



## Application for Licence

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

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<b>Licence Number</b>	L9407/2023/1
<b>Applicant</b>	Indian Ocean Oil Company Pty Ltd
<b>ACN</b>	077 514 642
<b>File number</b>	DER2023/000525
<b>Premises</b>	Murray Road Depot Murray Road CHRISTMAS ISLAND WA 6798  Legal description Lot 491 on Plan 193346 (Crown Reserve 47519)
<b>Date of report</b>	28 June 2024
<b>Decision</b>	Licence granted

**SENIOR INDUSTRY REGULATION OFFICER  
REGULATORY SERVICES**

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

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## 1. Decision summary

This decision report documents the assessment of potential risks to the environment and public health from emissions and discharges during the installation of infrastructure and operation of the premises. As a result of this assessment, licence L9407/2023/1 has been granted.

## 2. Scope of assessment

### 2.1 Regulatory framework

In completing the assessment documented in this decision report, the Department of Water and Environmental Regulation (the department; DWER) 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 23 June 2023, the applicant submitted an application for a works approval to the department under section 54 of the *Environmental Protection Act 1986* (EP Act). Following a site visit by DWER Officers on 3 August 2023, it was determined that the application be changed to a licence application under section 57 of the EP Act as the waste oil recycling infrastructure subject of the works approval application had already been mobilised onsite. It is understood that this was partially completed under the applicant's previous works approval (W5975/2016/1) to construct the waste oil recycling facility which was not completed at the time with the works approval expiring on 4 September 2016. The applicant has confirmed that only some reconfigurations, upgrades and improvements are needed to finalise the installation. The application also includes a discharge of treated wastewater to stormwater infrastructure. Time-limited operations have been applied for in this application. The premises is approximately 500m south of the Drumsite locality.

The Commonwealth of Australia owns the land and leases the premises to Indian Ocean Oil Company (IOOC). As a requirement of the lease, IOOC must obtain approval for improvements and plant additions for the premises. IOOC will seek these approvals prior to commencement of works.

The premises relates to the category and assessed design capacity under Schedule 1 of the *Environmental Protection Regulations 1987* (EP Regulations) which are defined in licence L9407/2023/1. The infrastructure and equipment relating to the premises category and any associated activities which the department has considered in line with *Guideline: Risk Assessments* (DWER 2020) are outlined in licence L9407/2023/1.

### 2.3 Overview of premises

The applicant is a subsidiary of Phosphate Resources Limited (PRL) who operate Christmas Island Phosphates (CIP) under DWER licence L8846/2014/1. The premises is currently registered with DWER (R2391/2014/1) as a Category 77 Bulk storage of chemicals under Regulation 5B of the EP Regulations. Currently, the premises receives hydrocarbons (fuels) via pipeline from the Smith Point Terminal where the primary uses include fuelling the dryers at CIP and the supply to Christmas Island Power Station and visiting navy vessels.

Currently, Christmas Island produces a range of waste oil and fuel material from a range of activities which include:

- Engine/gearbox oils from equipment (e.g., cars, heavy machinery, conveyers, gearboxes).
- Fuel oils that are 'dirty' and considered unacceptable for their primary use (e.g., Commonwealth Government Power Station).
- Oil sludge and sediment (e.g., from tank cleans and Navy ships).

- Water contaminated with hydrocarbons such as dewatering of fuel tanks and cleaning of hydrocarbon hoses.

These waste oils are currently stored and transported from the island by sea to the mainland for treatment and reuse or disposal. The storage, transportation and offloading of this waste presents an environmental risk and is of significant cost. The development of a waste oil recycling facility is a part of PRL/IOOC's overall waste management strategy in cost-saving, more efficient use of resources and minimising environmental risk.

Existing infrastructure at the premises includes:

- 540,000L vertical fuel storage tank (H9)
- 95,000L vertical diesel storage tank (H1)
- 2x horizontal 55,000L fuel storage tanks (H2 – reserve tank and H3 – diesel storage tank)
- 2x 12,000L vertical waste oil tanks (H4A – temporary buffer and H4B – batch storage)
- 25,000L horizontal waste fuel oil tank (CW tank)

This infrastructure is located within an earthen-based bund system (the existing earthen bund will be upgraded to concrete as a part of the proposed works). This bund system drains to an American Petroleum Institute (API) oil water separator to treat any potentially contaminated water captured in this area prior to discharge to a stormwater drain outflow point. The bund drain is equipped with an isolation valve to allow containment of spills if required. As a part of the application, the applicant advised that this stormwater drain connects to piping that runs west along Murray Road after which it enters State Forest and discharges to the ocean via an outfall on the rocky cliffs. As the applicant was unable to provide supporting information showing this stormwater system, DWER staff attended the IOOC site in late September 2023 to determine the flow-path and final discharge point for stormwater discharged to the Murray Road Depot stormwater system. Staff from Phosphate Resources Limited assisted DWER at the time.

Site investigations indicated that existing (and proposed) wastewater discharges into the Murray Road Depot stormwater system follows stormwater pipework and discharges into two unidentified drainage compensation basins located within the licensed premises area for Phosphate Resource Ltd operating under L8846/2014/1. No direct discharge appears to occur to the marine environment from the IOOC site via the site stormwater pipework. Figure 1 shows the approximate pathway and discharge points identified during the site visit.



**Figure 1: Current stormwater pathway from the Murray Road Depot to Compensation Basins 1 and 2**

## 2.4 Proposed operations

This application seeks to finalise installation of the following equipment and infrastructure for the operation of an oil recycling plant within three fabricated pre-mounted skid frame modules:

### Module 1:

- Sludge filter press, 2,500L polymer dosing tank, 2,500L flocculent dosing tank, 2,500L pH correction tank.

### Module 2:

- 5,000L primary separator vessel, 1,000L plate separator, belt skimmer, 50L/per hour skim tank, dissolved air flotation pump.

### Module 3:

- Hydro cyclone, 3,000L shock tank, 3,000L water treatment tank.

### Additional infrastructure:

- 3,000L finished water batch test tank, 23,000L final test tank, cartridge filter, concrete-based bund system sized to include the additional containment capacity.

The infrastructure allows for flexibility in the treatment system according to the quality of the waste oil/contaminated water inputs which includes the following in Table 1.

**Table 1: Estimated waste inputs**

Waste type	Inputs	Source	Estimated annual quantity (litres)	Constituents and characteristics
Waste oils and fuels	Oil sludge	IOOC tanks, separators etc.	35,000	Viscous, high sediment load, low water
	Waste engine and gearbox oils	CIP workshops, plant maintenance	25,000	Likely to be relatively consistent in viscosity and chemical properties, contaminated with carbon and metallic fractions
	Waste diesel fuel	Christmas Island Power Station	80,000	Relatively clean diesel product with a low level of contamination
	Waste oils	The Shire, Navy vessels, other businesses	100,000	Likely to be contaminated with carbon and metallic fractions
<b>Total</b>			<b>240,000</b>	
Water contaminated with hydrocarbons	Tank dewatering and hose cleaning	IOOC	15,000	High levels of diesel or fuel oil contamination
	Contaminated water from waste oil recycling process (see above)	IOOC	80,000	Waste will have been through several stages of filtration, separation
	Oil/water separators clean	CIP and IOOC	10,000	High level of soil contamination, low levels of oil
<b>Total</b>			<b>105,000</b>	
<b>Combined total</b>			<b>345,000</b>	

## Waste oil treatment

The oil recycling system acts as a basic filtering and separation process with dosing of flocculants and pH adjusters where required to expedite the sedimentation and decontamination of waste oil. No heating, distillation or refining is proposed for the waste materials. The waste oil treatment includes multiple stages of filtering, centrifuge and processes to remove physical contamination using the following process:

1. Waste oil material is delivered to the premises via road tanker which discharges through a bar strainer to the CW tank.
2. The waste oil material goes through dosing vessels to enable settling, filtration and to adjust pH if required.
3. The waste oil passes through a static mixer to effectively combine the mixture.
4. The waste oil enters a primary separator vessel to separate oil, solids and water.
5. The waste oil enters an oil treatment vessel to promote drop out of water and heavy sludge contamination.
6. The waste oil enters a centrifuge to further separate the oil and water.
7. The waste oil then enters an oil test tank to permit analysis of the recycled oil quality.
8. On verification of sampling, the recycled oil goes to one of two existing oil batch tanks (Tanks H4A and H4B) and then the CIP burner fuel tank (Tank H9).
9. Oily water goes through a hydro cyclone to further separate any residual oil from the water.
10. The water then goes through a series of filters and separators to be clarified.
11. The water is then pumped to the finished water holding tank for testing.
12. On verification of sampling in the final test tank, the treated water is released to the final oil water separator and discharged to the stormwater system.
13. After primary separation (and possible centrifuging), the solids go to a filter press to create a 'cake' for disposal via the existing CIP incinerator.

The proposed design of the facility will enable treated wastewater and/or treated oil collected in the batch tanks to be passed back through the various stages of treatment should it not meet required quality standards for reuse or discharge.

The facility's expected outputs and disposal is shown in Table 2:

**Table 2: Estimated outputs and proposed disposal**

Product/waste	Estimated annual quantity (litres)	Comments	Use/disposal
Recycled oil	160,000	This oil will be stored in one of two existing 'batch tanks' (Tanks H4A and H4B) where it will undergo testing. If the oil meets the required standard, it will be stored in existing Tank H9 for use in the CIP dryers.	Used as fuel in CIP dryers as authorised in licence L8846/2014/1.
Treated water	105,000	The treatment process will produce water that has some level of hydrocarbon contamination. This water will be further treated in the plant through settling tanks and filters before being stored in the finished water holding tank. This will then undergo testing to ensure it meets the required limits for discharge to the existing stormwater system which then enters the oil water separator.	Disposed to premises stormwater system which leads to and oil water separator and then follows stormwater infrastructure to two compensation basins as per Figure 1

Product/waste	Estimated annual quantity (litres)	Comments	Use/disposal
Solid 'cake' from press	20m <sup>3</sup>	The solids from the various settling processes for both oil treatment and water treatment will be transferred to a filter press, which will remove residual moisture leaving a solid cake. This is likely to comprise mainly of phosphate (principally from separator pits on vehicle wash-down ramps), metallic fractions (engine/gearbox wear), carbon (from combustion processes), fuel resins and gums and fibrous material.	Incinerated in the CIP incinerator as authorised in licence L8846/2014/1. Should the cake be found not suitable for disposal via the CIP incinerator, it will be stored on-site and transported to the mainland for appropriate disposal.
Large solids (from coarse filter)	Unknown	The coarse filtering process may produce a range of unwanted items e.g., rags, papers, plastics.	Incinerated in the CIP incinerator as authorised in licence L8846/2014/1.

### 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 installation and operation which have been considered in this decision report are detailed in Table 3 below. Table 3 also details the control measures the applicant has proposed to assist in controlling these emissions, where necessary.

**Table 3: Proposed applicant controls**

Emission	Sources	Potential pathways	Proposed controls
<b>Construction / Installation</b>			
Dust	General construction including bund upgrades and mobilisation of equipment	Air / windborne pathway	<ul style="list-style-type: none"> <li>Wetting down of any dust generating ground where required.</li> </ul>
Noise			<ul style="list-style-type: none"> <li>Noisy construction works will be carried out between 7.30 am and 4.30 pm, Monday to Friday only.</li> <li>Equipment used for construction work will be the quietest reasonably available.</li> </ul>
<b>Operation</b>			
Noise (intermittent, short duration)	Waste oil recycling process	Air / windborne pathway	<ul style="list-style-type: none"> <li>Operations limited to Monday to Friday, 7.30am – 4.30pm.</li> <li>Limited noise sources – mainly pumps.</li> <li>Requirement to comply with Environmental Protection (Noise) Regulations 1987.</li> </ul>



Emission	Sources	Potential pathways	Proposed controls
Odour			<ul style="list-style-type: none"> <li>Wastes stored in sealed tanks/vessels and unloaded with limited opportunity for venting (use of sealed couplings, vent lines).</li> <li>Proactive monitoring for odours with implementation of corrective actions if required.</li> </ul>
Treated wastewater and potentially contaminated stormwater discharge		Direct discharge to stormwater system with potential contamination impact on soils and groundwater through compensation basins	<ul style="list-style-type: none"> <li>Treated wastewater stored and tested before discharge to stormwater system.</li> <li>Use of an API oil water separator prior to final discharge.</li> <li>Regular inspection and maintenance of oil water separator.</li> <li>Quarterly monitoring of water discharged from oil water separator.</li> </ul>
Chemicals, hydrocarbons and partially treated wastewater	Containment loss from oil processing and storage infrastructure	Overland flow causing contamination of soil and groundwater	<ul style="list-style-type: none"> <li>Waste handling and storage within bunded concrete areas.</li> <li>Bulk oil and water tanks in bunded area with sufficient capacity (i.e., &gt;25% of largest tank volume).</li> <li>Implementation of procedures for loading / unloading.</li> <li>Vehicle tanker unloading within bunded area with concrete floor.</li> <li>Holding tanks fitted with high level indicators and alarms.</li> <li>Inspection, testing and maintenance of plant and equipment as per inspection and audit schedule.</li> <li>Spill kits located at strategic points on the premises.</li> <li>Spill response procedures implemented through Environmental Management System.</li> </ul>
Fire/smoke	Fire incident	Air / windborne pathway	<ul style="list-style-type: none"> <li>Fire-fighting equipment located throughout the premises.</li> <li>Implementation of site emergency management plan.</li> </ul>
Fire wash-water	Release of fire water in the event of fire extinguishing	Discharge to land and stormwater system Overland flow causing contamination of soil and groundwater	<ul style="list-style-type: none"> <li>Waste handling and storage within bunded concrete areas.</li> <li>Stormwater system fitted with bund isolation valve.</li> <li>Implementation of site emergency plan.</li> </ul>

### 3.1.2 Receptors

In accordance with the *Guideline: Risk Assessment* (DWER 2020), the delegated officer has excluded the applicant's employees, visitors, and contractors from its assessment. Protection of these parties often involves different exposure risks and prevention strategies, and is provided for under other state legislation.

Table 4 and Figure 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 4: Sensitive human and environmental receptors and distance from prescribed activity**

<b>Figure Ref.</b>	<b>Human receptors</b>	<b>Distance from activity / prescribed premises</b>
H1	Christmas Island High School	≈ 295m north of the prescribed premises boundary
H2	Residential area of Drumsite	≈ 540m north of the prescribed premises boundary
H3	Recreational area – Flying Fish Cove Beach	≈ 1.1km north of the prescribed premises boundary
H4	Christmas Island Recreation Centre	≈ 1.5km north-east of the prescribed premises boundary
<b>Figure Ref.</b>	<b>Environmental receptors</b>	<b>Distance from activity / prescribed premises</b>
-	Underlying soils and groundwater	<p>Christmas Island geology is dominated by karstic landforms and cave systems with soils considered as highly permeable with little runoff or erosion.</p> <p>According to the Department of Infrastructure and Regional Development and Geoscience Australia, Christmas Island's hydrogeology is complex and poorly understood. The island's groundwater system is likely to be highly compartmentalised, with the potential for groundwater supplies to be identified in several locations across the island.</p> <p>The depth to groundwater beneath the premises has not been determined. Information supplied from the Water Corporation shows that groundwater depth on the island varies and may be between 50-100m.</p>
E1	Christmas Island National Park	≈ 335m south-east of the prescribed premises boundary
E2	Indian Ocean	≈ 740m west of the prescribed premises boundary

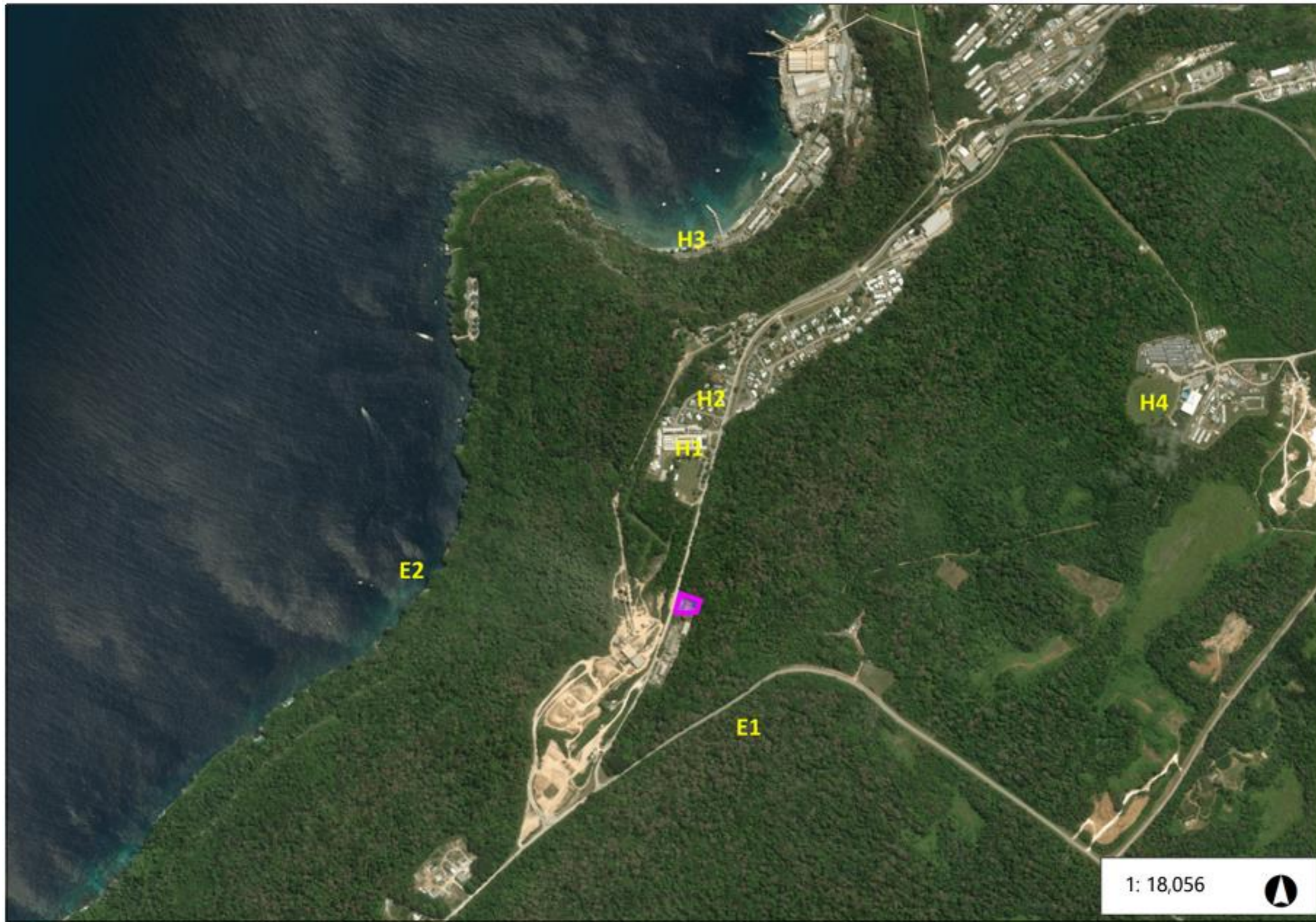


Figure 2: Distance to sensitive receptors

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IR-T13 Decision report template (short) v3.0 (May 2021)

## 3.2 Risk ratings

Risk ratings have been assessed in accordance with the *Guideline: Risk Assessments* (DWER 2020) for each identified emission source and takes into account potential source-pathway and receptor linkages as identified in Section 3.1. Where linkages are in-complete they have not been considered further in the risk assessment.

Where the applicant 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 applicant'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 applicant's controls are not deemed sufficient. Where this is the case the need for additional controls will be documented and justified in Table 5.

Licence L9407/2023/1 that accompanies this decision report authorises emissions associated with the operation of the premises.

The conditions in the issued licence, as outlined in Table 5 have been determined in accordance with *Guidance Statement: Setting Conditions* (DER 2015).

**Table 5: Risk assessment of potential emissions and discharges from the premises during installation and operation**

Risk events					Consequence rating <sup>1</sup>	Likelihood rating <sup>1</sup>	Risk	Reasoning	Licence regulatory controls
Sources / activities	Potential emissions	Potential pathways and impact	Receptors	Applicant controls					
<b>Installation</b>									
Installation and upgrades of oil treatment equipment and infrastructure Vehicle movements Upgrade earthen bunding to concrete	Noise and fugitive dust	Air / windborne pathway causing impacts to health and amenity	Refer to Section 3.1.2	Refer to Section 3.1.1	Minimal onsite impact <b>Slight</b>	Not likely to occur in most circumstances <b>Unlikely</b>	<b>Low</b> Acceptable, based on applicant controls being implemented	The delegated officer considers the applicant's proposed controls for the proposed installation and minor construction works sufficient in preventing any unreasonably impact the amenity or health of off-site human receptors identified in Section 3.1.2.	No regulatory controls specified in the licence - applicant controls sufficient.
<b>Operation</b>									
Vehicle movements Operation of oil/fuel treatment equipment and infrastructure Transfer and storage of oil/fuel and waste products	Noise	Air / windborne pathway causing impacts to health and amenity	Refer to Section 3.1.2	Refer to Section 3.1.1	Minimal onsite impact <b>Slight</b>	Not likely to occur in most circumstances <b>Unlikely</b>	<b>Low</b> Acceptable, based on applicant controls being implemented	The delegated officer considers the applicant's proposed controls for the proposed installation and minor construction works sufficient in preventing any unreasonably impact the amenity or health of off-site human receptors identified in Section 3.1.2.	No regulatory controls specified in the licence - applicant controls sufficient.
	Odour				Minimal onsite impact <b>Slight</b>	Not likely to occur in most circumstances <b>Unlikely</b>	<b>Low</b> Acceptable, based on applicant controls being implemented	The delegated officer considers the applicant's controls sufficient in preventing and managing any odours during operations. Applicable applicant controls have been included in the licence.	- Condition 1, Table 1 - Condition 7, Table 3
	Spills/unintended releases of hydrocarbons, chemicals, solid waste or partially treated wastewater	Overland runoff and seepage potentially causing ecosystem disturbance or impacting ground water quality			Low-level onsite impacts Minimal offsite impacts <b>Minor</b>	Not likely to occur in most circumstances <b>Unlikely</b>	<b>Medium</b> Acceptable subject to applicant controls and additional regulatory controls being implemented	The delegated officer considers the controls proposed by the applicant to be adequate to mitigate the risk of containment loss and spills. These controls have been included as conditions within the licence.	- Condition 1, Table 1 - Condition 7, Table 3 - Condition 9 - Condition 10
Fire incident	Fire, smoke and particulates	Air / windborne pathway causing impacts to health and amenity	Refer to Section 3.1.2	Refer to Section 3.1.1	High level onsite impacts Mid-level offsite impacts <b>Major</b>	Not likely to occur in most circumstances <b>Unlikely</b>	<b>Medium</b> Acceptable subject to applicant controls and additional regulatory controls being implemented	The delegated officer considers the applicant's controls essential in preventing and managing any fire and associated emissions during operations. Applicable applicant controls have been included in the licence.	- Condition 1, Table 1 - Condition 12 - Condition 13 - Condition 14
	Fire water	Overland runoff and seepage potentially causing ecosystem disturbance or impacting ground water quality			High level onsite impacts Mid-level offsite impacts <b>Major</b>	Not likely to occur in most circumstances <b>Unlikely</b>	<b>Medium</b> Acceptable subject to applicant controls and additional regulatory controls being implemented	The applicant must also ensure the Dangerous Goods Licence for the premises remains current with the Department of Energy, Mines, Industry Regulation and Safety.	- Condition 1, Table 1 - Condition 13 - Condition 14

Risk events					Consequence rating <sup>1</sup>	Likelihood rating <sup>1</sup>	Risk	Reasoning	Licence regulatory controls
Sources / activities	Potential emissions	Potential pathways and impact	Receptors	Applicant controls					
Discharge of treated stormwater	Potentially contaminated stormwater	Overland runoff and seepage potentially causing ecosystem disturbance or impacting ground water quality	Refer to Section 3.1.2	Refer to Section 3.1.1	Mid-level onsite impacts Low level offsite impacts <b>Moderate</b>	Not likely to occur in most circumstances <b>Unlikely</b>	<b>Medium</b> Acceptable subject to applicant controls and additional regulatory controls being implemented	The delegated officer considers the applicant's current infrastructure and operational controls sufficient in ensuring potentially contaminated stormwater is contained and treated with an oil water separator prior to discharge to the premises stormwater system. Controls relating to infrastructure and stormwater testing have been added to the licence.	- Condition 11 - Condition 15, Table 4
Discharge of treated wastewater to stormwater infrastructure	Treated wastewater				Mid-level offsite impacts (local scale) Low-level offsite impacts (wider scale) <b>Major</b>	Could occur at some time <b>Possible</b>	<b>High</b> Acceptable subject to applicant controls and multiple regulatory controls being implemented	See Section 3.3 for detailed risk assessment for wastewater testing and discharge to land.	- Condition 7, Table 3 - <b>Condition 15, Table 4</b> - Condition 16 - Condition 17

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

Note 2: Proposed applicant controls are depicted by standard text. **Bold and underline text** depicts additional regulatory controls imposed by department.

### 3.3 Detailed risk assessment for wastewater testing and discharge to land

#### 3.3.1 Wastewater volumes and quality

The applicant has estimated a proposed discharge of 105,000 litres of treated wastewater from the oil and fuel processing facility per annual period. As the applicant has advised that the facility will not be operating on weekend, this equates to a discharge of approximately 404 litres per day.

Given the various oil-based waste materials the applicant is proposing to accept and process at the premises (as per Table 1), the delegated officer considers any associated treated wastewater must be tested for potential environmental toxicants and meet the associated limit prior to discharge to the premises stormwater system. To better inform the department in determining the risk profile of this proposed wastewater discharge, a request for information was sent to the applicant on 11 October 2023. A response was received from the applicant on 2 November 2023 with the following requested information not provided:

- A list of the expected wastewater toxicants and likely concentrations in the treated wastewater;
- The expected oil recycling plants performance to remove environmental toxicants from the residual wastewater;
- A screening analysis to identify potential source-pathway-receptor linkages and comparing known or forecasted emission concentrations against relevant tier 1 environmental assessment criteria as per [Guideline: Assessment and management of contaminated sites](#);
- Current specifications and management controls for the drainage compensation basins likely receiving the proposed wastewater discharge;
- Details on the treated wastewaters receiving environment and likely ecological and environmental receptors, including but not limited to, surrounding vegetation (flora) and fauna, local soils/geology, and groundwater aquifer characteristics for the drainage compensation basin area.

Without this information to better inform the risk profile, the delegated officer has considered the following documents in determining parameters and associated limits prior to discharge:

1. [Guideline: Assessment and management of contaminated sites](#) (AMCS)
2. [Australian and New Zealand Environment and Conservation Council \(ANZECC\) & Agriculture and Resource Management Council of Australia and New Zealand \(ARMCANZ\), 2000 water quality guidelines](#)
3. [Water Quality Protection Note 68: Mechanical equipment wash down](#)

**Table 6: Treated wastewater testing requirements and limits**

Parameter	Units	AMCS guideline <sup>1</sup>	ANZECC guidelines <sup>2</sup>	WQPN 68 <sup>3</sup>	Set limit in L9407/2023/1
Arsenic	mg/L	0.1	0.024	-	0.024
Aluminium (total)	mg/L	0.2	0.055	-	0.055
Benzene	mg/L	0.01	0.95		0.01
Cadmium	mg/L	0.02	0.0002	-	0.0002
Chromium (III)	mg/L	-	0.0033	-	0.003
Chromium (VI)	mg/L	0.5	0.001	-	0.001
Cobalt	mg/L	0.5	0.0014	-	0.0014
Copper	mg/L	1	0.0014	-	0.0014
Ethylbenzene	mg/L	0.003	0.08	-	0.08
Lead	mg/L	0.1	0.0034	-	0.0034
Mercury (total)	mg/L	0.01	0.0006	-	0.006
Nickel	mg/L	0.2	0.011	-	0.011
Vanadium	mg/L	-	0.006	-	0.006
Zinc	mg/L	3	0.008	-	0.008
Naphthalene	mg/L	-	0.016	-	0.016
Phenol	mg/L	-	0.32	-	0.32
pH	-	6.5 – 8.5	-	5.5 to 8.5	6.5 – 8.5
Total recoverable hydrocarbons	mg/L	-	-	15	10 <sup>4</sup>
Salinity (measured as electrical conductivity)	uS/cm	-	-	1800	1800
Surfactants (detergents)	mg/L	-	-	5	5
Toluene	mg/L	0.025	0.018	-	0.018
Xylene	mg/L	0.02	0.2	-	0.2

Note 1 – Limits derived from Department of Health non-potable groundwater use limits in Table D1 – Guideline: Assessment and management of contaminated sites, DWER

Note 2 – Limits derived from the ANZECC and ARMCANZ (2000) Australian Water Quality Guidelines for Fresh and Marine Water Quality Guidelines (freshwater trigger values for slightly to moderately disturbed ecosystems)

Note 3 – Limits derived from WQPN 68, DWER

Note 4 - The API Separator is designed to achieve a discharge performance <10 mg/L TRH

As the sources of oil and fuel waste being delivered to the premises are expected to vary, the delegated officer considers sampling and testing of all oil recycling wastewater batches prior to discharge essential in ensuring an acceptable level of risk to the environment. Where the applicant can demonstrate consistent testing of wastewater that meets the limits set in the licence, the department may consider a decrease in testing frequency through the submission of a licence amendment application with all relevant supporting information and justification.



## 4. Consultation

Table 7 provides a summary of the consultation undertaken by the department.

**Table 7: Consultation**

Consultation method	Comments received	Department response
Application advertised on the department's website on 24 August 2023 – 16 September 2023	None received.	N/A
Local Government Authority Shire of Christmas Island advised of proposal on 28 August 2023 and 4 January 2024 (A2198943 and DWERDT887059).	None received.	The department notes that the Shire has previously provided correspondence on a works approval for installation of an oil recycling plant which notes that the works could proceed given the infrastructure is considered improvements and is contained within an allotment already zoned for that purpose (A1156441).
Department of Energy, Mines, Industry Regulation and Safety (DEMIRS) advised of proposal on 28 August 2023 (A2198944).	DEMIRS responded on 12 September 2023 advising that the premises currently holds a dangerous goods licence and has responsibilities under the <i>Dangerous Goods Safety Act 2004</i> and subsequent regulations to minimise risk of dangerous goods to people, property and the environment to as low as is reasonably practicable. The licence should be reviewed and amended as necessary prior to operating the proposed oil recycling facility.	The department forwarded this DEMIRS advice to the applicant on 19 September 2023 (DWERDT836894). It is the applicant's responsibility to ensure they hold a current dangerous goods licence reflecting the proposed oil recycling facility and should liaise with DMIRS where required.
Parks Australia advised of proposal on 28 August 2023 (A2198942).	None received.	N/A
Phosphate Resource Ltd advised of proposal on 15 November 2023 (A2221457).	None received.	N/A
Applicant was provided with draft documents on 4 January 2024 and 4 April 2024	Refer to Appendix 1	Refer to Appendix 1

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## 5. Conclusion

Based on the assessment in this decision report, the delegated officer has determined that a licence will be granted, subject to conditions commensurate with the determined controls and necessary for administration and reporting requirements.

## References

1. Australian and New Zealand Environment and Conservation Council, Agriculture and Resource Management Council of Australia and New Zealand, October 2000. *Australian and New Zealand guidelines for fresh and marine water quality. Volume 1, The guidelines*. Perth, Western Australia. Accessed at: <https://www.waterquality.gov.au/anz-guidelines/resources/previous-guidelines/anzecc-armcanz-2000>
2. Department of Water, September 2013. *Water Quality Protection Note 68: Mechanical equipment washdown*. Perth, Western Australia. Accessed at [www.wa.gov.au](http://www.wa.gov.au)
3. Department of Environmental Regulation (DER), July 2015. *Guidance Statement: Regulatory principles*. Perth, Western Australia. Accessed at: [www.wa.gov.au](http://www.wa.gov.au)
4. DER, October 2015. *Guidance Statement: Setting conditions*. Perth, Western Australia. Accessed at: [www.wa.gov.au](http://www.wa.gov.au)
5. DWER, September 2016. *Works Approval W5975/2016/1*. Perth, Western Australia. DWER Reference: A1158858
6. DWER, June 2019. *Guideline: Decision Making*. Perth, Western Australia. Accessed at [www.wa.gov.au](http://www.wa.gov.au)
7. DWER, June 2019. *Guideline: Industry Regulation Guide to Licensing*. Perth, Western Australia. Accessed at [www.wa.gov.au](http://www.wa.gov.au)
8. DWER, December 2020, *Guideline: Environmental Siting*, Perth, Western Australia. Accessed at: [www.wa.gov.au](http://www.wa.gov.au)
9. DWER, December 2020, *Guideline: Risk Assessments*, Perth, Western Australia. Accessed at: [www.wa.gov.au](http://www.wa.gov.au)
10. DWER, November 2021, *Guideline: Assessment and management of contaminated sites*, Perth, Western Australia. Accessed at [www.wa.gov.au](http://www.wa.gov.au)
11. Strategen-JBS&G, June 2023, *Application for Works Approval Murray Road Depot*, Western Australia. DWER reference: DWERDT796853
12. Strategen-JBS&G, 2023, *Indian Ocean Oil Company Pty Ltd L9407 response to Request for Information*, Western Australia. DWER reference: DWERDT860661

## Appendix 1: Summary of applicant's comments on risk assessment and draft conditions 26 February 2024

Condition/Table	Summary of applicant's comment	Department's response
<p>Condition 1, Table 1: (Design, installation, and operational requirements) and</p> <p>Condition 2 (Compliance reporting)</p>	<p>The table does not specify what is existing and new (yet to be installed) infrastructure and equipment. Clarification is required that Environmental Compliance Report(s) are only required for new infrastructure and equipment.</p>	<p>The Environmental Compliance Report is required for confirmation of all infrastructure meeting the requirements of the table. However, installation certification and as constructed plans for existing infrastructure (assessed through the registration) are not required; only required for new infrastructure.</p> <p>Condition 3 has been updated to confirm this requirement.</p>
<p>Condition 15 (Table 4: Emission and discharge limits) - Finished testing tank</p>	<p>Immediate imposition of emissions limits is problematic.</p> <p>The original application was for a works approval; however, the application changed to a licence on advice from DWER. A works approval would normally allow for time-limited operation with validation monitoring. The results of validation monitoring could then be used to inform the risk assessment for licence and requirements for ongoing monitoring and emission limits.</p> <p>IOOC requests emission limits are not imposed immediately, and that a period of validation testing is allowed (the number of batches of treated wastewater analysed post-construction of the new infrastructure for discussion). The results of the testing will be provided to DWER along with a risk assessment and recommendation for ongoing monitoring parameters, frequency, and emission limits.</p> <p>The number and types of sources of waste oil available on the island are limited and the quality of separated wastewater is expected to be consistent and pose a low environmental risk.</p> <p>The requirement to test each batch of wastewater before discharge is not practical given the samples must go to a NATA laboratory on the mainland (see comments against Condition 16 below).</p>	<p>The delegated officer notes the inclusion of commissioning/validation requirements will be a duplication of already proposed requirements in the draft licence. Where wastewater does not meet the emission limits, it is not permitted to be discharged to the environment. The licence conditions allow for this wastewater to either be further treated through the oil recycling infrastructure or will require disposal to a suitably authorised waste facility.</p> <p>The results of monitoring are to be included in the submission of the Annual Environmental Report.</p> <p>Where the applicant can demonstrate consistent testing of wastewater that meets the limits set in the licence, the department may consider a decrease in testing frequency through the submission of a licence amendment application with all relevant supporting information and justification.</p> <p>During discussions, it was noted the applicant intends to increase the size of the finish wastewater testing tank to reduce the number of wastewater sampling events. Applicant to confirm the capacity of this tank.</p>

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Condition/Table	Summary of applicant's comment	Department's response
Condition 15 (Table 4: Emission and discharge limits) - Oil Water Separator	<p>The proposed TPH emission limit (&lt;1 mg/L) is beyond the normal operational performance capability of the API Separator.</p> <p>The API Separator has been operated and maintained to a best-practice standard by IOOC for several years with no issues and can maintain a discharge of less than 10 mg/L (this limit was previously specified by DWER in Works Approval W5975/2016/1 for the same activity).</p> <p>The API Separator is maintained to sustain the required discharge performance (&lt;10 mg/L TPH) whether water is from the treatment system or other areas of the premises. The inclusion of the treated wastewater stream will not impact the demonstrated performance of the system.</p>	<p>Given the proximity to receptors, the other criteria limits imposed on the licence and the TPH limit recommended in WQPN 68, The delegated officer accepts this change with all other criteria limits to remain.</p> <p>The reference to TPH (total petroleum hydrocarbons) has been changed to TRH (total recoverable hydrocarbons) as it is the more relevant criteria for the analysis of petroleum hydrocarbons in wastewater.</p>
Condition 16	<p>The requirement to use NATA accredited laboratory will require the samples to be sent to the mainland with significant cost and time implications.</p> <p>The Eurofins/ALS laboratory has confirmed that transit times and quarantine requirements will mean that the specified holding times for some parameters will likely not be met (e.g., Cr VI and III, TRH, and surfactants have holding time requirements of less than two days; phenols and TRH have less than seven days). The laboratory has advised that there are no alternative methods for these parameters.</p>	<p>The delegated officer recognises the remoteness of the sampling location and associated travel logistics, however, sample testing outside of holding times are generally still viable and accurate.</p> <p>A note has been added to Table 4 acknowledging that some samples may not be tested within the specified holding times.</p>