act 1986, Part V*

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**Proponent: Poseidon Nickel Limited**

**Works Approval: W5180/2012/1**

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**Registered office:** 8 Churchill Court  
331-335 Hay St  
SUBIACO WA 6008

**ACN:** 060 525 206

**Premises address:** Windarra Nickel Project  
ML261SA, M38/1244 and M38/1245  
LAVERTON WA 6440  
as depicted in Schedule 1.

**Issue date:** Friday, 29 June 2012

**Commencement date:** Monday, 2 July 2012

**Expiry date:** Wednesday, 1 July 2020

### **Decision**

Based on the assessment detailed in this document the Department of Environment Regulation (DER), has decided to issue an amended works approval. DER considers that in reaching this decision, it has taken into account all relevant considerations and legal requirements and that the Works Approval and its conditions will ensure that an appropriate level of environmental protection is provided

Decision Document prepared by:

Fiona Sharpe  
Licensing Officer

Decision Document authorised by:

Danielle Eyre  
Manager Licensing



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## 1 Purpose of this Document

This decision document explains how DER has assessed and determined the application 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.

### **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 (SC)**

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 (OSC)**

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 is justified in Section 4 of this document.

#### **Non standard conditions (NSC)**

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 type="checkbox"/> Works Approval amendment <input checked="" 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>5</td> <td>1 500 000 tonnes per year</td> </tr> <tr> <td>6</td> <td>400 000 tonnes per year</td> </tr> <tr> <td></td> <td></td> </tr> </tbody> </table>	Category number(s)	Assessed design capacity	5	1 500 000 tonnes per year	6	400 000 tonnes per year		
	Category number(s)	Assessed design capacity							
	5	1 500 000 tonnes per year							
	6	400 000 tonnes per year							
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 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> ?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Referral decision No: Managed under Part V <input checked="" 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 checked="" type="checkbox"/> No <input type="checkbox"/> Department of Water consulted Yes <input checked="" 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, eg Site is subject to SO <sub>2</sub> requirements of Kwinana EPP.								



### 3 Executive summary of proposal and assessment

Historically, WMC Resources Limited (WMC) conducted mining operations at Mount Windarra (known as the Windarra Nickel Project) from 1972 up until 1993. Between 1994 and 2003, rehabilitation works were conducted at the site. Poseidon intends to recommence mining and processing operations at Mount Windarra mine on the site of the old WMC operations.

Poseidon is a mineral exploration company listed on the Australian Stock Exchange holding exploration interest in gold and nickel. Poseidon's head office is in Perth Western Australia.

Poseidon plan to build a Carbon in Leach (CIL) gold processing plant to retreat tailings from the historic Northern Gold and Southern Gold TSF's. Tailings will be hydraulically mined using high pressure monitors, and resultant slurry pumped approximately 1km to the CIL plant. The new CIL plant will be built adjacent to the nickel processing facility.

The solids content of the reclaimed tails will be increased to 45% by a feed thickener prior to the addition of lime (pH modifier), and sodium cyanide (leachant) in the CIL tanks. The extracted water from the thickener will return to the hydraulic mining operation for reuse, with supplementary feed from the process water pond.

Activated carbon in the CIL tanks will adsorb the gold in solution, and once removed from the process, the carbon will be transported off site in 500kg Bulka bags to be stripped.

The waste slurry from the CIL process will be combined with tails from the nickel processing plant and piped 14km south to the SWP in-pit TSF.

A new underground nickel deposit will be exploited at the Cerberus mine site. Coarse ore (<600mm) will be stockpiled on a ROM pad adjacent to the Cerberus mine boxcut prior to road transport to the Mount Windarra mine ROM pad 14km north of Cerberus. Ore from Cerberus will be processed together with ore from the Mount Windarra deposit to an 8-12% concentrate for export. The plant will process a combined nickel ore volume of 700 000 tonnes per annum from the two sites. The nickel processing plant was assessed in March 2012 (W5118/2012/1).

Poseidon has calculated a dewatering figure of 400 000 kL from Cerberus in the first year of operation, with models showing a gradual decrease in ground water inflow to 30% of initial volumes by year 11 of operation. A dewatering settlement pond is to be constructed at the Cerberus site to precipitate suspended material prior to pumping to the process water pond at the Mount Windarra process site. The Cerberus settling pond will have a geomembrane liner and emergency spillway to an additional water management pond. Poseidon have acknowledged that volumes of mine dewater in excess of operational requirements will be discharged into the Lake Irwin salina via an existing discharge point.

Currently, Poseidon's *Environmental Protection Act 1986* operating licence (L8173/2007/1) allows for an annual dewatering discharge volume of 1.3GL from the Mount Windarra mine into the Lake Irwin salina. This licence will be amended to include dewatering volumes from Cerberus.

The historic SWP has been nominated as the new TSF to accept nickel and gold process tails from the Mount Windarra processing site.

Mining ceased at SWP in 1994, with the pit cut 120 m deep and having a surface area at the pit rim of 27 hectares (ha). Since the cessation of mining, ground water inflows have flooded SWP, with the current water surface between 12 – 15 m below the pit rim.



Poseidon plan to sub-aerially deposit the combined gold/nickel slurry into the flooded SWP, where it will settle beneath approximately 100m of water cover, minimising oxidisation potential. Given the existing water content of the pit, a 100% water recovery target is achievable and necessary to minimise surface water rise.

An existing network of eight monitoring bores surrounding the SWP in-pit TSF will measure ground water parameters

Poseidon will install the following ancillary infrastructure at SWP in-pit TSF:

- A new 400mm HDPE tailings delivery pipeline that will lay adjacent to the return waterline in the Mount Windarra to South Windarra pipeline corridor;
- Both pipes will lay within a V-drain, complemented by sumps, isolation valves, flow sensors, and be double skinned at drainage crossings;
- A tails distribution pipeline around the pit rim. Plans are to operate only one discharge point (dropper) at any time, however the system will be designed to allow for the discharge point to be moved as required; and,

Installation of a power reticulation system (Genset) and associated recovery pump.

This Works Approval was issued in July 2012 for a duration of three years, hence was due to expire in July 2015. An amendment has been granted to extend the expiry date for a total of five years from 1 July 2015 to 1 July 2020.

DER has not re-assessed the acceptability or impacts of emissions and discharges from the Premises or re-visited any existing emission control levels. No changes to the conditions of the Works Approval have been made other than ensuring the most up-to-date template has been used.

## 4 Decision table

All applications are assessed in line with the *Environmental Protection Act 1986*, the *Environmental Protection Regulations 1987*, DEC's Policy Statement - Limits and targets for prescribed premises (2006), 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

Works Approval / Licence section	Condition number W = Works Approval L = Licence	OSC or NSC	Justification (including risk description & decision methodology where relevant)	Reference documents
Licence Duration	N/A	N/A	The duration of the Works Approval has been extended for an additional five years. The expiry date is now 1 July 2020.	Applicant supporting document and p4 application.



## 5 Advertisement and consultation table

Date	Event	Comments received/Notes	How comments were taken into consideration
22/06/2015	Proponent sent a copy of draft instrument	No comments received	N/A



## 6 Risk Assessment

*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