Thevenard Island

Onshore Well Plug and Abandonment Program Environment Plan Summary

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1.0 Introduction

1.1 Overview

Chevron Australia Pty Ltd (CAPL) is the proponent and nominated operator of the Thevenard Island (TVI) Joint Venture petroleum-related activities within the petroleum titles containing the Saladin, Cowle, Yammaderry, Crest, Roller, and Skate oilfields. Petroleum well-related activities on Thevenard Island are regulated under the Western Australian (WA) *Petroleum and Geothermal Energy Resources Act 1967* (PGERA), and associated Petroleum and Geothermal Energy Resources (Environment) Regulations 2012 (PGER(E)R).

The Thevenard Island oilfields and production facility have reached the end of their economic life, and therefore CAPL has ceased production. The assets have remained in care and maintenance mode since 2014, and will remain in this stage until all decommissioning activities have been completed.

The next stage of decommissioning requires the 15 onshore wells (used for production, injection, water disposal, and exploration) to be permanently plugged and abandoned.

1.2 Location

The wells associated with the EP are on Thevenard Island within Petroleum Production Licence L12 (Figure 1-1). Thevenard Island is approximately 25 km north-west of Onslow and 70 km south-west of Barrow Island in the Carnarvon Basin, WA. It is approximately 5 km long, 1 km at its greatest width, and covers an area of approximately 550 ha.

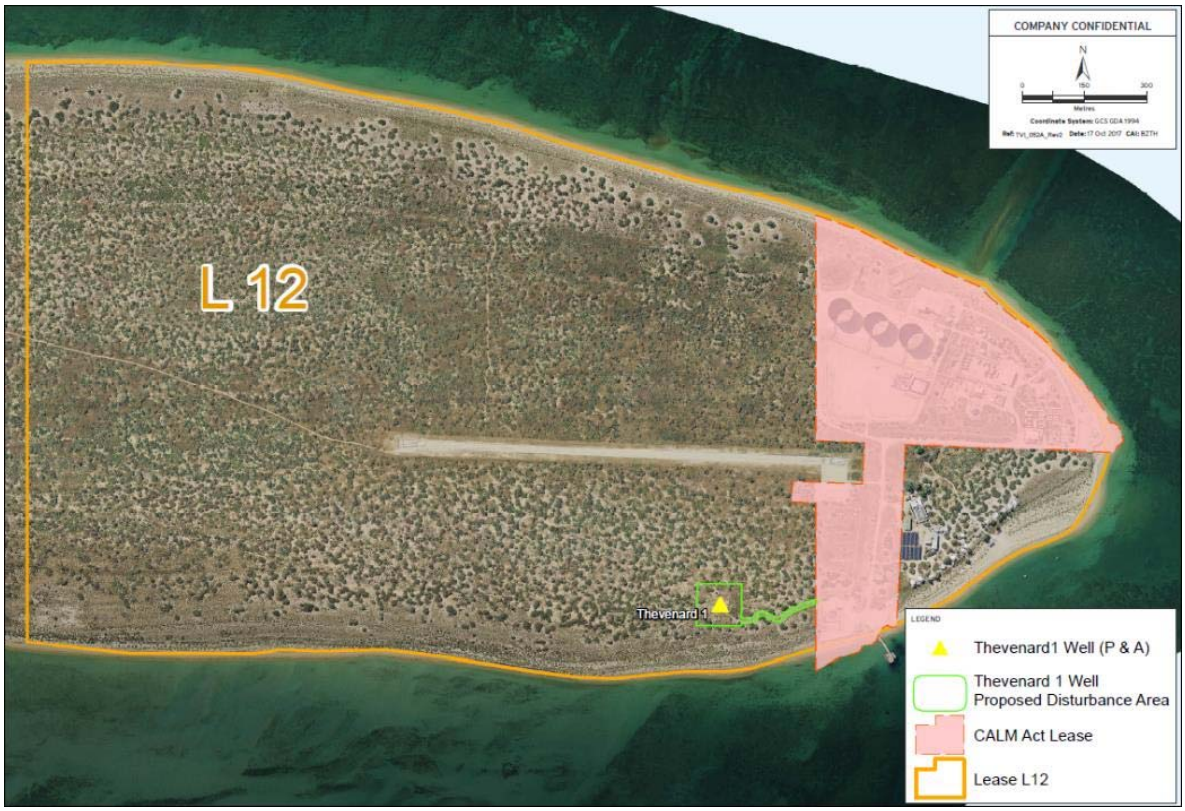

Figure 1-1: Location of L12, TVI-1, and the CALM Act Lease on Thevenard Island

1.3 Scope

Under the PGER(E)R, the scope of the EP is limited to the petroleum activity as described in Section 2.0.

1.4 Licence Holder and Operator Details

CAPL is nominated as the operator and titleholder of the Thevenard Island petroleum activities on behalf of the non-operating joint venture partners listed in Table 1-1.

Table 1-1: Titleholder Details

Titles	Details	Titleholders	Operator	Address
L12	Production Licence	Chevron Australia Pty Ltd Chevron (TAPL) Pty Ltd * Mobil Australia Resources Company Pty Ltd * Santos Offshore Pty Ltd *	Chevron Australia Pty Ltd	QV1, 250 St Georges Terrace, Perth, WA, 6000

* *Non-operating joint venture partner*

In accordance with the (PGER[E]R), the contact details for CAPL (the operator) are listed in Table 1-2.

Table 1-2: Operator Contact Details

Company Name	Chevron Australia Pty Ltd
Nominated Liaison Person	John Connor
Position	Drilling and Completions Manager
Business Address	GPO Box S1580, Perth WA 6845
Telephone Number	+61 8 9216 4254
Fax Number	+61 8 9216 4223
Email Address	austdrillingops@chevron.com

1.5 Stakeholder Engagement

Regular consultation with relevant stakeholders (community, State government departments, industry operators, and contractors to CAPL) has been undertaken by CAPL throughout the Thevenard Island Retirement Project.

CAPL's Thevenard Island Stakeholder Consultation Plan addresses the requirements of Regulation 17 of the (PGER(E)R) and provides a process for ensuring all stakeholders are identified and appropriately engaged throughout the Thevenard Island decommissioning activities.

This Stakeholder Consultation Plan also includes details regarding previous extensive consultation undertaken with stakeholders to provide general awareness, and a forum for providing feedback, on the Thevenard Island Retirement Project.

As discussed in the Stakeholder Consultation Plan and in accordance with Regulation 15(11) of the (PGER(E)R), CAPL has undertaken targeted consultation with stakeholders regarding the scope and content of the EP, as summarised in Table 1-3.

Table 1-3: Stakeholder Engagement Log

Stakeholder	Date	Summary of Consultation	Response Summary
DBCA	4 Oct 2017	Overview of the activities, potential environmental hazards, and control measures	Confirmation that previous feedback from DBCA is incorporated into the EP. Follow-up correspondence with DBCA to provide a full draft of the EP for review on 18 Oct 2017.
Department of Transport (DoT) (Harbour Master)	4 Oct 2017		Feedback related to existing requirements outside the development of the EP that pertain to vessel activity in the area.
Department of Water and Environmental Regulation	4 Oct 2017		Acknowledgement of correspondence, no specific feedback provided.
Mackerel Island Pty Ltd (MIPL)	4 Oct 2017		Response related to ensuring the timing of the plugging of Saladin wells is communicated to MIPL in advance so that visitors can be made aware of the activities and potential noise when booking.
Pilbara Port Authority	4 Oct 2017		In DoT Harbour Master's response. No further specific response provided.
DoT (Marine Pollution Branch)	13 Oct 2017	As above, with additional details pertaining to oil spill contingency plans	Response specific to the content of spill contingency plans resulting in minor administrative changes to the subsidiary document.
DBCA	8 December 2017	Requested several minor changes regarding: Species names, breeding times (turtles) etc. Consideration of additional control measures for specific activities where interaction with marine turtles and light sensitives species may occur	Several minor administrative changes made to this plan re: specices names and breeding times. CPAL provided more speicifc information to the evaluation of lighting impacts, and included additional consideration of control measures where potential interaction with marine turtles and light sensitive species had the potential to occur.

2.0 Description of the Activity

Before onshore plug and abandonment activities commence, well-site grooming may be undertaken (Section 2.2) to remove above-ground piping and equipment from the well site, thus enabling safe rig access (called Phase 1 activities). Access track and well-site construction (Section 2.4) may also be required to allow rig access.

Onshore plug and abandonment activities will comprise an additional three phases:

- Phase 2: Temporary reservoir isolation and disconnection of the trees (Section 2.3.1)
- Phase 3: Permanent reservoir isolation (Section 2.3.2)
- Phase 4: Permanent surface isolation (Section 2.3.3).

These activities will be undertaken using the wireline / slickline unit, workover rig, and cementing unit, as well as a coiled tubing unit or rig assist snubbing unit. Logistics and support operations may be required; these are described in Section **Error! Reference source not found.**.

2.1.1 Overview Onshore Oil Gas and Water Disposal Wells

Four well types are associated with the EP:

- production well
- injection well
- water disposal well
- exploration well.

Table 2-1 lists the well identifiers, well types, and as-built geographic coordinates.

Table 2-1: Well Identifiers, Types, and Locations

Well Site	Well	Well Type	Date Drilled	Easting	Northing
Saladin East	Saladin 5	Gas injection	Nov 1988	295294	7625781
	Saladin 6	Producer	Dec 1988	295295	7625779
	Saladin 11	Water injection	Jun 1994	295295	7625812
	Saladin 14	Gas-lifted producer	Aug 1996	295291	7625756
Saladin South	Saladin 4M	Gas injection	Feb 1989	294702	7625299
	Saladin 12	Gas-lifted producer	Jul 1996	294732	7625315
	Saladin 13	Gas-lifted producer	Aug 1995	294732	7625310
	Saladin 18M	Gas-lifted producer	Oct 1999	294732	7625338
	Saladin 19M	Gas-lifted producer	Sep 1999	294732	7625328
	Saladin 24	Gas-lifted producer	Aug 1999	294732	7625300
Crest	Crest 6	Producer	Mar 1998	294963	7626089
	WDW 1	PFW disposal	Apr 1994	294961	7626082
	WDW 2	PFW disposal	May 1994	294958	7626075
	WDW 3	PFW disposal	Mar 1994	294956	7626068

Well Site	Well	Well Type	Date Drilled	Easting	Northing
TVI-1	TVI-1	Exploration well	Drilled and abandoned Mar / April 1968	294458	7625351

2.1.2 Timing

The onshore plug and abandonment program is expected to commence in Q1 2018 and run for ~10 months. Some activities covered under the EP will occur 24 hours a day.

2.2 Phase 1: Well-site Grooming Prior to Plug and Abandonment

To provide additional space at the well sites for well abandonment activities, CAPL propose to disconnect and remove all surface piping and infrastructure from these sites. Existing piping and infrastructure to be removed includes:

- production pipework and associated vessels, tanks, pumps, filters, valves, instrumentation, electrical and control systems
- pipe stands, bunds, and foundations
- fences, light poles, sign posts, and bollards
- walkways, platforms, ladders, stairs, and structural steelwork
- relocation of some disused equipment and stabilisation blocks.

All production pipelines and vessels have been cleaned and flushed, and all production plant and metering station facilities have been isolated, depressurised, and are free of residual hydrocarbon.

No chemicals are required for these activities.

2.3 Plug and Abandonment Activities

The following subsections describe how CAPL expects the well abandonment activities to be conducted.

2.3.1 Phase 2: Temporary Reservoir Isolation and Disconnection of the Trees

Temporary reservoir isolation is required to enable the Christmas tree to be disconnected. This isolation can be undertaken via the rig or the wireline unit. During wireline operations, a wire or braided cable is lowered into the well to run tools in and out of the wellbore. Generally, onshore wireline operations are conducted from a diesel-powered unit (potentially self-propelled; not a rig) modified to deploy wireline cables. However, in some instances wireline operations may be completed by a rig.

Diesel-powered coiled tubing units and/or a hydraulic workover unit (snubbing unit) and cement mixing / pumping equipment may perform some of these operations.

Tasks associated with this activity include:

- Install Pressure Control Equipment
- Bullhead the Well
- Isolate the Reservoir
- Remove Pressure Control Equipment and Christmas Tree

2.3.2 Phase 3: Permanent Reservoir Isolation

Permanent reservoir isolation is required prior to permanent abandonment of the wells. Tasks associated with this activity include:

- Install and Pressure Test Blow Out Preventer
- Establish Communication with the Annulus
- Install Permanent Reservoir Barrier

2.3.3 Phase 4: Permanent Surface Isolation

Permanent surface isolation is required to ensure two barriers are in place prior to permanent abandonment of the wells. Tasks associated with this activity include:

- Set Upper Abandonment Plug
- Perforate / Cut / Punch Well Casing
- Install Surface Isolation Barrier

2.4 Access Track and Well-site Construction

Most wells covered by the EP have existing infrastructure and access tracks, but one well (TVI-1) requires an access track, construction of a well lease, and potentially a cellar around the wellhead. This construction is required to allow the rig (and support equipment) to safely access the well site.

Well sites other than TVI-1 may require well-site stabilisation.

3.0 Description of the Environment

Thevenard Island is a Nature Conservation Reserve (Reserve No. 33174) vested in the Conservation Commission, and managed by DBCA under the CALM Act. The reserve is primarily for the protection of seabird and shorebird populations.

3.1 Physical Environment

Thevenard Island is a low, relatively flat, vegetated mid shelf cay approximately 5 km long by 1 km wide. Thevenard Island covers an area of approximately 550 ha with an average height above sea level of 5 m Australian Height Datum (AHD). The surrounding shallow sea constitutes the continental shelf and comprises up to 250 m of lime cemented sand, grit, conglomeratic and coral reef deposits of Quaternary age, overlying Tertiary limestones of the Cape Range Group (LeProvost et al., 1987). No natural drainage patterns exist on Thevenard and rainfall infiltrates the sandy soils and directly recharges the shallow unconfined superficial groundwater. The unconfined groundwater aquifer is present within the Aeolian sands between 1 and 7 m (Golder 2011).

The benthic marine environment within the Thevenard Island area is broadly characterised by five intertidal and subtidal habitats (sandy beaches, intertidal limestone pavement, subtidal limestone pavement, coral communities, subtidal sand).

3.2 Biological Environment

According to the DPaW Declared Rare and Priority Flora list for the Pilbara region, no Declared Rare Flora (DRF) species are known to occur on Thevenard Island; however, the Priority 3 flora species, Carpobrotus sp. Thevenard Island occurs on the island. To date, 102 plant taxa have been identified on the CALM Act Lease and the DBCA Nature Reserve. Since operations commenced, 11 environmental weed species and 20 mainland native species have been recorded as introduced to Thevenard Island (Astron Environmental 2013). Results from weed management and monitoring programs conducted in 2014-2015 recorded 12 weed species on the CALM Act Lease (Astron Environmental 2015).

The DBCA advised there is an occurrence of Priority Ecological Community (PEC) #24, previously recorded on Barrow Island. This PEC is further described as ‘Coastal dune native tussock grassland dominated by Whiteochloa airoides (Priority 3)’ and is located on the western side of Thevenard Island. A Priority 3 PEC is defined as a poorly known ecological community that do not meet adequacy of survey requirements and/or are not adequately defined.

The house mouse (Mus domesticus) and the Northern Short-tailed Mouse (Leggadina lakedownensis) are the only two terrestrial mammal species found on Thevenard Island.

The Northern Short-tailed Mouse was recorded in 1985 (LeProvost et al. 1987), and the house mouse is believed to have been anthropogenically introduced to Thevenard Island in approximately 1985 (Astron Environmental 2011).

A total of 76 bird species have been recorded during avifauna surveys on TVI between 1985 and 2013 (Astron Environmental 2013). These bird species consist of resident and migratory bird species that utilise suitable habitats on Thevenard Island.

Five species of sea turtle occur in the waters of north-western WA, with Green Turtles (*Chelonia mydas*) particularly abundant in this region (Pendoley 1997). All five species are listed as Threatened and Migratory under the WA Wildlife Conservation Act 1950 and the Environmental Protection and Biological Conservation Act 1999.

Migrating humpback whales may be encountered in the offshore area of Thevenard Island between September and November, however the offshore area does not contain recognised migratory routes, known feeding, breeding or resting areas. Whale sharks

are known to pass through and potentially feed in the offshore area of Thevenard Island while migrating to aggregation areas on the Ningaloo Coast. Dugongs are also likely to be present in the nearshore waters around Thevenard.

3.3 Cultural Heritage

Thevenard Island is not within any Native Title area and no Aboriginal heritage places or registered sites are within the CALM Act Lease on Thevenard Island.

3.4 Socio-Economic Environment

The Pilbara coastal region is one of WA's largest resource development and industrial areas. Important industries include petroleum, iron ore export, salt production, and aquaculture. A major shipping port at Dampier facilitates exports from this region.

Major commercial fisheries operate out of Exmouth and Onslow. Exmouth also supports a tourism industry, primarily centred on the area's marine attractions. Recreational fishing charters regularly visit the waters around the offshore islands of the region during the winter tourist season, including the waters surrounding Thevenard Island.

4.0 Environmental Risk Assessment Methodology

An Environmental Risk Assessment Workshop was undertaken to evaluate impacts and risks arising from the petroleum activities described in Section 2.0. The risk assessment also considered emergency conditions and spill response activities.

The risk assessment was undertaken in accordance with the Chevron Australia Health, Environment, and Safety (HES) Risk Management Process and the processes outlined in ISO 31000:2009 Risk Management – Principles and Guidelines (SASNZ, 2009) and Handbook 203:2012 Managing Environment-related Risk (SASNZ, 2012).

The environmental impact and risk evaluation process comprised these components:

- identification and description of the petroleum activity
- identification of particular environmental values
- identification of relevant aspects
- identification of relevant environmental hazards
- exposure evaluation
- evaluation of impacts and risk
- consequence
- control measures and as low as reasonably practicable (ALARP) evaluation
- likelihood
- quantification of the level of risk
- risk acceptance criteria
- environmental performance objectives, standards, and measurement criteria.

Table 4-1 summarises the environmental impacts, risks, and control measures in place to manage the activity.

Table 4-1: Summary of the Potential Impacts Risks and Control Measures

Source of Environmental Impact or Risk (Hazards)	Potential Environmental Impacts and Risks (Consequences)	Control Measures
Light emissions generated from the activity have the potential to alter the behaviour of fauna and reduce their chances of survival	Fauna injury or death	• Where practicable, Phase 2-4 Plug and Abandonment activities scheduled to commence outside of turtle nesting season • Lighting mitigations: o Where possible, lower-frequency light sources (i.e. red or orange) shall be used, and blue/white lights avoided o Shielded, directed away from the beach and directed on the work area only • Lighting mitigations for vessels on stand-by overnight at the jetty: o External lights will be turned off at night o All window coverings will be drawn • Site induction which includes environmental measures for using lighting • Weekly inspection undertaken from the beach to assess placement, height, and direction of light during turtle nesting season.

Source of Environmental Impact or Risk (Hazards)	Potential Environmental Impacts and Risks (Consequences)	Control Measures
All activities were identified as having the potential to result in interactions with fauna. Specifically, these included • fauna strike via movement of vehicles and machinery (including sand clearing) • entrapment from removal of well cellars • entrapment from seawater intake	• Fauna injury or death	• Personnel access restrictions and speed restrictions on Thevenard Island (40 km/h) • Driver certification in accordance with the Australian Business Unit (ABU) Motor Vehicle Safety Process Fauna exclusion/egress controls are in place and operational • Any open fixed pipes are to be covered overnight to prevent fauna ingress and entrapment • Any open-ended tubular hoses and waste pipes are to have open ends elevated by at least 200 mm to prevent fauna access • Intake hose has a screen to prevent fauna ingress • Site inductions which include fauna management measures, personnel access restrictions, and speed restrictions on • During turtle nesting season (Nov–Apr): o demarcate barge landing hardstand area o conduct inspection prior to clearing sand from the barge landing area o stockpile all sand removed from the barge landing area within the laydown area 2 m away from the beach • Install concrete blocks on the outside of the barge landing ramp below Highest Astronomical Tide (HAT)
Well-site grooming, operation of plant and equipment during onshore plug and abandonment activities, and aviation logistics will generate noise emissions.	• Behavioural disturbance of fauna • Temporary disturbance to existing land use (tourism)	• No shift changes at midnight • Equipment is maintained in accordance with maintenance schedule • Stakeholder consultation with MIPL • Site inductions

Source of Environmental Impact or Risk (Hazards)	Potential Environmental Impacts and Risks (Consequences)	Control Measures
Vegetation clearing and well-site stabilisation will result in various environmental interactions which has the potential to cause a number of risks.	• Introduction of Non-indigenous Species (NIS) and disturbance to flora, fauna, and ecological communities • Fauna injury or death • Disturbance to potential Aboriginal heritage sites	• Conditions within the CPS 7024 will be implemented to minimise the risk of the introduction and spread of weeds and disturbance to ecological communities • Clearing activities to be undertaken during daylight hours • Pre-inspection of area to be cleared • Activities will be undertaken in accordance with the Aboriginal Heritage Act 1972 (WA). • A heritage survey will be completed before clearing • Vegetation Disturbance Certificate will be obtained before clearing activities, and will include a Vegetation Disturbance Assessment Form
Vegetation clearing has the potential to cause a fire.	• Disturbance to terrestrial flora, fauna, and ecological communities	• A fire trailer comprising a water tank, pump and hose will be present on site. • Fire extinguishers present (both in vehicles and on site) • Site induction which includes smoking restrictions, Permit to Work system, and emergency response procedures
Moving personnel and mobile equipment onshore has the potential to introduce new NIS to Thevenard Island, or further spread existing NIS.	• Introduction of NIS and disturbance to flora, fauna, and ecological communities • Spread of existing NIS	• Site inductions which include an overview of quarantine requirements for Thevenard Island for the onshore and nearshore environment • Equipment quarantine checks undertaken before mobilisation to Thevenard Island, as per the Quarantine Management Plan • Vehicle movements are restricted to existing roads and tracks within the approved CALM Act Lease and TVI-1 footprint
Handling and storage of solid waste during this onshore plug and abandonment program, has the potential for an accidental release of solid waste to the environment.	• Injury and entanglement of marine fauna and seabirds.	• Site induction • All waste is appropriately segregated, labelled and contained within covered receptacles (where there is the potential for material to be wind-blown) and removed from active well leases at the end of each day/campaign as appropriate and returned to the mainland for disposal • Emergency Response Plan in place for the Thevenard Island Onshore Well Plug and Abandonment Program which addresses cyclone preparedness arrangements. • Post Cyclone Inspection • Thevenard Island Radiation Management Plan (ABU130100161)

Source of Environmental Impact or Risk (Hazards)	Potential Environmental Impacts and Risks (Consequences)	Control Measures

Operating vehicles, equipment, and rigs within the well sites requires the use and storage of hazardous materials, and chemicals	• contamination of groundwater and soil
	• localised impacts to marine and coastal fauna and habitats
	• impacts to socioeconomic values
		• All personnel have completed site inductions, which include spill response procedures and responsibilities
		• Diesel fuel will be stored in a double-skinned container or secondary containment comprising 110% of the tank volume and inspected for leaks during use
		• Refuelling will be undertaken in accordance with refuelling procedure / JHA, which includes these safeguards:
		  o Using a spill tray during refuelling
		  o Monitoring fuel tank levels to avoid overfilling
		  o Spill response equipment on site during refuelling operations
		  o Any spills cleaned up immediately
		• The Contractor Bulk Hydrocarbon Transfer Checklist will be utilised to ensure the diesel transfer hoses are fitted with dry break couplings and the condition of diesel transfer hoses, couplings and seals are checked prior to bunkering activities
		• Response to spills in the marine environment conducted in accordance with the offshore OSCP
		• Bulk liquid chemicals will be stored in an existing bunded area on Thevenard Island
		• On the well site, any liquid chemicals will be stored within secondary containment comprising 110% of tank volume
		• Portable tanks, hoses, and pipes will be checked for integrity and securement of fittings before use
		• During use, visual monitoring will be undertaken to identify any discharges to the environment
		• Before disconnecting hoses from temporary storage tanks, spill protection will be provided underneath hose connections
		• The minimum requirements for well barriers as described in CAPL's global barrier standard are met
		• Safety-critical well control equipment is maintained in accordance with the rig operator safety management system as detailed in the DMIRS-accepted rig-specific safety case revision

Source of Environmental Impact or Risk (Hazards)	Potential Environmental Impacts and Risks (Consequences)	Control Measures
		• The WMP (documenting plug and abandonment design and preventive engineering controls) is accepted by DMIRS before activities commence • The OSCP is implemented in the event of an uncontrolled release from a well • Spill response exercises will be undertaken in accordance with the rig operator's emergency response exercise program • Clean-up to be started immediately on identifying a leak/spill • Emergency Response Plan in place for the Thevenard Island Onshore Well Plug and Abandonment Program which addresses cyclone preparedness arrangements

5.0 Management Approach

The implementation strategy in the EP identifies the systems, practices, and procedures used to ensure the environmental impacts and risks of the activities are continuously reduced to ALARP and the environmental performance outcomes and standards are met. These are predominantly driven through Chevron Australia's Operational Excellence Management System (OEMS).

5.1 Operational Excellence Management System

The implementation strategy of the EMP was developed in line with Chevron Australia's OEMS. Chevron's OEMS is aligned to ISO 14001:2004; Table 5-1lists the key components.

Table 5-1: OEMS Elements Relevant to the Activity

OEMS Element	Element Description	Key Processes Relevant to the Activity
Safe Operations (OE-03)	Operate and maintain facilities to prevent injuries, illness, and incidents	• (OE-03.01.01) ABU HES Risk Management
Management of Change (OE-04)	Manage both permanent and temporary changes to prevent incidents	• (OE-04.00.01) Management of Change for Facilities and Operations – ABU Standardised OE Process
Incident Investigation (OE-09)	Investigate and identify root causes of incidents to reduce or eliminate systemic causes to prevent future incidents	• (OE-09.00.01) Incident Investigation and Reporting – ABU Standardised OE Process
Community and Stakeholder Engagement (OE-10)	Reach out to the community and engage in open dialogue to build trust	• (OE-10.00.01) Community and Stakeholder Engagement – ABU Standardised OE Process
Emergency Management (OE-11)	Prevention is the first priority, but be prepared to respond immediately and effectively to all emergencies involving wholly owned or operated Chevron assets	• (OE-11.01.01) Emergency Management Process • (ABU160500405) Thevenard Island Onshore Well Securement OSCP
Compliance Assurance (OE-12)	Verify conformance with OE requirements in applicable company policy and government laws and regulations	• (OE-12.01.19) Compliance Assurance Audit Program ABU Standardised OE Procedure • (OE-12.01.18) Compliance Assurance Management of Instances of Potential Noncompliance

5.2 Environment Plan Review

Regulation 18 of the PGER(E)R requires CAPL to submit a proposed revision of the accepted EP to the Minister:

- before commencing a new activity
- before any significant modification or change, or a new stage of an existing activity
- before, or as soon as practicable after, any significant new environmental impact or risk occurs, or any significant increase in an existing environmental impact or risk which occurred or is to occur.

6.0 Chemical Disclosure

No chemicals are required for Phase 1 well-site grooming activities. CAPL will provide DMIRS with a list of chemicals and required parameters for the chemicals to be used downhole once they have been selected and prior to Phase 2 plug and abandonment activities commencing. This Summary will be updated accordingly.

7.0 Acronyms and Abbreviations

Table 7-1 defines the acronyms and abbreviations used in this document.

Table 7-1: Acronyms and Abbreviations

Acronym / Abbreviation	Definition
°C	Degrees Celsius
ABU	Australian Business Unit
AHD	Australian Height Datum
ALARP	As low as reasonably practicable
CAPL	Chevron Australia Pty Ltd
DBCA	WA Department of Biodiversity, Conservation and Attractions
DMIRS	WA Department of Mines, Industry Regulation and Safety
DoT	Department of Transport
DRF	Declared Rare Flora
EP	Environment Plan
HES	Health, Environment, and Safety
ISO	International Organization for Standardization
JHA	Job Hazard Analysis
Km/h	Kilometres per hour
MIPL	Mackerel Island Pty Ltd
NIS	Non-indigenous Species
OE	Operational Excellence
OEMS	Operational Excellence Management System
OSCP	Oil Spill Contingency Plan
PEC	Priority Ecological Community
PGERA	*Petroleum and Geothermal Energy Resources Act 1967*
PGER(E)R	Petroleum and Geothermal Energy Resources (Environment) Regulations 2012
Q1, Q2,etc.	Three-month quarter of a calendar year
TVI	Thevenard Island
WA	Western Australia
WDW	Water Disposal Well
WMP	Well Management Plan

8.0 References

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