



## Application for Works Approval Amendment

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

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<b>Works Approval Number</b>	W6516/2021/1
<b>Works Approval Holder</b>	Pilbara Energy (Generation) Pty Ltd
<b>ACN</b>	631 303 305
<b>File Number</b>	DER2021/000042
<b>Premises</b>	PEG Power Station  Legal description –  Part of Lease L47/901 as granted under the Mining Act 1978  As defined by the coordinates in Schedule 1 of the Revised Works Approval  Shire of Ashburton
<b>Date of Report</b>	12 July 2022
<b>Decision</b>	Revised works approval granted

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## 1. Decision summary

Works Approval W6516/2021/1 is held by Pilbara Energy (Generation) Pty Ltd (Works Approval Holder) for the PEG Power Station (the Premises), located within Lease L47/901 in the Shire of Ashburton.

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 Works Approval W6516/2021/1 has been granted.

The Revised Works Approval issued as a result of this amendment consolidates and supersedes the existing Works Approval previously granted in relation to the Premises. The Revised Works Approval has been granted in a new format with existing conditions being transferred, but not reassessed, to the new format.

## 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 summary

On 14 March 2022, the Works Approval Holder submitted an application to the department to amend Works Approval W6516/2021/1 under section 59 and 59B of the *Environmental Protection Act 1986* (EP Act). The following amendments are being sought:

- Addition of an authorised discharge point for treated wastewater from an Oily Water Separator (OWS). The discharge location will include a coalescing separator for the processing of wastewater.

No changes to the aspects of the existing Works Approval have been requested by the Works Approval Holder.

## 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 operation which have been considered in this Amendment Report are detailed in Table 1 below. Table 1 also details the proposed control measures the Works Approval Holder has proposed to assist in controlling these emissions, where necessary.

**Table 1: Works Approval Holder controls**

Emission	Sources	Potential pathways	Proposed controls (from application)
Potentially hydrocarbon contaminated wastewater	Operation of Coalescing Oily Water Separator (COWS)	Direct discharge to land via the V-drain from the outflow of discharge location point W2	<p>Treated wastewater can only be discharged to the environment via the proposed discharge point (W2) as depicted in Figure 2, Schedule 1 of the revised works approval.</p> <p>Wastewater will be monitored to ensure water quality is &lt;15mg/L TRH prior to discharge.</p> <p>Surface water will be managed in accordance with:</p> <ul style="list-style-type: none"> <li>• Fortescue’s Surface Water Management Plan (100-PL-EN-1015),</li> <li>• Standard Engineering Specification for Drainage and Flood Protection (100-SP-CI-0004).</li> </ul> <p>Chemicals and hydrocarbons will be managed in accordance with:</p> <ul style="list-style-type: none"> <li>• Fortescue’s Chemical and Hydrocarbon Management Plan (100-PL-EN-0011)</li> <li>• Chemical and Hydrocarbon Spills Procedure (100-PR-EN-0014),</li> <li>• Chemical and Hydrocarbon Storage Procedure (100-PR-EN-1064)</li> <li>• Environmental Protection (Controlled Waste) Regulations 2004.</li> </ul> <p>COWS incorporates Automatic Closure Device (ACD) which will automatically close the separator when maximum oil storage capacity is reached, ensuring in the event of a major spill, oil does not pass through the system but is rather contained within the first chamber of the COWS unit.</p> <p>Hydrocarbons extracted by the COWS will be stored in the waste oil chamber which will be regularly emptied and disposed of by an approved controlled waste carrier.</p> <p>The COWS is equipped with sensors and alarms to alert the power station operators when waste oil in the first chamber is required to be pumped out by a licenced waster operator.</p>

### 3.1.2 Receptors

In accordance with the *Guideline: Risk assessments* (DWER 2020), the Delegated Officer has excluded employees, visitors and contractors of the Works Approval 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 2 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 2: Sensitive human receptors and distance from prescribed activity**

Human receptors	Distance from prescribed activity
No human receptors expected to be impacted by this proposal.	

The distances to groundwater and water sources are shown in Table 3. It is also noted that the Premises are within the *Rights in Water and Irrigation Act 1914* (RIWI Act) proclaimed Pilbara surface water and groundwater areas.

**Table 3: Groundwater and water sources**

Groundwater and water sources	Distance from Premises
Groundwater	Groundwater flows south to north, with groundwater encountered between 10mbgl and 30mbgl. Groundwater quality is fresh to marginal, with total dissolved solids ranging from 200 mg/L to 1,000 mg/L. No bores located within 1km of Premises (based on available GIS dataset –WIN Groundwater Sites).

## 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 Works Approval 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 Works Approval Holder's proposed controls to be critical to maintaining an acceptable level of risk, these will be incorporated into the works approval as regulatory controls.

Additional regulatory controls may be imposed where the Works Approval 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 Works Approval W516/2021/2 that accompanies this Amendment Report authorises construction and time-limited operations. The conditions in the Revised Works Approval have been determined in accordance with *Guidance Statement: Setting Conditions* (DER 2015).

A licence is required following the time-limited operational phase authorised under the works approval to authorise emissions associated with the ongoing operation of the Premises i.e. electricity power generation activities. A risk assessment for the operational phase has been included in this Amendment Report, however licence conditions will not be finalised until the department assesses the licence application.

**Table 4. Risk assessment of potential emissions and discharges from the Premises during operation**

Risk Event					Risk rating <sup>1</sup> C = consequence L = likelihood	Works Approval Holder's controls sufficient?	Conditions <sup>2</sup> of works approval	Justification for additional regulatory controls
Source/Activities	Potential emission	Potential pathways and impact	Receptors	Works Approval Holder's controls				
<b>Operation</b>								
Operation of the Coalescing Oily Water Separator (COWS)	Potentially hydrocarbon contaminated treated wastewater <15mg/L TRH from discharge point W2 (as depicted in Figure 2, Schedule 1 of the revised works approval).	Pathway: Direct discharge to land causing seepage to groundwater.  Impact: potential impacts to groundwater quality and loss of beneficial use	Groundwater (10-30 mbgl)	Refer to Section 3.1	C = Minor L = Rare <b>Low Risk</b>	Y	<b><u>Conditions 1, 6, 7, 8, 11, 12, 13 and 14</u></b>	A limit of 15 mg/L total recoverable hydrocarbons will be placed on oil water separator discharge points in line with Water Quality Protection Note 68 (DoW, 2013). This will be enforced to ensure the quality of water discharged to land, with monitoring requirements during time-limited operations to verify the performance of the treatment system.
Unplanned containment overtopping from waste oil chamber within COWS.	Hydrocarbons				C = Minor L = Rare <b>Low risk</b>	Y	<b><u>Conditions 1, 6, 7, 8, 11, 12, 13 and 14</u></b>	The controls provided by the Works Approval Holder are sufficient to determine a low risk posed by the overtopping of waste oil within the COWS.  Controls include sensors and alarms to alert power station operators when

Risk Event					Risk rating <sup>1</sup> C = consequence L = likelihood	Works Approval Holder's controls sufficient?	Conditions <sup>2</sup> of works approval	Justification for additional regulatory controls
Source/Activities	Potential emission	Potential pathways and impact	Receptors	Works Approval Holder's controls				
								waste oil chamber is at capacity.

Note 1: Consequence ratings, likelihood ratings and risk descriptions are detailed in the *Guideline: Risk assessments* (DWER 2020).

Note 2: Proposed Works Approval 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
Local Government Authority – Shire of Ashburton – advised of proposal 10 May 2022	<p>The following commented received on 9 June 2022 for consideration:</p> <ol style="list-style-type: none"> <li><i>The cumulative impact of hydrocarbon build-up on the tributary of the Fortescue South River, located directly adjacent to the proposed power station.</i></li> <li><i>Impacts of development and discharge in the event of flooding</i></li> </ol>	<p>Low risk of hydrocarbons impacting groundwater at a depth of 10-30m bgl and river tributary is ephemeral.</p> <p>A limit of 15 mg/L total recoverable hydrocarbons will be placed on oil water separator discharge points in accordance with Water Quality Protection Note 68 (DoW, 2013).</p> <p>Additionally, there are monitoring requirements during time-limited operations to verify the performance of the treatment system.</p>
	<ol style="list-style-type: none"> <li><i>The Shire notes that the original approval did not include the discharge of oily water into the environment and queries the justification for this.</i></li> <li><i>The Shire encourages ‘discharge’ to be recycled or taken off site.</i></li> </ol>	<p>Comments noted. In the previous decision report for W6516 discharge was not included as it was to be evaluated later in this amendment.</p> <p><i>“The Delegated Officer has decided to remove all wastewater discharge conditions in the works approval and thus no authorisation for any discharge of oily water to land is given through this works approval.”</i></p>
Works Approval Holder was provided with draft amendment on 25 May 2022.	Response received 16 June 2022 in relation to amendment report only. Reference DWERDT619051	No comments provided

## 5. Conclusion

Based on the assessment in this Amendment Report, the Delegated Officer has determined that a Revised Works Approval will be granted, subject to conditions commensurate with the determined controls and necessary for administration and reporting requirements.

## 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. WQPN 68, DoW 2013, *Water quality protection note 68, Mechanical equipment wash down*, Perth, Western Australia.