



EMPEROR ENERGY
L I M I T E D

Judith-2 Exploration Drilling Oil Pollution Emergency Plan

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ACRONYMS

TERM/ ACRONYM	DEFINITION
AASFA	Agriculture and Animal Services Functional Areas
AEP	Australian Energy Producers
AFMA	Australian Fisheries Management Authority
AIIMS	Australasian Inter-Service Incident Management System
AMOSC	Australian Marine Oil Spill Centre
AMOSPlan	Australian Industry Cooperative Oil Spill Response Arrangements
AMSA	Australian Maritime Safety Authority
BOP	Blow-out Preventor
CMT	Crisis Management Team
DEECA	Department of Energy, Environment, and Climate Action (formerly DEWLP)
DFAT	Department for Foreign Affairs and Trade
DISC	Drilling Industry Steering Committee
DISR	Department of Industry, Science, and Resources
DJSIR	Department of Jobs, Skills, Industry and Regions (Victoria)
DPI	Department of Primary Industries (NSW)
DTP	Department of Transport and Planning (Victoria)
EMBA	Environment That May Be Affected
EMLO	Emergency Management Liaison Officer
EMT	Emergency Response Team
EMPLAN	State Emergency Management Plan (NSW)
EP	Environment Plan
EPA	Environment Protection Authority
EPO	Environmental Performance Outcomes
EPS	Environmental Performance Standards
ERP	Emergency Response Plan
GIS	Geographic Information System
IAP	Incident Action Plan
IC	Incident Controller
ICC	Incident Command Centre
IMT	Incident Management Team
ISV	Infield Support Vessel
JSCC	Joint Strategic Coordination Committee

TERM/ ACRONYM	DEFINITION
LO	Liaison Officer
LOWC	Loss of Well Control
MARPOL	Marine Oil Pollution Legislation
MENSAR	Maritime Emergencies (non-search and rescue)
MDO	Marine Diesel Oil
MODU	Mobile Offshore Drilling Unit
MoU	Memorandum of Understanding
NatPlan	National Plan for Maritime Environmental Emergencies
NEBA	Net Environmental Benefit Analysis
NOPSEMA	National Offshore Petroleum Safety and Environment Management Authority
NOPTA	National Offshore Petroleum Titles Administrator
NRE Tas	Department of Natural Resources and Environment Tasmania
NRT	National Response Team
NRST	National Response State Team
NSW	New South Wales
OPICC	Offshore Petroleum Incident Coordination Committee
OPGGs Act	Offshore Petroleum and Greenhouse Gas Storage Act 2006
OPGGs(E) Regulations	Offshore Petroleum and Greenhouse Gas Storage (Environment) Regulations 2023
OIM	Offshore Installation Manager
OPEP	Oil Pollution Emergency Plan
ORT	Operational Response Team
OSC	On-scene Controller
OSM	Operational and Scientific Monitoring
OSM-BIP	Operational and Scientific Monitoring Bridging Implementation Plan
OSRL	Oil Spill Response Limited
OSTM	Oil Spill Trajectory Modelling
P&A	Plug and Abandon
POLREP	Pollution Report
PSZ	Petroleum Safety Zone
PSOL	Port Safety Operating License
RCC	Rescue Coordination Centre
SCERP	Source Control Emergency Response Plan
SCME	State Controller Maritime Emergencies

TERM/ ACRONYM	DEFINITION
SCR	Safety Case Revision
SEMP	State Emergency Management Plan (Victoria)
SITREP	Situation Report
SMEEC	State Maritime Environmental Emergency Coordinator
SOPEP	Shipboard Oil Pollution Emergency Plan
SSDI	Subsea Dispersant Injection
TasPlan	Tasmanian Marine Oil and Chemical Spill Contingency Plan
TEMA	Tasmanian Emergency Management Arrangements
TEM	Tasmanian Emergency Management
VEAWP	Victorian Emergency Animal Welfare Plan
Vic	Victoria
WildPlan	Tasmanian Oiled Wildlife Response Plan
WOMP	Well Operations Management Plan
WWC	Wild Well Control

1. INTRODUCTION

1.1. Activity Description

Emperor Energy Limited (Emperor Energy), as the Titleholder under the *Offshore Petroleum and Greenhouse Gas Storage Act 2006* (Cth) and the *Offshore Petroleum and Greenhouse Gas Storage (Environment) Regulations 2023* (Cth) (OPGGs(E) Regulations), is proposing to undertake exploration and appraisal drilling activities, for one well within its Petroleum Exploration Permit VIC/P47, in the Gippsland Basin. The Judith-2 well is being drilled on the Judith Gas Field, originally discovered in 1989 by Shell Australia. (Figure 1-1).

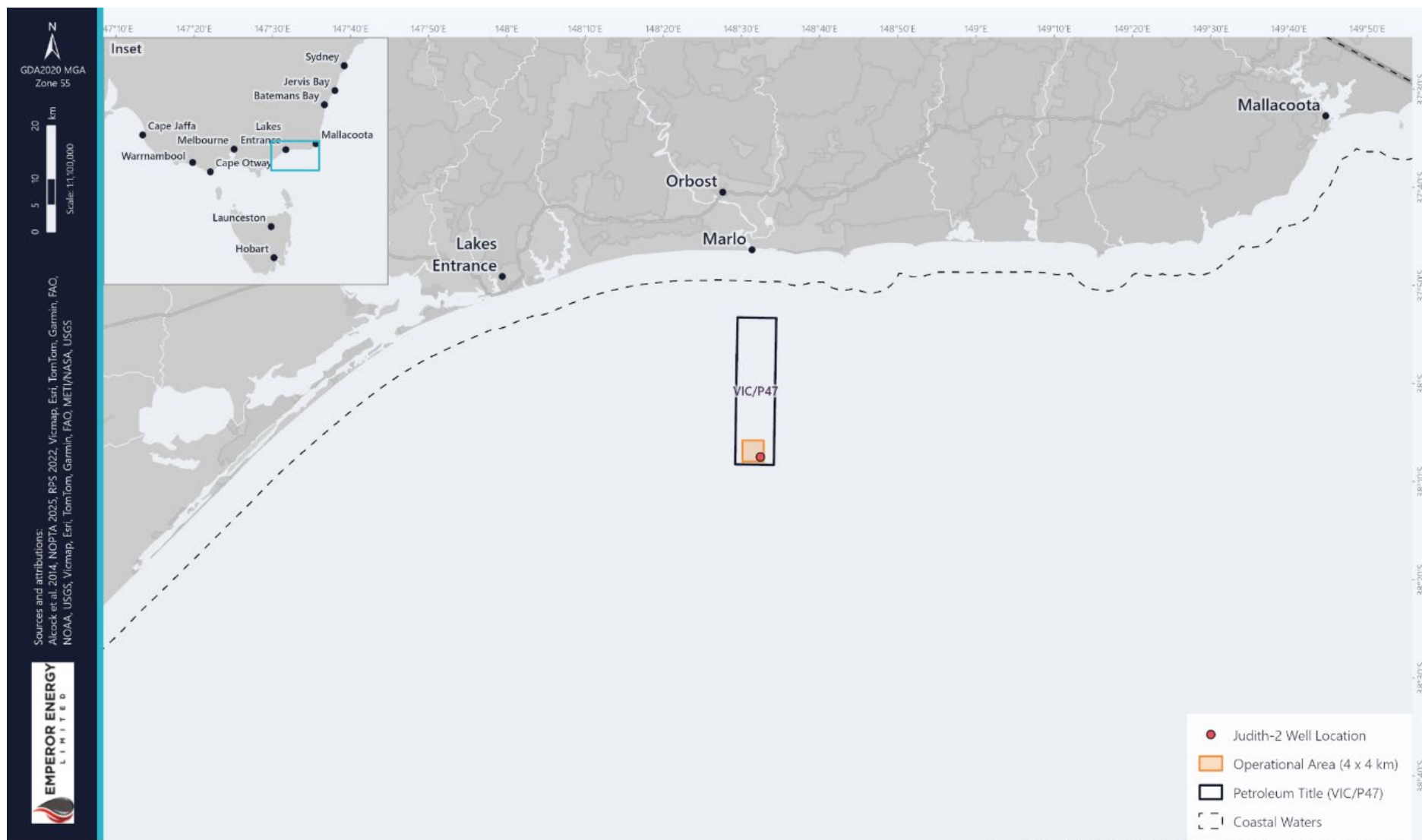
The permit area is located within offshore Commonwealth waters, approximately 13 km south-east of Marlo, Victoria, in water depths of approximately 76 m. The Operational Area for Judith-2 well has been defined as a 4 km by 4km area around the Judith-2 well location. Indicative coordinates for the Judith-2 well are presented in Table 1-1.

Table 1-1: Indicative Location of the Judith-2 Exploration Well

WELL	LATITUDE (GDA94)	LONGITUDE (GDA94)	EASTING (MGA55)	NORTHING (MGA55)	WATER DEPTH
Judith-2	38° 09' 6.7644" S	148° 33' 19.6692" E	636287.4	5776190.5	~76 m

The Operational Area is set as a 500 m radius around the final well location (which reflects the area of the Petroleum Safety Zone (PSZ) that will be gazetted around the MODU while it is on location).

The drilling activity will be carried out using a jack-up mobile offshore drilling unit (MODU) with support vessels and helicopters. The Judith-2 Exploration Drilling Program Environment Plan (the EP) covers the drilling activities and all MODU, vessel and helicopter operations within the Operational Area. Refer to Section 3 of the Judith-2 Exploration Drilling EP for further details on the activity.



1.2.Purpose

This Oil Pollution Emergency Plan (OPEP) has been prepared in accordance with Regulation 22(8) of the Commonwealth *Offshore Petroleum and Greenhouse Gas Storage (Environment) Regulations 2023* (OPGGGS(E) Regulations), which states that the implementation strategy must contain an OPEP and provide for the updating of the plan. The OPEP has been developed to align with the National Plan for Maritime Environmental Emergencies (National Plan, or 'NatPlan') and is designed to integrate with all relevant state emergency management plans within the EMBA. This includes the Victorian State Emergency Management Plan (SEMP) – Maritime Emergencies (non-search and rescue) Sub-Plan, the New South Wales (NSW) State Waters Marine Oil and Chemical Spill Contingency Plan (a sub-plan to the NSW State Emergency Management Plan – EMPLAN), and the Tasmanian Marine Oil and Chemical Spill Contingency Plan (TasPlan), which is an associated plan under the Tasmanian Emergency Management Arrangements (TEMA).

This OPEP is designed to be an operational response document used in the event of a hydrocarbon spill event associated with Emperor Energy's exploration drilling activities in VIC-P47, as described in the Judith-2 Exploration Drilling Program EP.

The objectives of this OPEP are to:

- Support the implementation of pre-determined response strategies as outlined in this OPEP.
- Ensure that the management of the response is consistent with the National Plan, the Australian Industry Cooperative Oil Spill Response Arrangements (AMOSPlan), and all relevant state emergency management plans. This includes;
 - the Victorian SEMP and its Maritime Emergencies (non-search and rescue) Sub-Plan,
 - the NSW State Waters Marine Oil and Chemical Spill Contingency Plan (a sub-plan to the EMPLAN), and,
 - the TasPlan, which is an associated plan under the TEMA.
- Ensure effective integration and use of industry/government response efforts and resources, through,
 - maintaining active participation in national and regional response arrangements such as the Australian Marine Oil Spill Centre (AMOSC) and the Australian Marine Oil Spill Response Arrangements (AMOSPlan).
 - This includes maintaining mutual aid agreements, participating in joint training and exercises, and ensuring interoperability with relevant government agencies.
- Ensure Emperor Energy has timely access to appropriately trained people and resources to effectively respond to and manage an oil spill response, by
 - establishing and maintaining contracts with accredited oil spill response organisations, conducting regular training and competency assessments, and maintaining a scalable, fit-for-purpose response capability aligned with the nature and scale of potential oil spill scenarios

1.3.Scope

Emperor Energy has identified two credible worst-case hydrocarbon spill scenarios that have the potential to require a coordinated spill response, as outlined in this OPEP:

1. A vessel loss of containment (LoC) resulting in the release of 280 m³ Marine Diesel Oil (MDO) over 6 hours to the sea surface. This LoC volume has been applied to the geophysical and geotechnical vessels as well as the drilling support vessels.

- Geophysical survey vessels (and to a lesser extent geotechnical vessels) generally have considerably smaller fuel tank capacities than drilling support vessels, so while the MDO spill scenario also covers the geophysical and geotechnical survey campaigns, the volume of fuel likely to be released in a LoC event for these campaigns would be significantly smaller and therefore, the modelling results for these campaigns are considered overly conservative.
2. A spill from the Mobile Offshore Drilling Unit (MODU), the worst-case scenario being a total Loss of Well Control (LOWC) at sea surface resulting in the release of 55,256 m³ (347,584 bbl) of condensate over 77 days (717 m³ [4,514 bbl] per day).

The environmental risks associated with these spill scenarios are assessed in the EP.

Excluded from the scope of this OPEP are vessels transiting to or from the Operational Area (as described in the EP). These vessels operate under the *Navigation Act 2012* (Cth) and are not engaged in petroleum-related activities when they are not in the operational area of the geophysical, geotechnical or drilling activity.

1.4. Hydrocarbon properties

The properties of the MDO and gas condensate are described in this section to provide context for the spill response strategies outlined in Section 5.

1.4.1. Marine Diesel Oil

The MDO that will be used by the vessels during the activity is categorised as a group II light-persistent oil according to the International Tankers Owners Pollution Federation (ITOPF, 2014). The classification is based on the specific gravity of hydrocarbons in combination with relevant boiling point ranges. The hydrocarbon properties for MDO are summarised in Table 1-2.

Table 1-2: Hydrocarbon properties for MDO (RPS, 2022)

HYDROCARBON CHACTERISTICS			MDO
Density (kg/m³)			829.1 (at 25 °C)
API			37.6
Dynamic viscosity (cP)			4.0 (at 25 °C)
Hydrocarbon category			Group II
Hydrocarbon classification			Light persistent oil
Boiling Point (°C)	Non-persistent	Volatile (<180)	6%
		Semi-volatile (180-265)	34.6%
		Low-volatility (265-380)	54.4%
	Persistent	Residual (>380)	5.0%
	Evaporation (24 / 48 / 72 hrs)		
Emulsification propensity			Low
Surface persistence (to sheen)			48–72 hours
Pour point			-14 °C

1.4.2. Condensate

Based on the reservoir modelling, condensate in the Judith gas field is likely to have an API of 54.6, which is equivalent to a density of 760 kg/m³. In the absence of samples from the Judith field, a proxy was carefully selected for spill modelling purposes to ensure the trajectory modelling results were appropriate and applicable. The condensate was classified as a Group I non-persistent oil. The hydrocarbon properties for the condensate are summarised in and values are derived from SIMAP oil spill modelling undertaken by RPS (2022) using representative Gippsland Basin metocean conditions. The hydrocarbon properties for condensate are summarised in Table 1-3. Notably, when exposed to the atmosphere, 64% of the condensate is predicted to evaporate within the first 12-24 hours (RPS, 2022).

Table 1-3: Hydrocarbon properties for condensate (RPS, 2022)

HYDROCARBON CHARACTERISTICS			CONDENSATE
Density (kg/m ³)			760 (at 15°C)
API			54.6
Dynamic viscosity (cP)			0.875 (at 20°C)
Hydrocarbon category			Group I
Hydrocarbon classification			Non-persistent oil
Boiling Point (°C)	Non-persistent	Volatile (<180)	64%
		Semi-volatile (180-265)	19%
		Low-volatility (265-380)	16%
	Persistent	Residual (>380)	1%
Evaporation (24 / 48 / 72 hrs)			~64% / ~83% / ~95–99%
Emulsification propensity			Very low
Chemical dispersibility			Not dispersible
Natural dispersion rate			Very high
Surface persistence (to sheen)			12–24 hours
Pour point			< –20 °C

1.5.Recoverable Hydrocarbons

Oil spill trajectory modelling (OSTM) undertaken for the two release scenarios listed in Section 1.3 was undertaken using the industry-accepted thresholds for the four hydrocarbon phases (sea surface, dissolved, entrained and shoreline) outlined in Table 1-4.

Of these phases, only hydrocarbons at the sea surface and shoreline can be recovered in the field. Dissolved hydrocarbons, as the name suggests, means that the hydrocarbons have dissolved into the seawater and therefore cannot be recovered. Entrained oil consists of oil droplets that are predicted to suspend in the water column and have not yet dissolved or degraded (NOPSEMA, 2025).

Of the exposure thresholds for hydrocarbons at the sea surface and accumulated on the shoreline, response and recovery measures are only generally effective for hydrocarbons at the moderate and high threshold (highlighted in green in Table 1-4). For MDO and gas condensate at the low exposure threshold, natural degradation is generally the response option with the highest net environmental benefit (NOPSEMA, 2025).

Table 1-4: Hydrocarbon exposure thresholds (NOPSEMA 2019; 2025)

EXPOSURE TYPE	EXPOSURE THRESHOLD		
	LOW	MODERATE	HIGH
Floating	1 g/m ²	10 g/m ²	50 g/m ²
Shoreline	10 g/m ²	100 g/m ²	1,000 g/m ²
Dissolved	10 ppb	50 ppb	400 ppb 300 ppb*
Entrained	19 ppb	100 ppb	100 ppb 1,000 ppb*

* Revised threshold in 2025 NOPSEMA guidelines.

Based on the information provided above, Table 1-5 presents the results for the maximum area of sea surface and shoreline affected by MDO and gas condensate at the actionable exposure thresholds (i.e. moderate and high). As noted, hydrocarbons dissolved or entrained in the water column cannot be recovered, so results for these exposure thresholds are not presented (see EP Appendix C for the full modelling results). The results outlined in Table 1-5 indicate that recoverable hydrocarbons on the:

- Sea surface - are not predicted to extend more than 19 km from the release location.
- Shoreline – are limited to isolated sections of East Gippsland (dominated by sandy beach with small areas of rocky headlands), with;
 - a low probability of contact (1% for MDO and 18% for condensate)
 - short sections of coastline affected (0.9 km for MDO and 3.6 km for condensate)
 - small volumes of hydrocarbons predicted to accumulate (9.1 m³ for MDO and 28 m³ for condensate).

Based on the OSTM results, Figure 1-2 and Figure 1-3 present the extent of MDO and gas condensate, respectively, on the sea surface at the moderate and high thresholds (i.e. actionable levels).

Figure 1-4 illustrates the locations along the East Gippsland shoreline where the OSTM predicts MDO and gas condensate will accumulate at actionable levels (>100 g/m²), while the following series of figure provide a detailed view of these sections of shoreline (moving west to east):

- Figure 1-5 - Cape Conran area
- Figure 1-6 – Thurra River area
- Figure 1-7 – Point Hicks & Mueller River area
- Figure 1-8 – Gale Head Beach & Rame Head
- Figure 1-9 – Red River area
- Figure 1-10 – Gabo Island area
- Figure 1-11 – Wau Wauka River inlet.

It is important to note that the statistics regarding peak volumes on the shoreline included in Figure 1-5 to Figure 1-11 relate to the entire length of shoreline modelled by RPS (2022), not for the specific location in the map, meaning these volumes are highly conservative and that the peak loading at each location will be considerably less than indicated. The shoreline sectors and response equipment requirements included in Appendix E (East Gippsland Regional Response Plan) are general in nature (focused on shoreline substrates and sensitivities) rather than focused on shoreline hydrocarbon loadings predicted by the OSTM.

Table 1-5: Summary of the maximum distances affected by the MDO and condensate spill modelling results at the actionable thresholds

EXPOSURE VALUE	MDO (VESSEL LOC)	GAS CONDENSATE (LOWC)
Surface exposure (floating hydrocarbons)		
Moderate (10 g/m ²)	Summer – 18.7 km (WSW direction). Winter – 15.8 km (SW direction).	Summer - 18.3 km (WSW direction). Winter - 15.1 km (SW direction).
High (50 g/m ²)	Summer – threshold not reached. Winter – 2.9 km (NW direction).	Summer – threshold not reached. Winter – 0.4 km (WNW direction).
Shoreline exposure		
Moderate (100 g/m ²)	Summer – no exposure predicted. Winter – contact only predicted along the East Gippsland shoreline: • 1% probability of contact • Shoreline accumulation occurring within 5.2 days. • Maximum volume ashore of 9.1 m³. Maximum length of shoreline accumulation of 0.9 km.	Summer – contact only predicted along the East Gippsland shoreline: • 12% probability of contact • Shoreline accumulation occurring within 30 days. • Peak volume ashore of 17 m³. • Maximum length of shoreline accumulation of 3.6 km. Winter - contact predicted along the East Gippsland shoreline: • 18% probability of contact • Shoreline accumulation occurring within 150 hours (6.25 days). • Peak volume ashore of 28 m³. • Maximum length of shoreline accumulation of 3.6 km. There is a 5% probability of contact at the Bega Valley, Gabo Island and Montague Island.
High (1,000 g/m ²)	Summer – threshold not reached. Winter – threshold not reached.	Summer – threshold not reached. Winter – threshold not reached.

Summer = October to March, winter = April to September.

Of note is that MDO and condensate are light hydrocarbons that will evaporate from the sea surface rapidly. The strategic Net Environmental Benefits Analysis (NEBA) that outlines the response options suitable for the two spill scenarios (see Section 4.2.1) takes the nature of the hydrocarbons into account, along with the areas of sea surface and shoreline predicted to be contacted.

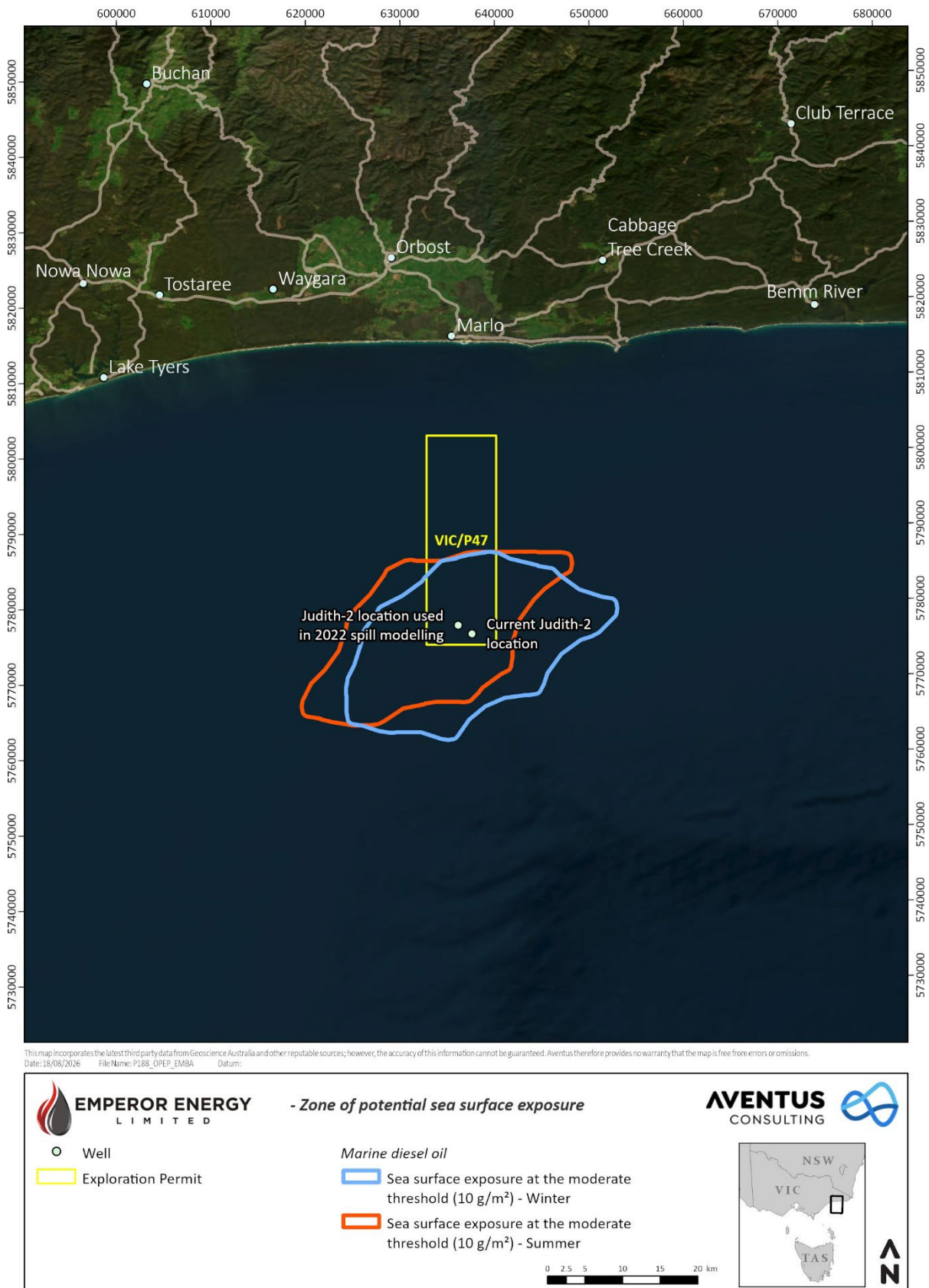


Figure 1-2: Extent of MDO on the sea surface at the moderate and high thresholds

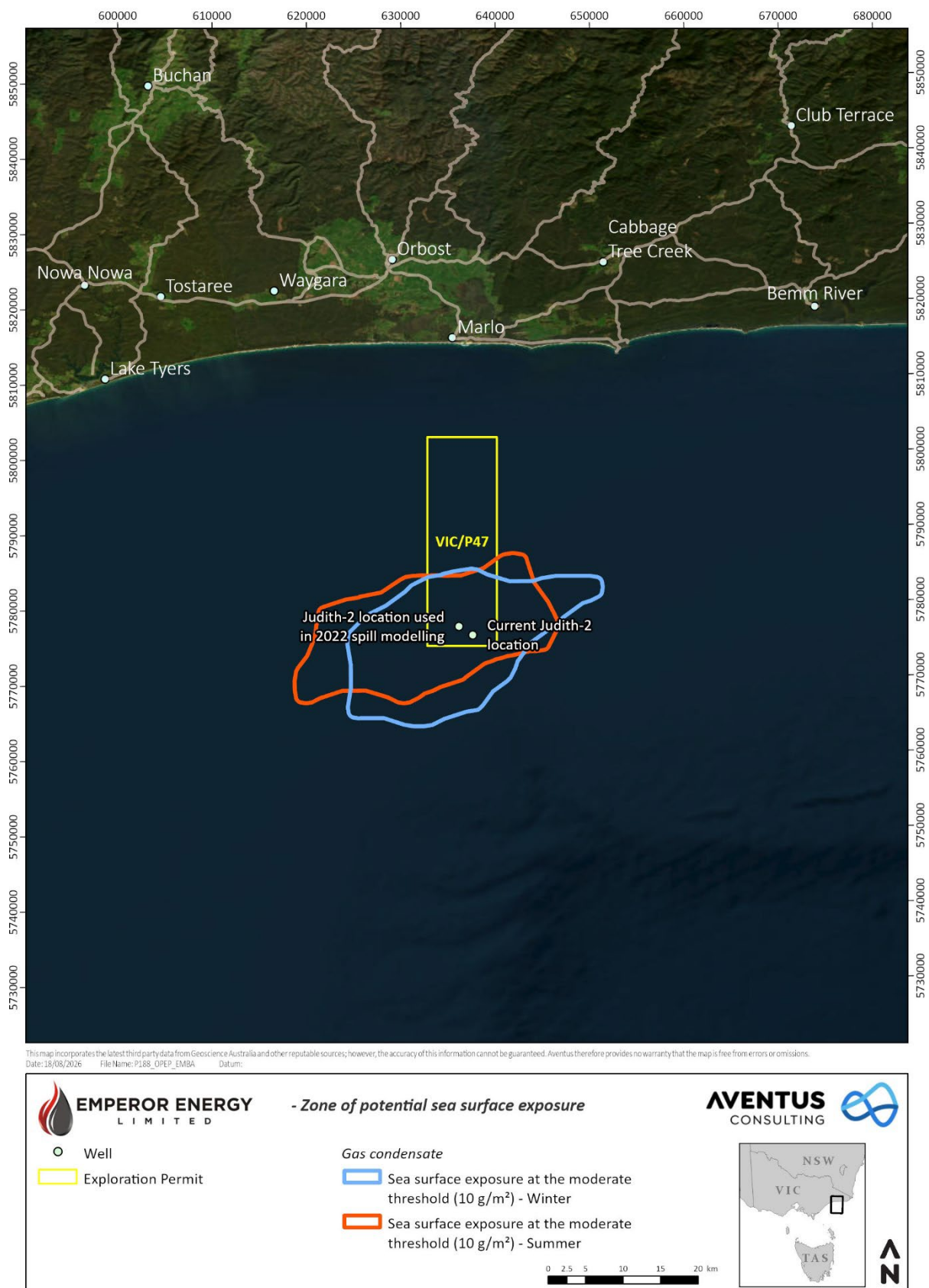


Figure 1-3: Extent of gas condensate on the sea surface at the moderate and high thresholds

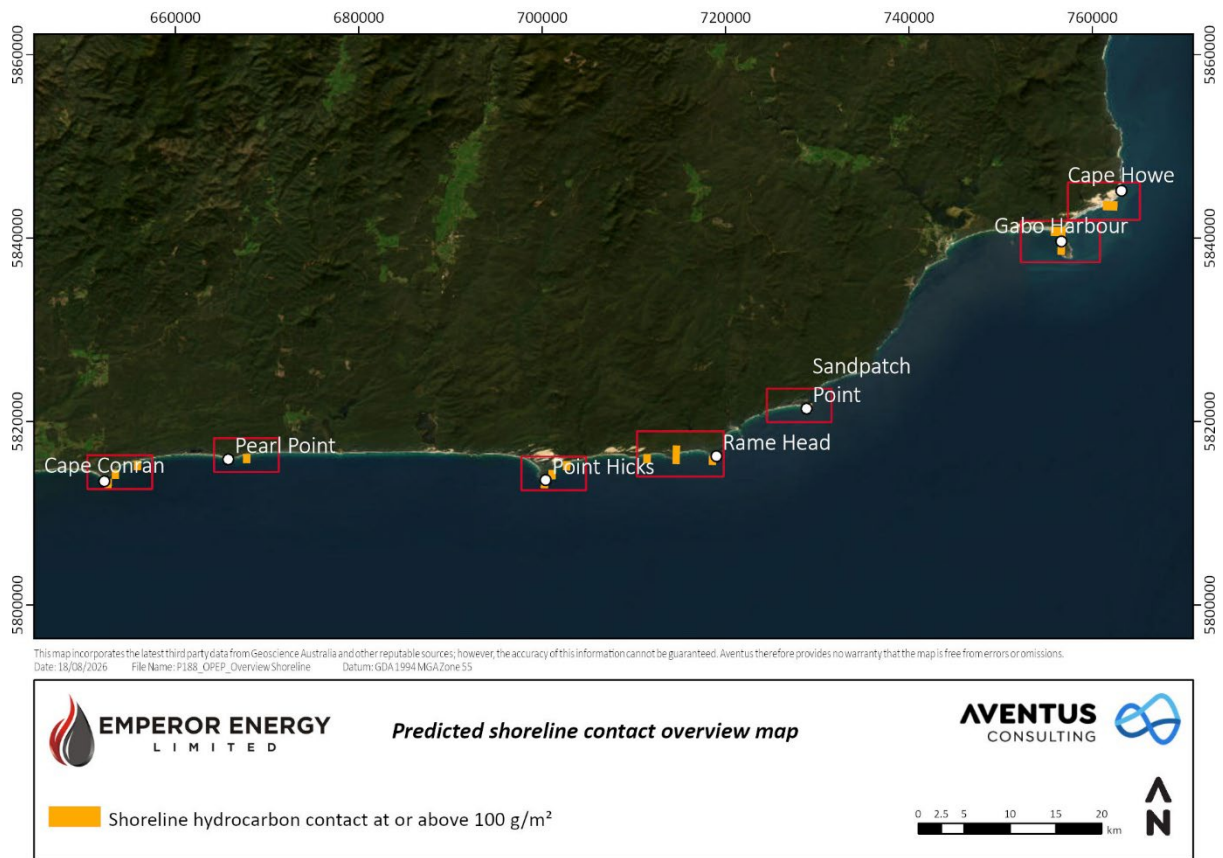
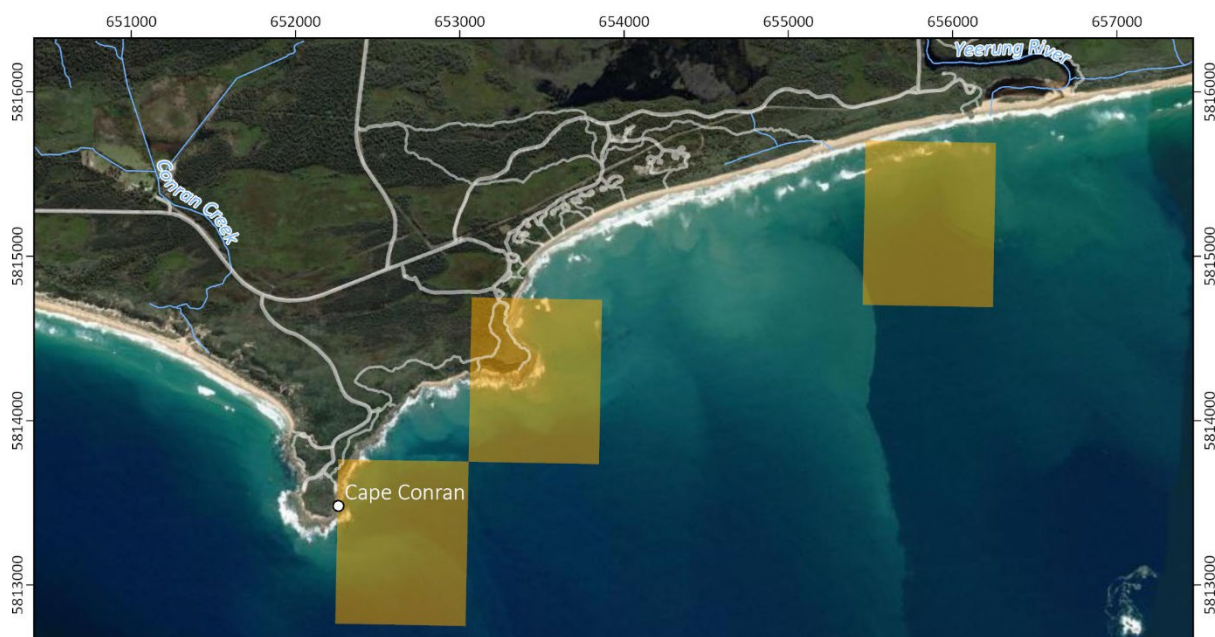


Figure 1-4: Locations of MDO and condensate shoreline loading at the moderate threshold across the summer and winter seasons along the East Gippsland coastline



This map incorporates the latest third party data from Geoscience Australia and other reputable sources; however, the accuracy of this information cannot be guaranteed. Aventus therefore provides no warranty that the map is free from errors or omissions.
Date: 18/08/2026 File Name: P188_OPEP_Cape Conran & Yeerung River Datum: GDA 1994 MGAZone55

Cape Conran & Yeerung River (East Gippsland shoreline sector in the spill modelling)	Diesel		Gas condensate	
	Summer (Oct – Mar)	Winter (Apr – Sept)	Summer (Oct – Mar)	Winter (Apr – Sept)
Maximum probability of shoreline accumulation (%)				
Moderate threshold	-	-	12	18
High threshold	-	-	-	-
Minimum time before shoreline accumulation (days)				
Moderate threshold	-	5.2	30	6.25
High threshold	-	-	-	-
Maximum length of shoreline contacted (km)				
Moderate threshold	-	0.9	3.6	3.6
High threshold	-	-	-	-
Peak volume on shoreline (m³)*	1.8	9.1	17	28

* Peak volume represents the volume along the entire East Gippsland shoreline sector (~200 km) for modelling purposes, not the peak volume for this location specifically.


EMPEROR ENERGY
LIMITED

**Predicted shoreline contact at
Cape Conran & Yeerung River**

 Shoreline hydrocarbon contact at
or above 100 g/m²

AVENTUS
CONSULTING



0 250 500 1,000 m



Figure 1-5: Extent of shoreline hydrocarbon contact and loading at the actionable level for MDO and condensate for summer and winter – Cape Conran and Yeerung River area

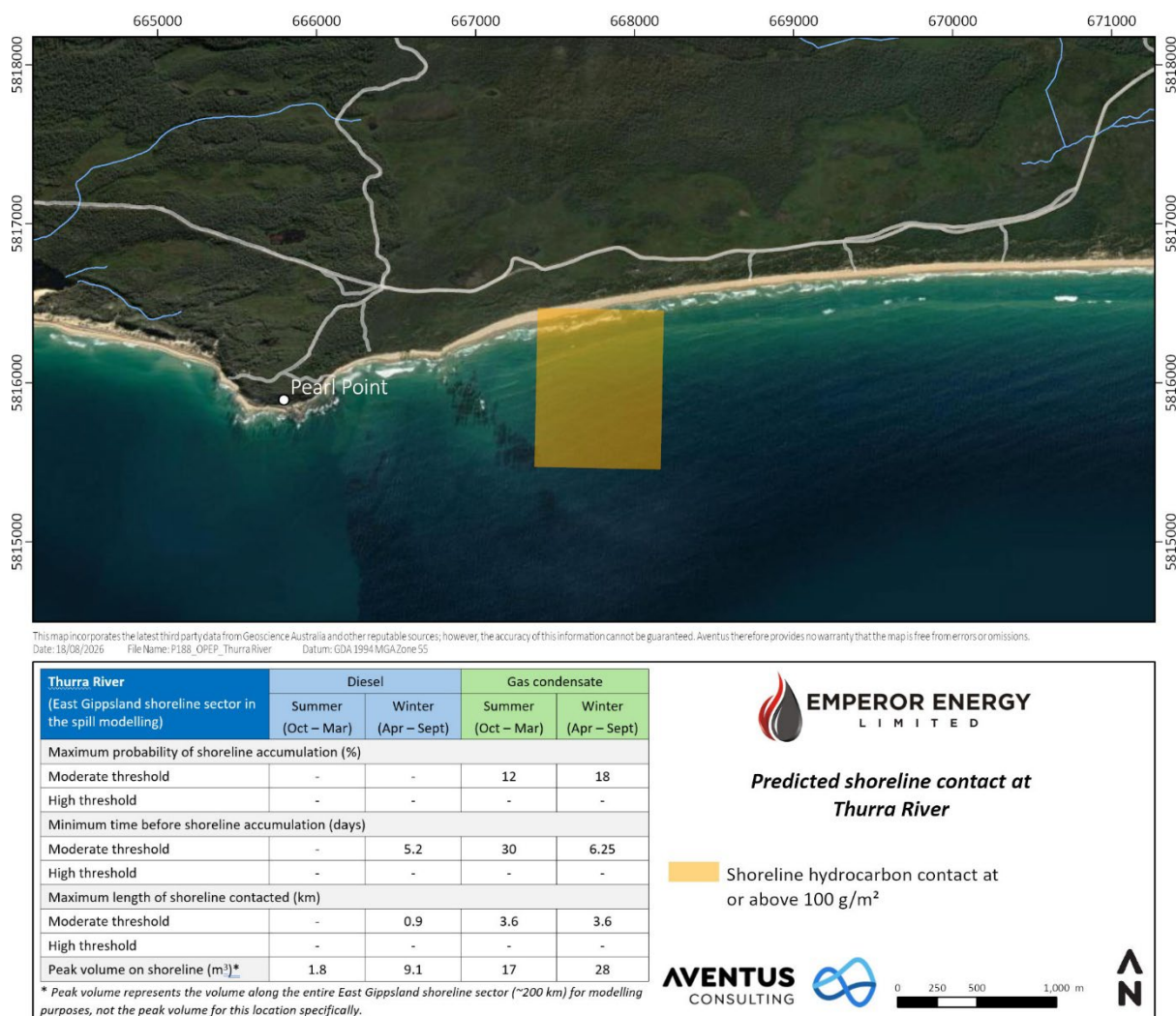


Figure 1-6: Extent of shoreline hydrocarbon contact and loading at the actionable level for MDO and condensate for summer and winter – Thurra River area

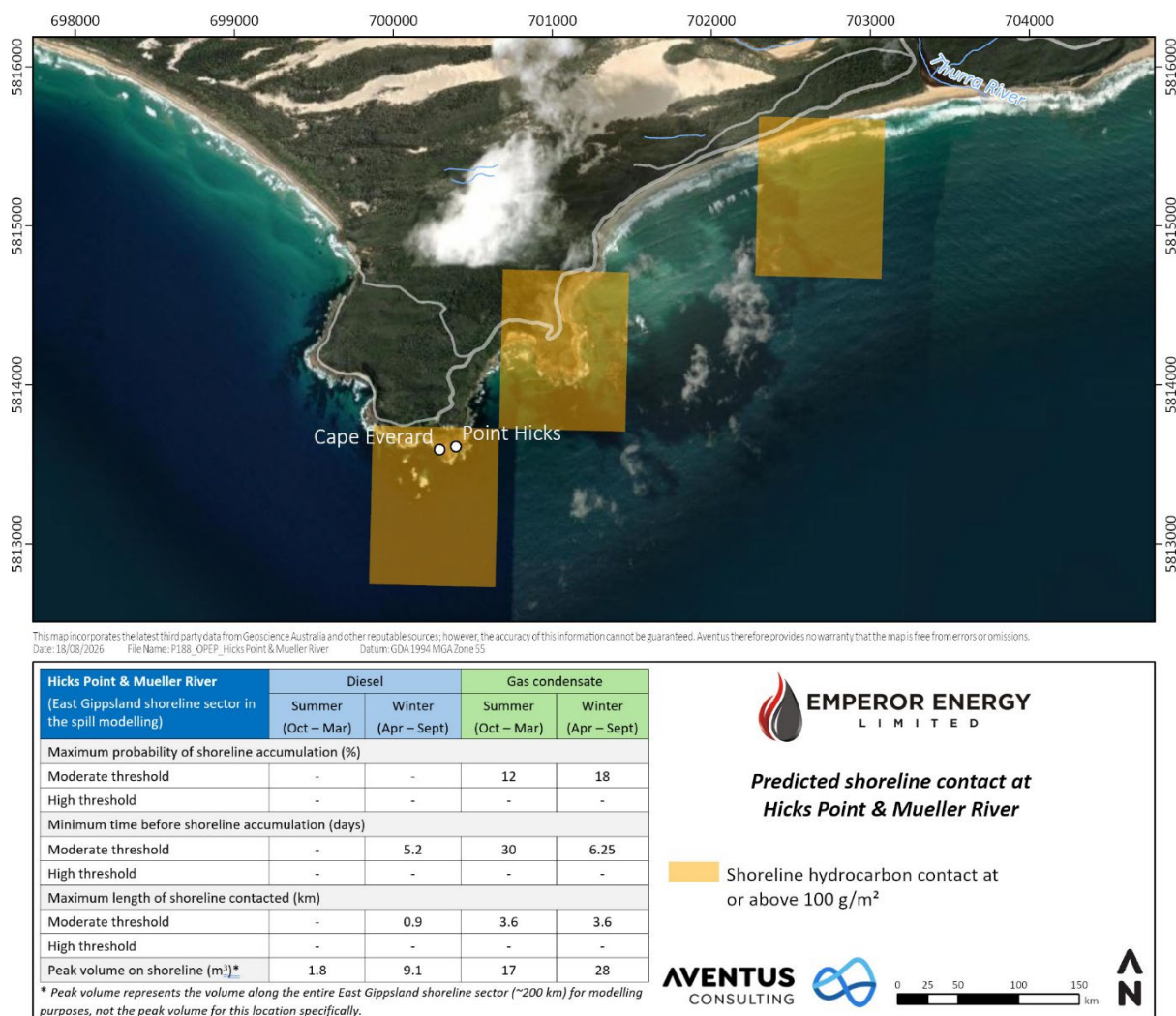


Figure 1-7: Extent of shoreline hydrocarbon contact and loading at the actionable level for MDO and condensate for summer and winter – Point Hicks and Mueller River area

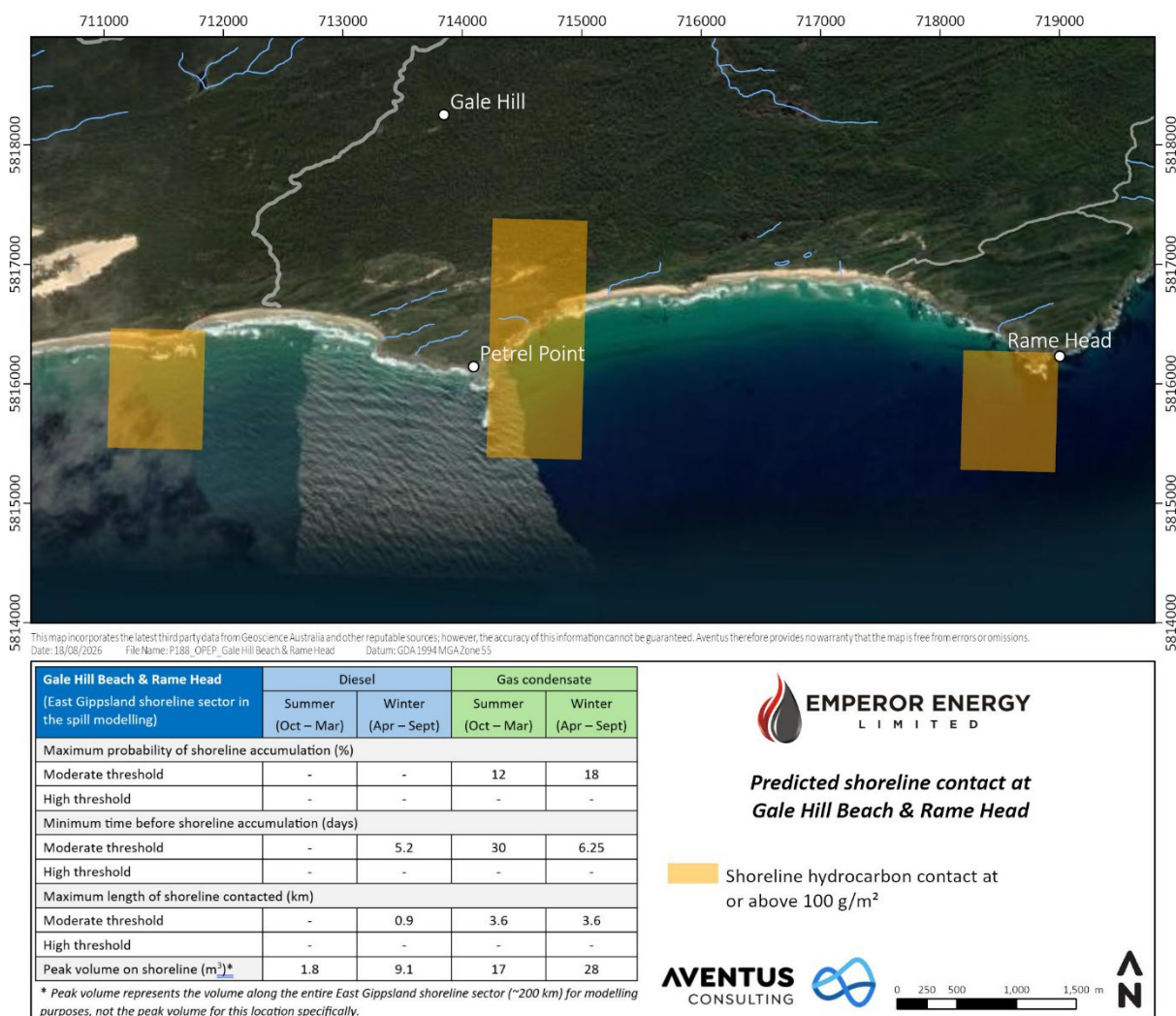


Figure 1-8: Extent of shoreline hydrocarbon contact and loading at the actionable level for MDO and condensate for summer and winter – Gale Hill Beach and Rame Head area

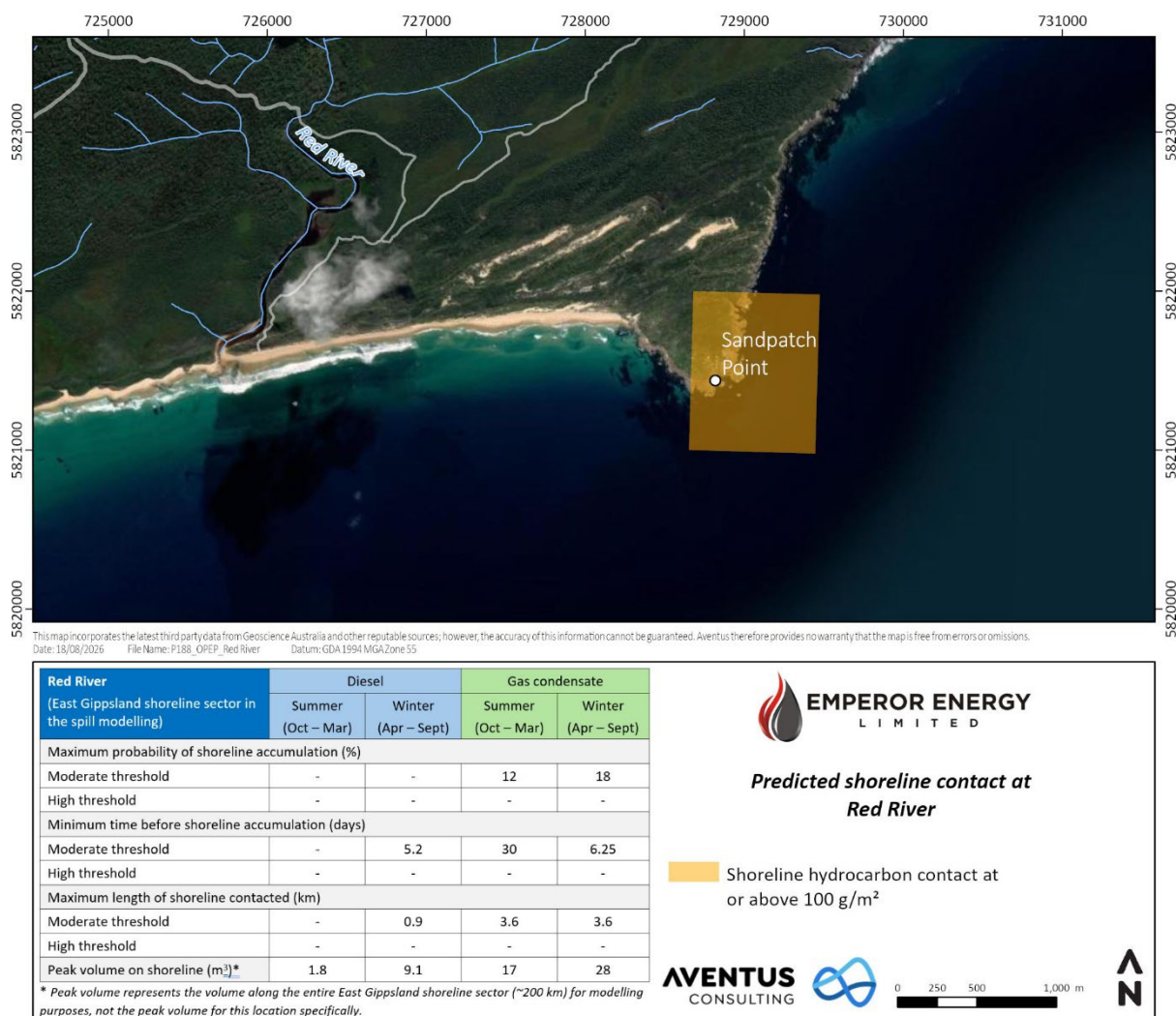


Figure 1-9: Extent of shoreline hydrocarbon contact and loading at the actionable level for MDO and condensate for summer and winter – Red River area

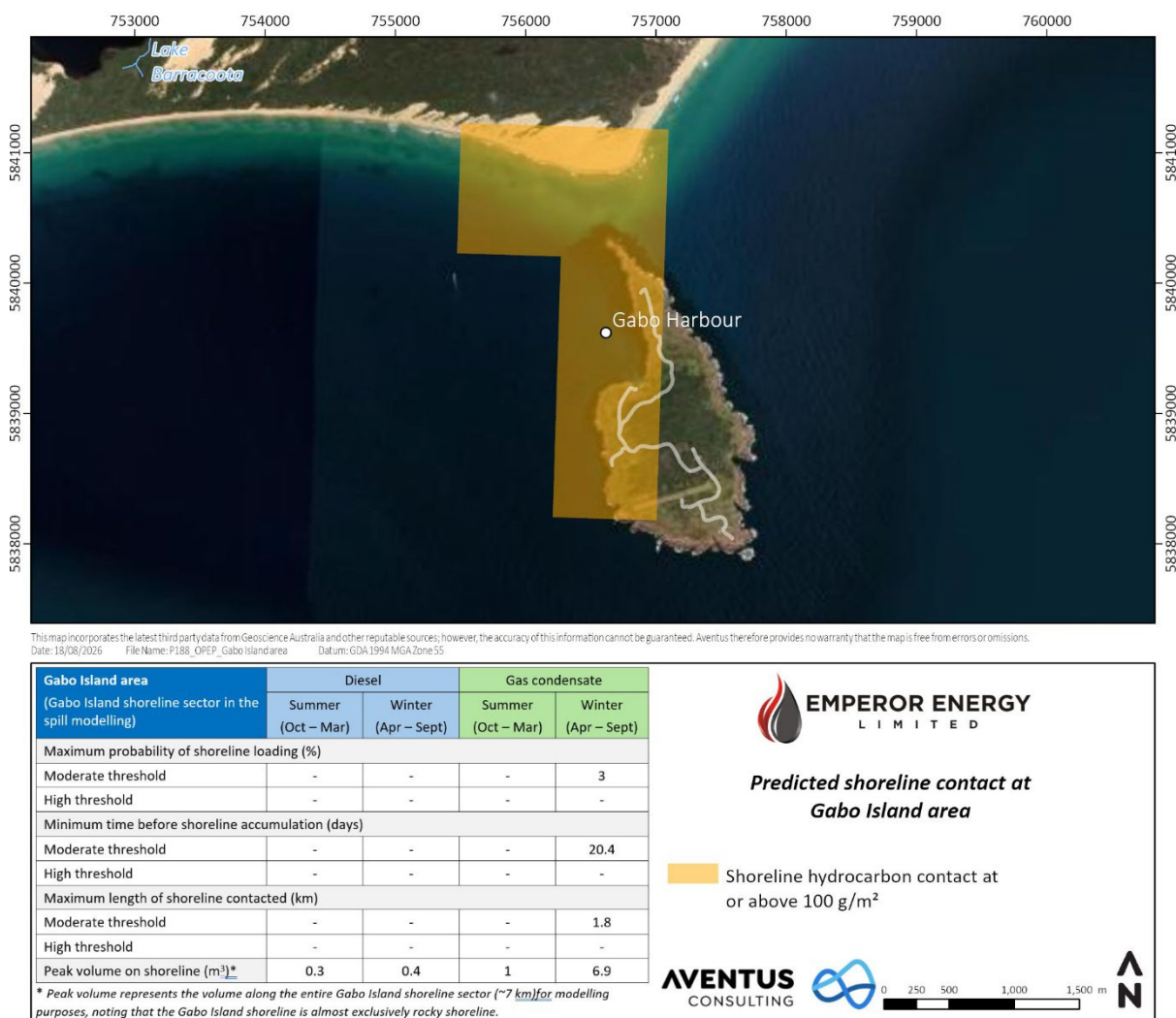


Figure 1-10: Extent of shoreline hydrocarbon contact and loading at the actionable level for MDO and condensate for summer and winter – Gabo Island area

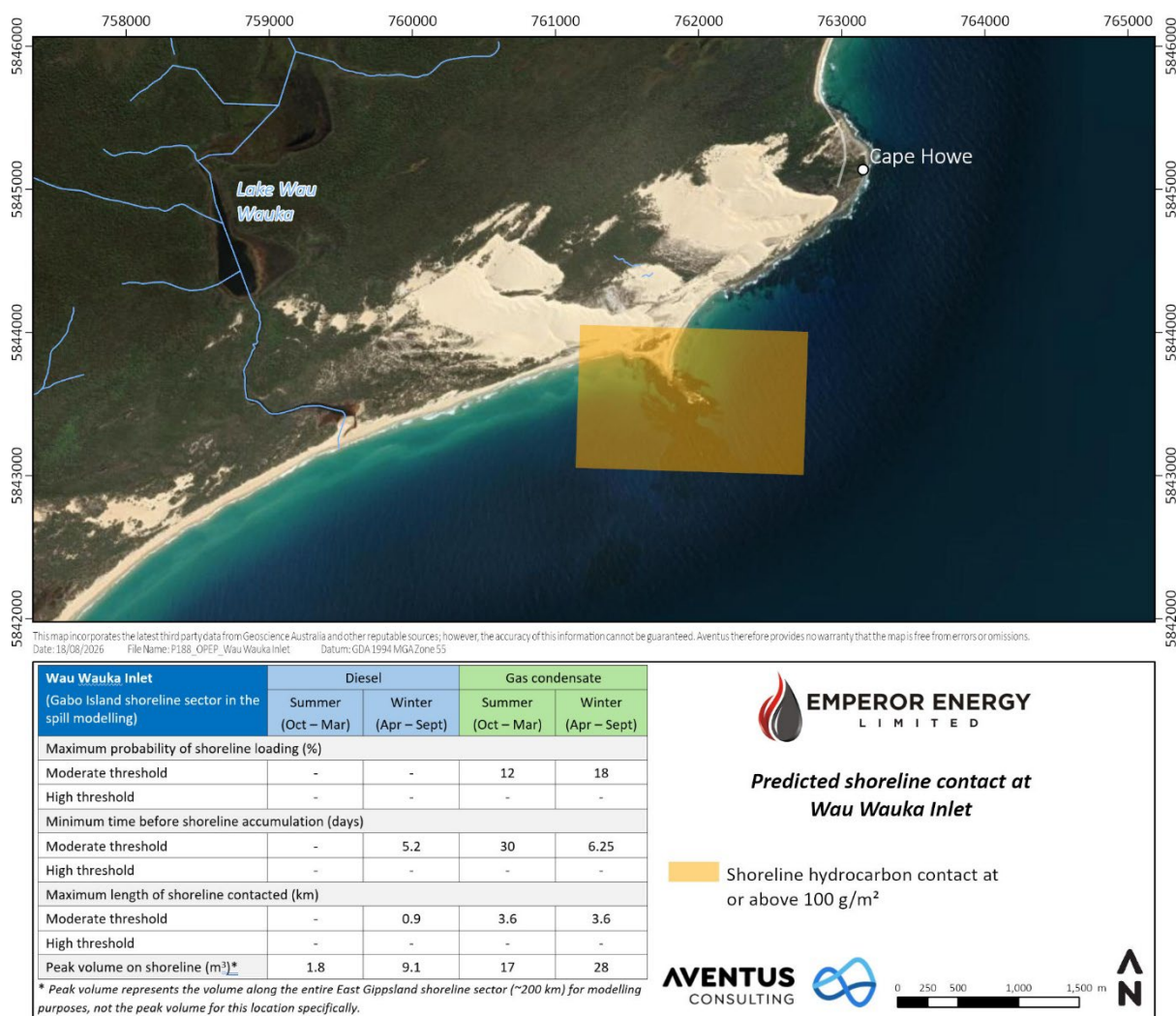


Figure 1-11: Extent of shoreline hydrocarbon contact and loading at the actionable level for MDO and condensate for summer and winter – Wau Wauka Inlet area

1.6. Spill Response and OPEP Structure

In the event of a hydrocarbon spill, the OPEP should be used as guidance to the spill response activities. See Figure 1-12 for the structure of the OPEP and sequence of response activities to follow in the event of a spill response.

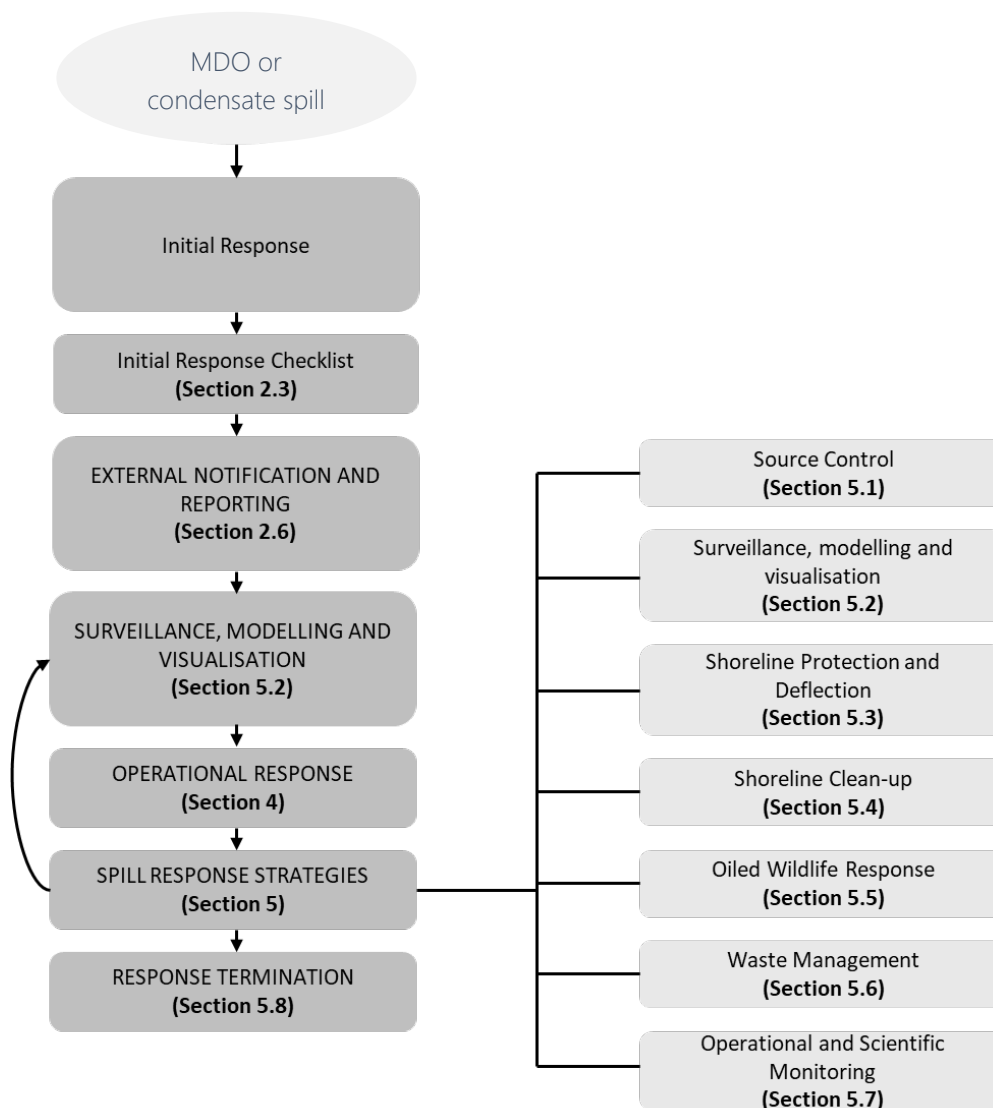


Figure 1-12: Spill Response Actions and Requirements

1.7. Response Documentation Interface

Emperor Energy will manage any incident resulting from its offshore petroleum activities in accordance with the Judith-2 Exploration Drilling Program Bridging Emergency Response Plan (ERP) which will be prepared prior to the commencement of the drilling activities. This plan will refer to this OPEP as the operational document for use in the event of a hydrocarbon spill.

The interfaces of relevant documentation within Emperor Energy, AGR and external oil spill response plans is described in Table 1-6.

Table 1-6: Response documentation interface

DOCUMENT	DESCRIPTION
National Response Plans	
National Plan for Maritime Environmental Emergencies (NatPlan)	The umbrella contingency planning and response arrangement for Australia and is administered by the Australian Maritime Safety Authority (AMSA). The NatPlan defines national arrangements, principles, and policies for responding to maritime emergencies.
Australian Industry Cooperative Oil Spill Response Arrangements (AMOSPlan)	Describes mutual aid arrangements of the petroleum industry coordinated by AMOSC. It outlines membership arrangements, activation procedures and interfaces with other plans.
Australian Maritime Safety Authority's Marine Pollution Response Plan	This plan is the operational response plan for the management of ship-source incidents.
Victorian State Emergency Management Plan (SEMP)	Contains provisions providing for the mitigation of, response to and recovery from emergencies, and specifies the roles and responsibilities of agencies in relation to emergency management (EM).
Victorian Maritime Emergencies (non-search and rescue) (MENSAR) Plan	This sub-plan exists to ensure that collaboration, co-operation and resources sharing is captured and agreed to by the stakeholders and a response to a complex maritime emergency will be a shared responsibility between the agencies. Serves the purposes of being the Victorian Marine Pollution Contingency Plan.
Victorian Emergency Animal Welfare Plan	To provide a coordinated approach to the management of animal welfare impacts as a direct result of an emergency incident in Victoria.
Tasmanian Marine Oil and Chemical Spill Contingency Plan (TasPlan)	The TasPlan supports the NatPlan and the TEMA. Provides arrangements for responding to oil or chemical spills and maritime incidents within Tasmanian State Waters.
Tasmanian Oiled Wildlife Response Plan (WildPlan)	Outline the procedures, reporting structures, roles and guidelines for the rescue and rehabilitation of wildlife affected by an oil spill within Tasmanian waters.
NSW Coastal Waters Marine Pollution Plan	Outlines the arrangements to manage a marine oil or chemical spill and maritime incidents that could result in an oil or chemical spill into state waters of NSW.
NSW State Emergency Management Plan (EMPLAN)	Provides a coordinated and comprehensive approach to emergency management in NSW.

DOCUMENT	DESCRIPTION
Agriculture and Animal Services Functional Areas (AASFA) Supporting Plan (NSW)	Supporting plan to the EMPLAN which describes the coordination arrangements for use of AASFA resources for prevention of, preparedness for, and recovery from impact and effects of an emergency.
Judith-2 Exploration Drilling Activity Plans and Response Documents	
Judith-2 Exploration Drilling Program Environment Plan (EP)	Describes the petroleum activity, existing environment, risk assessment and environmental performance outcomes. Prepared to meet the OPGGS(E) Regulations.
Judith-2 Exploration Drilling Program Well Operations Management Plan (WOMP)	Details well integrity aspects for Judith-2 and includes well management systems and source control emergency response overview. As accepted by NOPSEMA under the Offshore Petroleum and Greenhouse Gas Storage (Resource Management and Administration) Regulations 2025 (RMA Regulations).
MODU Safety Case Revision (SCR)	Details the Major Accident Event (MAE) and Safety Critical Control details for the safety aspects for the Judith-2 Exploration Drilling Program. The document is prepared by AGR and the MODU Drilling Contractor and submitted by the MODU Drilling Contractor as the registered facility operator to NOPSEMA in accordance with the <i>Offshore Petroleum and Greenhouse Gas Storage (Safety) Regulations 2023</i> .
Emperor Energy Crisis Management Plan (CMP)	The CMP defines the organisational responsibilities, actions, reporting requirements and resources required to manage a crisis.
Judith-2 Exploration Drilling Program Bridging ERP	The Bridging ERP provides the framework and requirements for incident management between Emperor Energy, AGR and the MODU Drilling contractor. The purpose of the plan is to control and mitigate damage and injury caused by a disaster and to provide a structured method of support, direction, and management at the site of an emergency or incident.
AGR Drilling ERP	Emperor Energy has contracted AGR to provide integrated operations project management services for the activity, including emergency response and incident management support. AGR will supply the Drilling Supervisor (DSV) and the key positions within the IMT. The AGR Drilling ERP describes their organisational responsibilities, actions, reporting requirements and resources required to manage crises and emergencies.
MODU Contractor ERP	The ERP outlines the organisational responsibilities, actions, reporting requirements and resources required should an emergency unfold during routine and source control operations
Judith-2 Exploration Drilling Program Source Control Emergency Response Plan (SCERP)	The SCERP includes an initial investigation stage with provision for escalation including the mobilisation of a rig to undertake relief well activities. The SCERP provides the Source Control Branch (SCB) within the Incident Management Team (IMT) with guidance and checklists in the event of a LOWC to implement source control strategies.
Vessel and MODU SOPEP	A Ship Oil Pollution Emergency Plan (SOPEP) is required under the International Convention for the Prevention of Pollution from Ships

DOCUMENT	DESCRIPTION
	(MARPOL), for the MODU and support vessels >400t. The SOPEP includes vessel specifications, procedures to follow for notification and spill response, and a list of spill equipment and locations.
Judith-2 Exploration Well Operational and Scientific Monitoring Bridging Implementation Plan (OSM-BIP)	The OSM-BIP describes a program of operational and scientific monitoring that will be enacted in the event of a worst-case discharge scenario. The OSM-BIP is the principal tool for determining the extent, severity, and persistence of environmental impacts from a marine hydrocarbon spill and inform remediation activities. The OSM-BIP has been developed in accordance with AEP's Joint Industry Operational and Scientific Monitoring Plan Framework (APPEA 2021). The OSM-BIP addresses the requirements of Regulation 22(9)(d) and 22(10) of the OPGGS(E) Regulations.
East Gippsland Regional Response Plan (EGRPP)	The EGRRP is designed to guide the IMTs from Emperor Energy and Victoria's State Control Agency including the respective Shoreline Response Coordinators in the planning and execution of shoreline protection and pre-clean-up initial operations. The EGRRP focusses on the region's unique ecological, socio-economic, and cultural sensitivity data to facilitate informed decision-making during the initial stages of an incident.

2. INITIAL RESPONSE CHECKLIST

The following initial response checklists (Table 2-1, Table 2-2, Table 2-3) include immediate actions to be undertaken following the detection of a spill from a vessel or a loss of containment incident from the MODU, the worst-case scenario being a LOWC resulting in a condensate release.

These initial response checklists are intended as guides only and are not considered an exhaustive list of actions that will be undertaken – they are subject to change based on the specific parameters and conditions at the time of the incident.

The initial response checklists are consistent with the strategic response priorities detailed in the National Plan and the Victorian SEMP and MENSAR Plan.

The PEARL Framework is to be applied to guide initial response in prioritising protection efforts during an oil spill response. The order of priority is as follows

- P – People: Protect human life and safety above all else, including responders and the public.
- E – Environment: Protect sensitive environmental areas such as sensitive habitat, rare and/or endangered species and cultural resources.
- A – Amenity: Safeguard areas of recreational, cultural, or aesthetic value (e.g. beaches, heritage sites).
- R – Receptors (Economic): Protect commercial and economic assets such as fisheries, aquaculture, ports, and tourism infrastructure.
- L – Livelihoods: Minimise impacts on communities and industries that rely on marine and coastal resources for their income and wellbeing.

This will ensure a structure and consistent approach to decision-making during the initial and ongoing phases of a response. PEARL ensures that response actions are aligned with the OPEP's overarching aim to minimise harm and facilitate an effective, coordinated response.

2.1. Emergency and Operational Contact Directory

Emperor Energy has a centralised Emergency and Operational Contact Directory (EOCD) that must be used for all notifications and emergency communications. The database contains verified details for regulators, contractors, emergency services, and other key stakeholders. It is updated monthly and accessible via the Emperor Energy SharePoint system, with offline copies available at designated locations (with the AGR Offshore Installation Manager (OIM) during activities.

Emergency response contacts are in a dedicated section of the database, prioritising critical stakeholders such as Regulators, spill response contractors, emergency services, and medical providers. Escalation pathways and 24/7 availability indicators are clearly marked for immediate action.

This system is fully integrated with AGR's Drilling ERP. During an incident, personnel must use the emergency contact section to initiate notifications and escalation protocols without delay. Always refer to the latest verified contact list before any planned activity or emergency response.

The EOCD is accessible through the Emperor Energy SharePoint site, within the Crisis Management Team folder: [Crisis Management Team](#).

Access to the EOCD will be maintained by Emperor Energy and provided to the following locations throughout the activity:

- the MODU;
- the AGR Incident Command Centre (ICC)
- Emperor Energy's Melbourne office — updated within 24 hours of any substantive contact change.

The digital copy will be clearly marked with its effective date and version number.

2.2. Incident Control Escalation Path

Figure 2-1 represents a quick guide of the responsibilities of vessel owners, AGR and Emperor Energy for responsibility, escalation, communication and control in the event of an oil pollution emergency event during any vessel or petroleum activity. Further information regarding statutory and control agencies is presented in Section 3.3. Note that a description of Level 1, 2 and 3 spills is provided in Section 3.1.

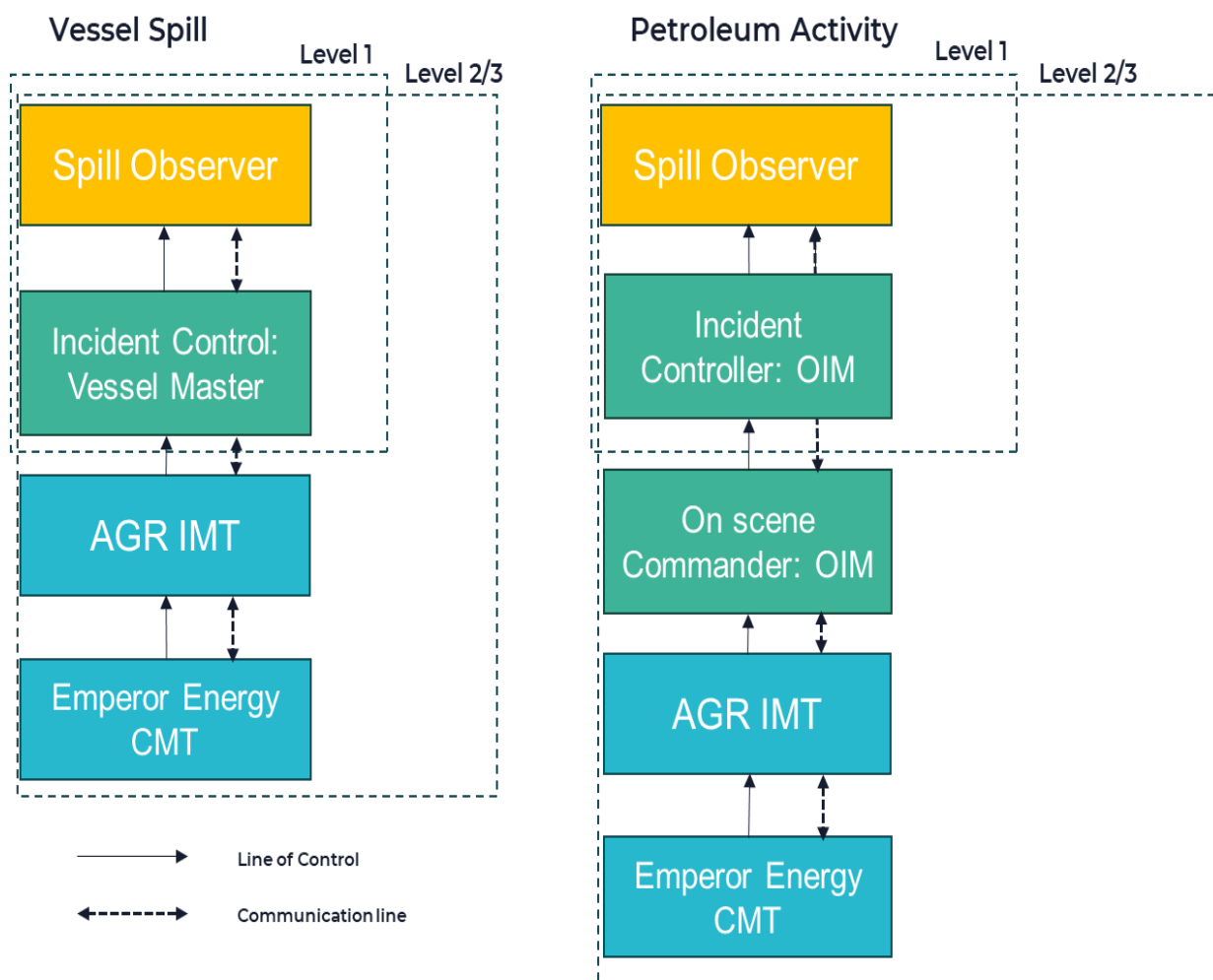


Figure 2-1: Incident Management Control and Communication pathways

2.3.Initial Response Checklist – MDO Spill from Support Vessel

Table 2-1: Initial Response Checklist – MDO Spill from Vessel

STEP	ACTION	RESPONSIBILITY	INDICATIVE TIMING	ADDITIONAL INFORMATION
1	On discovery of a spill from the vessel – notify the Vessel Master.	Spill Observer	Immediate	SOPEP
2	Manage the safety of all personnel. Secure sources of ignition and alert all personnel (appropriate to the level of the spill).	Vessel Master	Immediate	SOPEP
3	If safe, stop the spill through source control actions: - If Level 1: Vessel Master to act as Incident Controller (IC) and refer to SOPEP. - If Level 2/3: Contact Incident Management Team (IMT) who will request IMT Leader assume role of Incident Controller, with Vessel Master becoming On-scene Controller (OSC). Assess incident and prevent further spillage if possible / safe.	Vessel Master	Immediate	SOPEP
4	Notify AMSA of spill incident (AMSA will act as Control Agency for all vessels spills in Commonwealth waters). Vessel Contractor/ Emperor Energy to maintain direct contact with AMSA and act as the Supporting Agency. Establish IC for incident.	Vessel Master	As soon as practicable	SOPEP / OPEP
5	Determine spill parameters: - What is it – oil type/group/properties? - Where is it – latitude/longitude, leading edge (if known)? - How big is it - area/volume? - What is happening to it - status of release i.e., continuing or under control? - Weather conditions at site (wind/currents).	Vessel Master	As soon as practicable	SOPEP

STEP	ACTION	RESPONSIBILITY	INDICATIVE TIMING	ADDITIONAL INFORMATION
6	Determine Spill Response Level required	Incident Controller	As soon as practicable	OPEP
7	In the event of a Level 2/3 spill, deploy the spill tracking buoy(s), following the deployment instructions. Pre-positioning: 1 tracking buoy on Geophysical or Geotechnical vessels 1 tracking buoy on each drilling support vessel (two in total)	Vessel Master	As soon as practicable	Number of buoys to deploy: 1 buoy for an MDO spill. Section 5.3.2.4
8	Complete tasks outlined in Table 2-3– Initial Response Checklist – IC and IMT.	Incident Controller	Refer to Table 2-3	Section 2.5
9	Continue to assess spill parameters - provide regular reports to relevant IC regarding appearance and behaviour of surface spill, weather (surface wind speed, direction, sea state, current speed, and direction), tidal conditions and any changes to release status.	Incident Controller	Ongoing until terminated	OPEP

2.4.Initial Response Checklist – LOWC from MODU

Table 2-2: Initial Response Checklist – LOWC from MODU

STEP	ACTION	RESPONSIBILITY	INDICATIVE TIMING	ADDITIONAL INFORMATION
1	On discovery of a hydrocarbon release – immediately notify the OIM.	Spill Observer	Immediate	MODU ERP Judith-2 Bridging ERP
2	Activate MODU ERP, Judith-2 Bridging ERP and SCERP and response actions stated in this OPEP. Notify AGR Drilling Supervisor. Conduct internal notifications.	OIM	As soon as practicable	MODU ERP Judith-2 Bridging ERP Judith-2 SCERP OPEP
3	Manage the safety of all personnel. Secure sources of ignition and alert all personnel (appropriate to the level of the spill).	OIM	Immediate	MODU ERP Judith-2 Bridging ERP
4	If safe, stop the spill through source control actions. Assess incident and prevent further spillage if possible / safe.	OIM	Immediate	MODU ERP Judith-2 SCERP
5	Determine initial hydrocarbon release parameters: - What is it - oil type/ group/ properties? - Where is it - latitude/ longitude, leading edge (if known)? - How big is it - area/ volume? - What is happening to it - status of release i.e., continuing or under control? - Weather conditions at site (wind/ current)? Issue a Marine Pollution Report (POLREP) to AMSA.	OIM or delegate	As soon as practicable	Appendix A (SITREP & POLREP)
6	Determine Spill Response Level required: Level 2 or 3:	AGR Drilling Supervisor /OIM	ASAP but within 30	Section 3.1

STEP	ACTION	RESPONSIBILITY	INDICATIVE TIMING	ADDITIONAL INFORMATION
	Contact AGR Drilling Superintendent and confirm they will assume role of Incident Controller, with the AGR Drilling Supervisor assuming role of On-scene Controller (OSC) in consultation with the Rig OIM.		minutes of notification.	
7	Issue External Notifications	External Liaison Officer	As required by each external organisation	Section 2.6
8	Initiate AMOSC call out	CMT	As soon as practicable	Section 2.6
9	Initiate Spill Modelling, & Surveillance: • Deploy the Tracking Buoys from one of the support vessels following the deployment instructions; • Alert support vessels for stand-by; • Alert supply base for stand-by; and • Alert helicopters provider for stand-by.	IMT IC	As soon as practicable	Section 5.3
10	Complete tasks outlined in Table 2-3– Initial Response Checklist – IC and IMT.	IMT IC	Refer Table 2-3	Section 2.5
11	Initiate Source Control – activate SCERP.	IMT IC	Within 2 hours of LOWC notification	Section 5.2
12	Provide regular SITREPs to the IMT Leader (Incident Controller) (as agreed) regarding the appearance and behaviour of surface spill. and weather (surface wind speed, direction, sea state, current speed and direction) and tidal conditions.	OSC / OIM or delegate	Ongoing as agreed with OSC	Appendix A for SITREP form

2.5.Initial Response Checklist – Incident Controller and IMT

Table 2-3: Initial Response Checklist – IC and IMT

STEP	ACTION	RESPONSIBILITY	INDICATIVE TIMING	ADDITIONAL INFORMATION
1	Upon notification of spill from site, AGR IC to confirm role and IMT activation with the on-site team. Vessel Master / AGR Drilling Supervisor to assume role of OSC in consultation with the MODU OIM and the IC. The OSC will maintain contact with the IMT on the status of the spill.	IC.	On notification.	Section 3.2.1.2
2	Notify required IMT members to standby or mobilise to Incident Control Centre (ICC) and set up Incident Control Room and advise Emperor Energy Duty Crisis Management Team (CMT) Manager.	IC.	30-60 mins from notification.	Section 3.2.2
3	Establish a reliable communications line with the incident site / OSC	IC.	Following notification.	Updated Weekly Contact Directory (EOCD)
4	Confirm with OSC: • POLREP showing current situation with release: ○ Shutdown and isolation; ○ Continuing or under control; ○ Material and quantity released; ○ Agreed SITREP frequency.	IC.	90 minutes from notification.	Appendix A
5	Set up regular briefing of Emperor Energy Duty CMT Leader	IC.	ASAP following notification from OSC.	OPEP Section 3.2.
6	Ensure key stakeholders (Regulatory, Government, Community) are informed of	IMT Liaison Officer	As per organisations requirements.	Section 2.6.2

STEP	ACTION	RESPONSIBILITY	INDICATIVE TIMING	ADDITIONAL INFORMATION
	the incident as per requirements in Table 2-4			
7	Implement the Judith-2 Exploration Drilling Program Bridging ERP. Establish ICC.	IC.	90 minutes from notification.	Judith-2 Bridging ERP
8	Initiate Surveillance, Modelling and Visualisation (SMV) tactics. Determine spill trajectory – weather conditions and perform initial vector analysis: - Where is it going - Weather conditions/ currents/ tides? - What is in the way - Resources at risk? - When will it get there - Weather conditions/ currents/ tides?	IC / IMT Planning Section.	Within 90 minutes from IMT activation.	Section 5.3
9	Based on the preliminary spill assessment provided by OIM and operational monitoring data: - Assess response required; and - Implement spill response commensurate to the size and level of risk as outlined in Section 5.1 (Spill Response Strategy Selection).	IC.	90 minutes from notification.	Section 3.1 Section 5
10	Continue to implement Judith-2 SCERP: - Engage well control specialists and prepare for mobilisation; and - Engage AEP MoU: Mutual Assistance to facilitate relief rig.	Operations Section Chief or delegate.	Refer to 5.1.	Section 5.1

STEP	ACTION	RESPONSIBILITY	INDICATIVE TIMING	ADDITIONAL INFORMATION
11	If Vic DTP, Tas EPA, Transport for NSW or AMSA is to assume control as Control Agency, assist in completion of Incident Control Handover Checklist (See Appendix C).	IC.	As required.	Section 2.6.2
12	Notify oil spill response contractor(s) and determine level of support required based on the escalation potential of the incident: - CMT to activate AMOSC to support the response, for a level 2/3 spill event; and - IMT to engage vessel contractor to identify additional support / surveillance vessels. (Contact Information available in EOCD)	IC/CMT liaison.	As soon as practicable.	Section 2.6.2
13	Prepare for potential evacuation of personnel from the incident site.	IC.	Refer to Bridging ERP	Judith-2 Bridging ERP
14	Establish spatial context of the spill: - Obtain all necessary maps/ modelling from GIS software and establish sensitivity mapping; and - Identify protection priorities and confirm response options via NEBA.	Planning Section Chief (or delegate).	90 minutes from notification	Section 5.3.2.1
15	Create initial incident action plan (IAP) (as required) in consultation with AMOSC (if required) and Control Agency (i.e. Vic DTP / Tas EPA / Transport for NSW / AMSA, if applicable).	IC.	Ongoing	Section 4.2
16	Activate the Judith-2 Exploration Well OSM-BIP to monitor effectiveness of	Planning Section Chief (or delegate).	As required	Section 5.8

STEP	ACTION	RESPONSIBILITY	INDICATIVE TIMING	ADDITIONAL INFORMATION
	response strategies and potential impacts from spill and response			

2.6.External Notification and Reporting

2.6.1. Regulatory Reporting

For hydrocarbon spill incidents that may occur during the Judith-2 drilling activities, relevant notifications and reporting requirements will need to be conducted. Notifications and reporting should be undertaken by the IC or CMT delegate.

Table 2-4 provides information relevant to the external notification requirements for a level 2/3 event, including contact details, regulatory reporting requirements for oil spill incidents within Commonwealth and State jurisdictions. Further information can be found within the:

- NatPlan;
- Victorian SEMP;
- Victorian MENSAR Plan;
- Victorian Emergency Animal Welfare Plan;
- TasPlan;
- Tasmanian WildPlan;
- NSW Coastal Waters Marine Pollution Plan;
- NSW State EMPLAN; and
- Agriculture and Animal Services Functional Areas (AASFA) Supporting Plan (NSW).

For spills occurring from vessel activities there is an additional requirement for the Vessel Master to report the incident under the relevant marine oil pollution legislation (MARPOL) as stated within the vessel's SOPEP.

Table 2-4: Hydrocarbon spill notification requirements and contacts

AGENCY OR AUTHORITY	INDICATIVE TIMING	REPORTING REQUIREMENTS	RESPONSIBILITY	SUPPORTING INFORMATION
NOPSEMA	Verbal: within 2 hours Written: as soon as practicable, no later than 3 days .	Incidents occurring in <u>Commonwealth waters</u> that have the potential to cause moderate to significant environmental damage.	CMT Leader or delegate	Report verbally ASAP via Incident Notification phone number: Ph: 1300 674 472 NOPSEMA Form N-03000-FM0831 A159980A Email:

AGENCY OR AUTHORITY	INDICATIVE TIMING	REPORTING REQUIREMENTS	RESPONSIBILITY	SUPPORTING INFORMATION
				submissions@nopsema.gov.au Copy also to NOPTA
NOPTA	Written: within 7 days of report being submitted to NOPSEMA.	Incidents occurring in <u>Commonwealth waters</u> (i.e., reportable to NOPSEMA).	CMT Leader or delegate	Via Titles Administrator. Provide the same written report as provided to NOPSEMA Email: resources@noppta.gov.au / titles@noppta.gov.au
AMSA	Verbal: Within 2 hours of incident Written: POLREP form within 24 hours on request from AMSA	Vessel incidents occurring >3nm offshore in <u>Commonwealth waters</u> .	Vessel Master	Report verbally or by email if phone contact is not possible to AMSA immediately via Rescue Coordination Centre (RCC): Ph: 1800 641 792 (24-hour) Submit Incident Alert after becoming aware of incident: Alert form 18 Submit an incident report within 72 hours after becoming aware of the incident: incident report form 19 reports@amsa.gov.au Harmful substances report: (POLREP) – oil (form 197) rccaus@amsa.gov.au
Director of National Parks (DNP)	Verbal: ASAP but not later than 2 hours after becoming aware of spill.	All spills that occur within a marine park or have the potential to impact an Australian Marine Park.	IMT IC or delegate	Via the Marine Compliance Duty Officer (24-hr): 0419 293 465
Department of Climate Change,	Verbal: ASAP following the potential for	Potential for damage to MNES – including protected and migratory species,	IMT IC or delegate	1800 803 772 environment.compliance@dcceew.gov.au

AGENCY OR AUTHORITY	INDICATIVE TIMING	REPORTING REQUIREMENTS	RESPONSIBILITY	SUPPORTING INFORMATION
Energy, the Environment and Water (DCCEEW)	impacts to MNES, no later than 7 days / when directed by State Authority.	Commonwealth marine reserves and RAMSAR wetlands.		
Australian Fisheries Management Authority (AFMA)	Verbal: within 24 hours	Fisheries within the spill EMBA.	IMT IC or delegate	1300 723 621 or (02) 6225 5555 info@afma.gov.au
Spills entering Victorian State Waters				
Victorian Department of Transport and Planning (DTP)	Verbal: as soon as practicable.	All incidents within <u>State Waters</u> and <u>Commonwealth Waters</u> adjacent to Vic State waters.	IMT IC or delegate	SCC-Vic (State Duty Officer - Dept of Transport and Planning) 1800 956 557 sccvic.sdo.transport@sc.vic.gov.au SCC-Vic (State Agency Controller - Dept of Transport and Planning) 1800 973 552 sccvic.scmdr.transport@sc.vic.gov.au State Control Centre 8 Nicholson Street East Melbourne Victoria 3002
Victoria Department of Energy, Environment, and Climate Action (DEECA)	Verbal: as soon as practicable.	For marine incidents that have the potential to impact wildlife within Victorian <u>State waters</u> .	IMT IC or delegate	Via the DEECA ERR Duty Officer: 0419 587 010 (24/7) Or via the Vic Emergency Hotline: 1800 226 226
Spills entering Tasmanian State Waters				
Tasmania Environment Protection Authority (EPA)	Verbal: as soon as practicable.	All incidents within <u>State Waters</u> and <u>Commonwealth Waters</u> adjacent to Tasmanian State waters.	IMT IC or delegate	Via Pollution Hotline: 1800 005 171 (24/7)

AGENCY OR AUTHORITY	INDICATIVE TIMING	REPORTING REQUIREMENTS	RESPONSIBILITY	SUPPORTING INFORMATION
				Whale Hotline (for impacts to cetaceans): 0427 942 537 whales@dpipwe.tas.gov.au
Tasmania Department of Natural Resources and Environment (NRE TAS)	Verbal: as soon as practicable.	For marine incidents that have the potential to impact wildlife within Tasmanian <u>State waters</u> .	IMT IC or delegate	Via the Wildlife Incidents Hotline: 1300 827 727
Spills entering New South Wales State Waters				
Transport for NSW	Verbal: as soon as practicable	All incidents within <u>State Waters</u> and <u>Commonwealth Waters</u> adjacent to NSW State waters.	IMT IC or delegate	Via Incident 24-hour Duty Officer: 02 9962 9074

2.6.2. Activation of External Organisations

For any Level 2 or 3 hydrocarbon spill that occurs during the Emperor Energy Judith-2 Exploration Drilling Program activities, several external agencies will need to be contacted to assist with the response. Table 2-5 outlines the specific information of the external agencies that are likely to be used by Emperor Energy in the event of a spill. This list is not exhaustive and does not include additional external agencies that may be used upon decision from the IC under the current situation (i.e., vessels of opportunities, etc).

Table 2-5: Activation of external organisations for a hydrocarbon spill

AGENCY OR AUTHORITY	INDICATIVE TIMING	ACTIVATION PROCESS	RESPONSIBILITY	SUPPORTING INFORMATION
AMOSC	Verbal: as soon as possible, within 2 hours of incident	Notify AMOSC 24-hour Duty Officer	CMT or delegate	+61 438 379 328
AMSA	Verbal: immediately following a vessel spill	Notify AMSA 24-hour Search and Rescue	Vessel Master	1800 641 792
Wild Well Control (WWC)	Verbal: within 4 hours of a LOWC incident having been identified	Notify WWC 24-hour emergency hotline	IMT SCB Lead	OECD
Oil Spill Trajectory Modelling (OSTM)	Verbal: as soon as possible, within 2	Via provider-specific duty	CMT Liaison or delegate	Via AMOSC's 24-hour Duty

provider (AMOSC, RPS)	hours of an incident being identified	officer or AMOSC 24-hour Duty Officer		Officer: +61 (0) 438 379 328
OSM Service Provider (Stantec)	Verbal: as soon as initiation criteria is met and approved by the IC Refer to Section 12 of the Judith-2 Exploration Well OSM-BIP for the full mobilisation and activation process	Notify company-specific duty officer	IC or delegate	Directly via OSM Services Provider- 24-hours Duty Officer number. Contact details available through EOCD listed in Section 2.1.
Waste Contractor	Verbal: as soon as practicable when service is likely to be required	Notify waste contractor.	IC or delegate	Contact details available through EOCD listed in Section 2.1.

3. SPILL RESPONSE FRAMEWORK

3.1. Spill Classification

The NatPlan has a three-level classification system for oil spill incidents, based on the resources required to respond and the size and/or complexity of the incident. This assists in guiding agency readiness levels, incident notifications, response actions and potential response escalations. Table 3-1 demonstrates the oil spill classification that has been adapted from the NatPlan.

Table 3-1: Spill Level Classification

CHARACTERISTIC	LEVEL 1	LEVEL 2	LEVEL 3
MANAGEMENT			
Jurisdiction	Single jurisdiction	Multiple jurisdiction	Multiple jurisdictions including international
No. of agencies	First Response Agency	Routine multi-agency response	Agencies from across government and industry
Incident Action Plan	Simple/Outline	Outline	Detailed
Resources	Onsite resources required only	Requires intra-state resources	Requires national or international resources
TYPE OF INCIDENT			
Type of response	First Strike	Escalated	Campaign
Duration	Single shift	Multiple shifts - days to weeks	Extended response - weeks to months
Hazards	Single Hazard	Single Hazard	Multiple Hazards
RESOURCES AT RISK			
Human	Potential for serious injuries	Potential for loss of life	Potential for multiple loss of life
Environment	Isolated impacts with natural recovery in a few weeks	Significant impacts, recovery may take months. Remediation required.	Significant area, recovery may take months. Remediation required.
Wildlife	Individual fauna	Groups of fauna or threatened fauna	Large numbers of fauna
Economy	Business level disruption	Business failure	Disruption to a sector
Social	Reduced services	Ongoing reduced services	Reduced quality of life
Infrastructure	Short term failure	Medium term failure	Severe impairment
Public Affairs	Local and regional media coverage	National media coverage	International media coverage

3.2.Emperor Energy Incident Control Framework

3.2.1. Incident Control Overview

Emperor Energy's incident control framework reflects the Australasian Inter-Service Incident Management System (AIIMS) and consists of key roles required to effectively coordinate and execute a response.

For a Level 2 or 3 spill incident occurring from the MODU during Judith-2 Exploration Drilling operations, the following teams will be activated:

- Emperor Energy CMT.
- Drilling IMT, including the SCB.
- On-site ORT.

The incident control structure has been developed in collaboration with AMOSC and AGR to ensure that all roles can be filled and are understood so that an effective and fit-for-purpose hydrocarbon spill response can be maintained for the duration of a worst-case release scenario.

3.2.1.1. CMT Roles and Responsibilities

The Emperor Energy CMT provides strategic leadership and oversight during crisis events classified as Emergency Level 3, or where a Level 2 emergency has the potential to escalate. The CMT operates under the authority of the Chief Executive Officer (CEO) and is responsible for strategic decision-making relating to people, environment, assets, reputation, and liability.

The Emperor Energy CMT is composed of members of the Emperor Energy Management Team and supporting resources (Subsurface, Legal, HR and Insurance representatives), with additional support roles filled by representatives from contracted service providers (Figure 3-1). Any contracted personnel have been assessed and approved via the Emperor Energy Contractor selection and evaluation process as outlined in the EP Section 8.4.

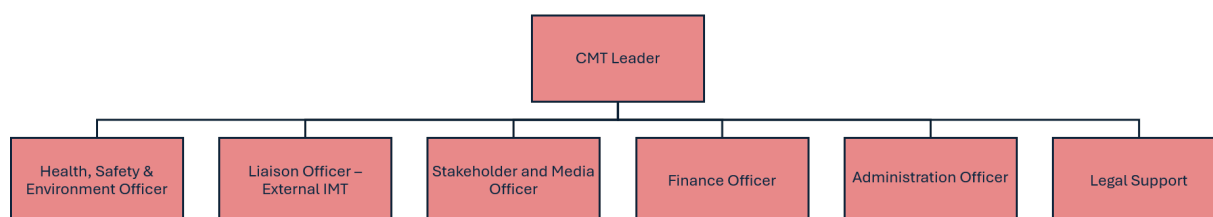


Figure 3-1: Emperor Energy Judith-2 Crisis Management Team (CMT) Structure

The Emperor Energy CMT consists of seasoned industry professionals with a combination of complementary technical and commercial experience. The CMT roles and responsibilities are summarised in Table 3-2. In the event of a Level 2 or 3 spill, the IMT Liaison officer will notify the CMT Leader. The CMT Leader will standup the required roles as needed. As the incident response is managed by the IMT, the CMT functions will be more staggered and would not be required to be in full response mode for the duration of the event. It is expected that the CMT would be involved in the first 4 to 5 days full time and after that would be utilised where required. The CMT leader would be required for ongoing daily briefings and IAP sign offs.

The CMT Leader will activate support as required to assist with legal and media issues. The CMT key accountabilities include:

- Governance and control of any incident response;
- Maintaining OPEP preparedness (as outlined in Appendix G);
- Testing OPEP readiness via drills and exercises, with learnings included in OPEP revisions as required;
- Implementing the OPEP in the event of Level 2 or 3 spill event;
- Undertaking regulatory notifications;
- Governance of all contractors engaged to support a spill response, including the IMT;
- Approval of all incident action plans (IAP);
- Communicating with all relevant stakeholders and media; and
- Strategic planning of control and recovery processes.

These responsibilities cannot be delegated and are further outlined in the RASCI matrix in Table 3-3. A RASCI Matrix is a governance tool demonstrating accountability, capability and assurance.

RASCI defines: Who performs the work

- R – Responsible: Performs the work.
- A – Accountable: Owns the outcome and legal responsibility.
- S – Supports: Provides resources or specialist assistance.
- C – Consulted: Provides expert advice before decisions are made.
- I – Informed: Is kept updated on progress or decisions.

Table 3-2: CMT roles and responsibilities

SUB-FUNCTION	ROLES AND RESPONSIBILITIES
CMT Leader	The CMT Leader is responsible for: • Ensuring all preparedness drills and exercises are undertaken and learnings updated into the relevant documents (EP, OPEP etc) • Ensuring all IMT member are trained and competent to fulfil their roles • Ensuring all required personnel and equipment remain available prior to and during an incident • Ensuring the OPEP and all EPOs/EPs and MCs are verified and maintained in order to be prepared for a timely response; • Ensure all EP and OPEP EPOs/EPs are implemented during a response. • Directing the company's response to a crisis; • Establishing and communicating strategic goals with other members of the CMT; • Ensuring response actions are aligned to statutory, regulatory and legal requirements; • Ensuring Company Executive and Board are briefed on the crisis response and related issues;

SUB-FUNCTION	ROLES AND RESPONSIBILITIES
	- Ensuring the company maintains sufficient resources to manage incident response over extended periods; - Ensuring governance of the IMT to ensure response activities are undertaken in accordance with the OPEP; - Maintaining a direct line of contact with the IMT leader; and - Approving the daily IAP.
IMT Liaison Officer	The IMT Liaison Officer will be the primary interface between the Emperor Energy CMT and the AGR IMT. The responsibility of the IMT Liaison Officer is: - Ensuring the timely availability of technical and operational information and documentation pertaining to the asset and the equipment involved in the incident; - Maintaining communications and situation awareness; - Assisting the CMT to review and approve IAP's prepared by the IMT; - Ensuring the CMT has reliable up to date situational awareness to assist in preparation of media releases, make relevant regulatory notifications and communicate to other external stakeholders; and; - Providing liaison personnel in the event that a State Control Agency IMT is required throughout the response.
Administration Officer	The CMT Administration Officer is responsible for: - Initial set-up of the CMT room, perform scheduled checks on the CMT room IT functionality, and provide 24/7 IT support to the CMT through the management of incidents. - Maintaining the readiness of the CMT Room, ensuring IT systems are functional and relevant documentation is available including CMT contact registers
Stakeholder and Media Manager	This role is responsible for: - Managing external information flows to stakeholders and members of the public. - Ensuring relevant and timely public and stakeholder information is distributed across all relevant platforms.
HSE Advisor	Supports the CMT in the event of an incident by: - Confirming planned IMT response actions align with approved EP and OPEP requirements; - Assisting with regulatory engagement, including preparing environmental notifications, reports and updates; - Supporting the CMT leader in ensuring the OPEP and all EPOs/EPs and MCs are verified and maintained in order to be prepared and implemented; - Support the IMT Liaison officer in communications and potential support to control agency liaison if required - Supplying accurate HSE information to assist internal and external communications; and - Supporting post-incident environmental recovery planning, monitoring and lessons learned.
Legal Advisor	- Provide legal advice to the CMT as requested. - Review contractual needs as required.
Finance Officer (Chief Finance Officer)	The Finance Manager will support the CMT Leader in managing the finances of the business in an emergency situation and ensure timely commitment of funds and engagement of services and support via the Financial Management System. The Finance Manager will provide access to the commercial arrangements in place to

SUB-FUNCTION	ROLES AND RESPONSIBILITIES
	implement emergency response. This will include implementation of insurance loss adjustment engagement via the incumbent insurance broker. The Finance Manager is responsible for: • Activation of the financial resources and support functions required to support response plans; Tracking of expenditure during emergency responses and reporting status to the CMT; • Ensuring requests for expenditure are actioned in a timely manner and tracked; • Completing post-incident expenditure analysis and reporting; • Assuming the role of Primary Scribe to establish immediate record of events. This responsibility can be handed over to a support role once the CMT is established; • Engaging legal and commercial support functions as required by the CMT; • Reviewing outgoing correspondence from a commercial/legal perspective; and • Advising the CMT Leader on commercial/legal considerations of draft response plans.

Table 3-3: RASCI showing key accountabilities and governance for a hydrocarbon spill

ACTIVITY	CMT LEADER (EMPEROR ENERGY)	CMT LIAISON (EMPEROR ENERGY)	IMT IC (AGR)	OTHER CONTRACTED PERSONNEL
Hold training drills and exercised	A/R	S	S	S
Ensure compliance with OPEP	A/R	S	R	I
Activate OPEP	A	S	R	I
Lead incident briefings	A	S	R	I
Regulatory reporting	A	R	S	I
Develop IAP	A	S	R	I
Approve IAP	A/R	S	C	I

3.2.1.2. IMT Roles and Responsibilities

The IMT roles and responsibilities are described in Table 3-4 and illustrated in Figure 3-2. Unless otherwise stated, all roles are filled by AGR. Further details on roles, including the peak capability for the IMT response structure, are provided in Appendix B. The Judith-2 Exploration Drilling Program SCERP provides details on the source control procedures and plans developed for the activities covered within this OPEP. In the event of a level 2 or 3 incident, the IMT leader will standup as a minimum the roles to assess the incident. Once established, the IMT Leader will engage roles as required throughout the duration of the incident. Roles may be stood down depending on the nature of the response and requirements.

Table 3-4: IMT roles and responsibilities

SUB-FUNCTION	ROLES AND RESPONSIBILITIES
Incident Controller (IC)	The Incident Controller is responsible for overall co-ordination and direction for the spill response. This includes: - Establishing clear response objectives and strategies aligned with the Judith-2 EP Environmental Performance Outcomes (EPOs) and the OPEP's Environmental Performance Standards (EPS). - Ensuring the deployment of an effective and safe response structure, including the mobilisation of appropriate personnel, equipment, and resources. - Maintaining oversight of response operations to ensure alignment with regulatory requirements and company standards. - Facilitating communication and coordination across all response functions and with external stakeholders as required. - Monitoring and reviewing response effectiveness, making adjustments to strategies and resources as necessary or as advised by the CMT.
Safety Officer	- Develops and implements a plan that assesses and manages the safety risk of the response. - Ensures safety risks are assessed and mitigation plans/ processes in place. - Ensures ongoing communications with Shoreline Forward operating base (FOB)
External Agency Liaison Officer	- Ensures key stakeholders AMOSC/Control agency (government, regulatory and community) are informed of the incident and have their concerns acknowledged and addressed by the response organisation. - Provides liaison personnel in the event that a State Control Agency IMT is required throughout the response.
Planning Officer	- Drives the planning process that develops the IAP. - Tracks resources. - Oversees the Environment, Situation Units, Forecasting and OSM functions. - Analyses the response and planning that fits best the scenario (oil type, weather, fates, locations, sensitivities), to mitigate the consequences most effectively.
Environmental Unit Lead (AMOSC)	- Strategies are chosen consistent with good global practice, accounting for the benefit and dis-benefits of each strategy. Assessment of environmental risk. - Daily NEBA analysis. Analysis of the resources at risk. Deployment of SMV tactics and technical advice into the IMT. Deployment of OSM Services Provider
Situation Lead	- Common operating picture developed – situational assessment (intelligence) - Common Operating Picture established via GIS system and circulated to stakeholders.

SUB-FUNCTION	ROLES AND RESPONSIBILITIES
Intelligence Lead	- Data that tracks the environmental impacts of spilt oil is collected, analysed, and notated. Operational monitoring programmes are used to monitor and vary the IAP. - Deployment of OSM Services Provider.
Operations Officer	- Develops tactics to execute strategies in the field. - Maintain communication with FOB Lead. Provide tech input to the safety plans. - Provides technical input to the production of the next operational period IAP. - Drafts the daily operational orders for each field team. - Provides technical input to the safety plans. - Ensures the execution of the activities in the field in accordance with the IAP in coordination with filed based FOB personnel.
Source Control Branch Lead	- The SCERP provides details and guidance on emergency well control management for the activities covered within this OPEP. It covers the activities to be carried out to assess the well control and to plan and execute appropriate response measures to regain control of and secure the well. - Mobilise source control expertise and develop detailed relied well plans - Liaise and support the in-field source control team to implement their tactics (as per SCERP) and ensure alignment with the IMT
Shoreline response team supervisor (AMOSC)	- Develop tactics to execute shoreline response strategies. - Collaborate with relevant State Control Agencies to establish shoreline tactics (including protection priorities) to be input to the production of the next operational period IAP. - Ensure collaboration with the Environment Unit to identify protection priorities. - Execute the Shoreline Response IAP under the direction and in collaboration with the relevant State Control Agency.
Air Operations Lead	- Develop tactics and associated tasking assignments to execute the strategies requiring aviation support such as aerial surveillance. - Maintain coordination of activities with Aviation FOB Lead and supply unit lead
Oiled Wildlife Response Specialist (AMOSC)	In collaboration with the relevant State Control Agency, provide support resources and coordinate the oiled wildlife activities in field and report back into the IMT.
Logistics Officer	- Acquires resources, operational locations and materials that match the operational need. 'For-purpose' resources are acquired as needed, consistent with the IAP.
Supply Unit Lead	- Assisting with sourcing and mobilisation of suitable aircraft and vessels as required - Communicating and coordinating with FOB leads - Organising suitable resources as per the IAP.

SUB-FUNCTION	ROLES AND RESPONSIBILITIES
Communications Lead	Ensuring communications logs and direction to all field-based team from IMT, CMT, and field based ops are consolidated both inwards and outwards.
Finance Officer	Tracks all costs and provides financial oversight consistent with the control agency requirements. Ensures there is a financial and administrative management process in place for the response.

The Emperor Energy CMT, led by the CMT leader, provides strategic direction, governance, and resource oversight and governance to ensure the IMT deliver a safe and compliant response. The IMT, led by AGR, manages tactical response operations, with integration facilitated through the Emperor Energy IMT Liaison Officer, ensures continuous communication, information flow, and coordination between teams.

Specialist CMT roles (HSE, Finance, Stakeholder and Media, Legal) support the IMT by providing technical advice, regulatory alignment, communications, funding, and risk management inputs. This integration ensures the CMT sets strategy, maintains organisational oversight, and confirms decision-making, while the IMT executes operational response activities effectively. The integration of the CMT and IMT is provided by the structure in Figure 3-3.

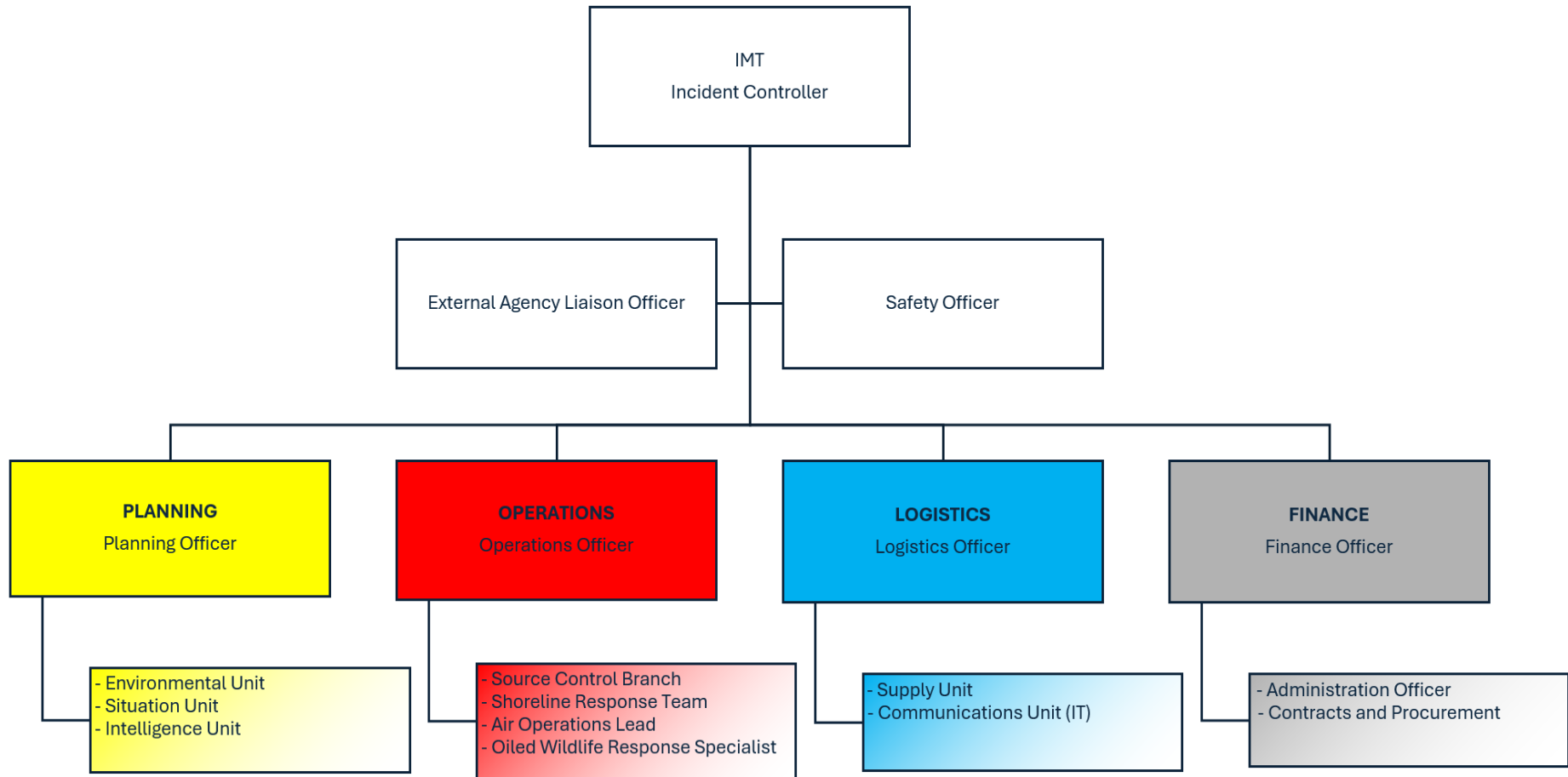


Figure 3-2: Judith-2 IMT Structure

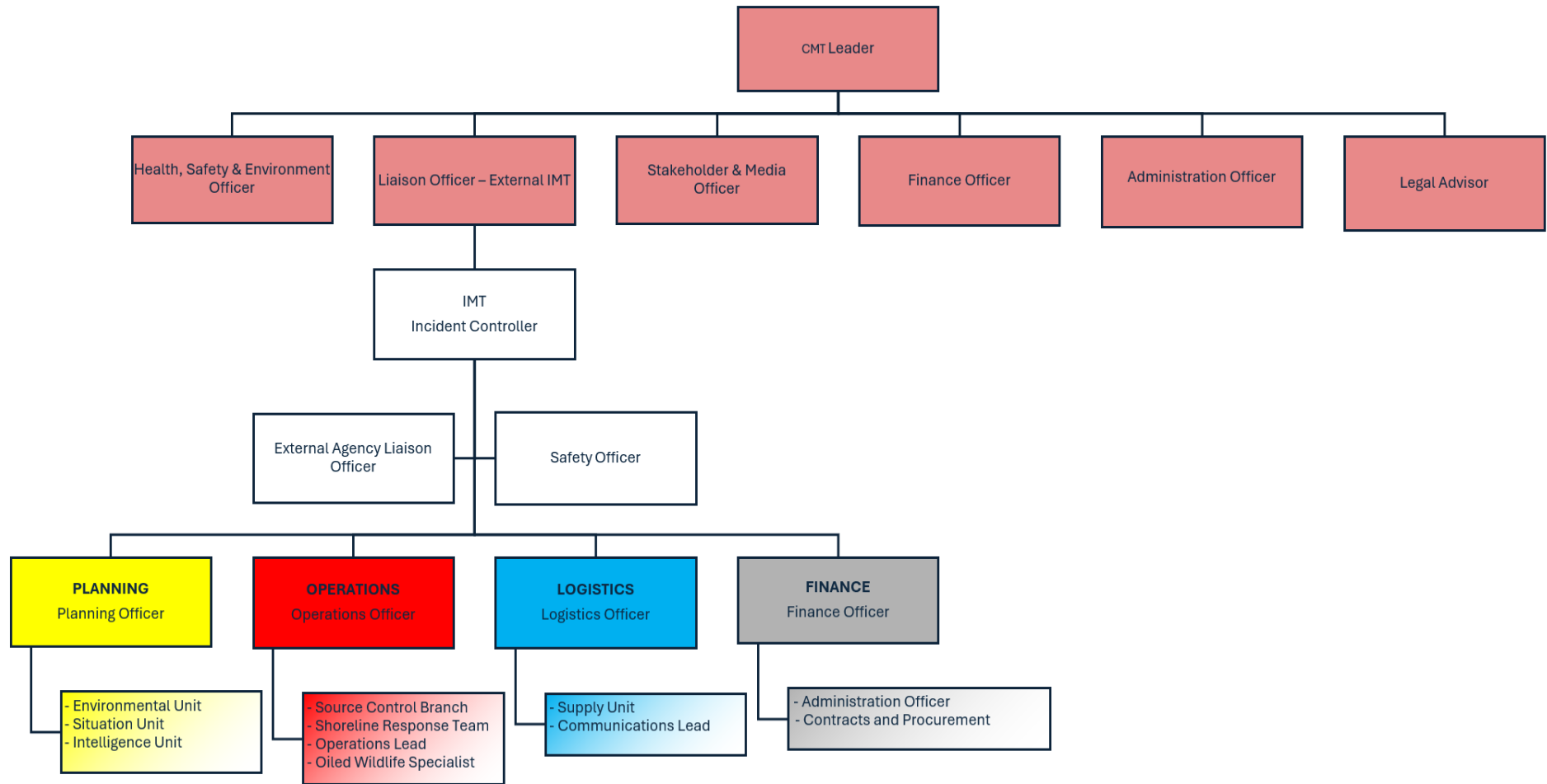


Figure 3-3: Judith-2 combined CMT and IMT structure

3.2.1.3. ORT Roles and Responsibilities

The IMT will provide support to the on-site operational response team (ORT). The Forward Operating Base (FOB(s)) will be located near to response activities to manage and provide for the daily operations of the field response. For example, the shoreline FOB is likely to be in the vicinity of Lakes Entrance (which provides good road access, port and accommodation facilities).

The specific ORT roles required are dependent on the nature and scale of the spill scenario and will be subject to change depending on the response strategies required. Escalation and capability for peak manning is detailed in Table B - 3. All roles may not be necessary for the entire response. The core ORT roles and responsibilities have been summarised in Table 3-5.

Table 3-5: Core ORT Functions

SUB-FUNCTION	ROLES AND RESPONSIBILITIES
Aviation FOB Lead	- Responsible for the establishment and management of the FOB, IT systems, personnel, materials and equipment. - Establish operating location to ensure coordination of aerial observers and aircraft suppliers. - Communicate the daily aerial surveillance location and plan based on the IAP supplied by the air operations lead.
Shoreline FOB Lead	- Responsible for the establishment and management of the FOB, IT systems, personnel, materials and equipment. - Establish operating location to ensure coordination of shoreline response and aircraft suppliers. - Coordination of the day-to-day shoreline response at respective field location. Ensure they are implemented in line with the IAP and as per the direction of the relevant Control Agency. - Maintain communication between in field response, IMT and control agency - Review any requirements for additional support needed for security of personnel, medical support, media response or other support in liaison with the Health and Safety Officer.
Health and Safety Officer	Coordinate welfare requirements for all field response personnel. Implementation of health and safety plan measures.
Marine Operations Team Lead	Coordination of in field marine response operations, reporting through OSC to IMT. Ensure they are implemented in line with the IAP.
Shoreline Operations Manager/Supervisor	- Supervise Activity Leads - Coordinate shoreline response with FOB - May coordinate more than one activity lead
SCAT Team Lead (AMOSC initially then may be led by State Control Agency)	- Undertake preliminary shoreline assessment to assess shoreline response requirements and whether full SCAT assessment is required from state agency - Based on results from preliminary assessment state SCAT team handover may be undertaken for full SCAT deployment. - Coordination of the SCATs at respective field locations. Ensure they are implemented in line with the IAP and as per the direction of the relevant Control Agency.

SUB-FUNCTION	ROLES AND RESPONSIBILITIES
Activity Leads/Shoreline Response Team Lead	- Coordination of the day-to-day shoreline response at respective field location. Ensure they are implemented in line with the IAP and as per the direction of the relevant Control Agency. - Manage the team of general responders
Oiled Wildlife Response Coordinator (OWR)	Coordination of in field OWR activities reporting through the OSC to the IMT. Ensure they are implemented in line with the IAP and as per the direction of the relevant Control Agency.

3.2.2. Incident Management Team Activation

All those that may be required to assist in an emergency are to be notified as early as possible. The following notification process is to be followed:

- The incident is to be reported to the AGR Drilling Superintendent via the duty phone number. If unavailable, a Duty Manager should be contacted via the on-call phone number (refer to AGR Contacts Directory).
 - A weekly update to the Contacts directory will be issued between the Rig, AGR drilling crew and Emperor Energy.
- Confirm that the person contacted will assume the role of IC (responsible for managing Emperor Energy's response to the incident) if the incident has escalated beyond Level 1:
 - The lead in the field (Vessel Master/OIM) will be allocated as the OSC .
- The IC, following consultation with the OSC, will notify the AGR IMT members which are on 24-hour call (to standby, or mobilise to the Incident Control Centre (ICC) within the agreed 1-hour timeframe).
- The AGR IMT Leader will be responsible for notifying external organisations that can provide additional support if required to scale-up the response.

The incident management system is scalable, flexible, and adaptable, with the structure reflecting the size and complexity (operational and tactical levels, as applicable) appropriate to the spill scenario.

The oil spill response management arrangements and Incident Management System outlined in this OPEP reflect the AIIMS. This allows for a standardised and consistent approach to emergency response across Emperor Energy, AGR, contractors and relevant State and Commonwealth government agencies.

Additional resources will be under the control of the relevant IMT Section Chiefs. An indication of the potential positions and delegation of responsibilities that may occur in a large spill scenario are described in Appendix B. Contact details are available in the EOCD Section 2.1.

3.2.3. Incident Management Team Training

Response personnel will be trained for required positions within the CMT and IMT. Competency is maintained through participation in regular response exercises and workshops as discussed within Section 7.2. Training requirements for the CMT and IMT members are summarised in Section 7.2.

3.2.4. Response Duration and Fatigue Management

For a sustained LOWC response of up to 77 days, the Emperor Energy CMT will maintain the core functions and alternatives throughout the response. Given that only day shift is required for the CMT and that response activities are predominantly being undertaken during the normal work hours, there is no requirement for a shift rotation, however there will be a roster in place to ensure that there is always a nominated and backup person in the function.

AGR will manage IMT resourcing on a rotating shift basis consistent with the fatigue management protocols in the Judith-2 Bridging ERP. The following minimum resourcing arrangements apply:

3.2.4.1. CMT Resourcing Arrangements

- The Emperor Energy CMT functions (CMT leader and CMT Liaison) have in place a nominated primary and at least one alternate. A roster is issued weekly from the month prior to activity beginning and throughout the duration of any project activity to confirm the nominated personnel as well as ensuring they are trained as per Table 7-1.
- The CMT operates to a defined daily operating schedule rather than continuous 24-hour shifts. CMT handovers (where required) are recorded using the CMT Handover Form – within the Emperor Energy Crisis Management Plan.

See Table 3-6 for maximum needs for CMT roles and the number of personnel available.

Table 3-6: CMT Needs and capability

CMT ROLE	NUMBER NEEDED	NUMBER AVAILABLE	SOURCES
CMT Leader	2	3	Emperor Energy MD, Technical Director & Commercial Director
IMT Liaison Officer	2	6	Emperor Energy COO, HSE Advisor Aventus Consulting (x2) Xodus (x2)
HSE Advisor	1	5	Emperor Energy HSE Advisor Aventus Consulting (x2) Xodus (x2)
Stakeholder & Media Advisor	1	3	York Park Group
Legal support	1	2 (but can extend as required)	Grondal Bruining
Finance Officer	1	2	Emperor Energy CFO, Commercial Director
Administrative Officer	1	3	Emperor Energy Administrator Aventus Consulting (x2)

3.2.4.2. IMT Resourcing Arrangements

- IC: Minimum 3 accredited personnel (AGR Drilling Superintendent plus two qualified successors). The IC will be in position for 12 hrs during the day. For a Level 3 LOWC duration, the IC position will have a rotation period of 5 days. Handover will be managed via the Incident Control Handover Form (Appendix C).
- Planning, Operations, Logistics and Finance Officers: Two trained personnel per position for shift coverage (12-hour shifts).
- Source Control Branch: Fatigue management is governed by the SCERP. Well control contractor to provide a minimum of 2 qualified personnel for continuous 24/7 coverage, if necessary.
- ORT Field Response Teams: Team leads rotated at 5-day intervals. AMOSC Core Group and AMSA NRT personnel supplement field teams from Day 7 of a Level 3 response.

A formal resourcing review will be conducted at each IAP cycle to confirm forward availability of key personnel and identify resourcing gaps. Appendix B provides the expanded IMT structure applicable to a full Level 3 sustained response for peak requirements based on the full length of a worst case scenario and outlines the available capability which will continually verified as outlined in the Appendix B.

3.3. Jurisdictional Authority and Control Agency

Jurisdictional Authority refers to the Agency that has the responsibility to verify that an adequate spill response plan is prepared and, in the event of an incident, that a satisfactory response is implemented.

The Control Agency, also known as the Combat Agency, for an oil spill occurring in marine waters is responsible for the control of response activities, including appointing the IC. The Control Agency may have additional arrangements in place for another government agency or organisations to provide oil spill response services during an emergency.

As stated within the NatPlan (AMSA 2020), the titleholder remains accountable for spills relating to its Petroleum Activities, however, the nominated Control Agency and Jurisdictional Authority assigned to a spill depends on the specific location and spill source. Table 3-7 provides a summary of the relevant Control Agency and Jurisdictional Authority for spills occurring within Victorian State and Commonwealth waters.

NOPSEMA has responsibility for safety, structural (well) integrity and the environmental management of the offshore petroleum industry within Commonwealth waters in accordance with the *Offshore Petroleum and Greenhouse Gas Storage Act 2006* (OPGGGS Act) and associated regulations. Therefore, NOPSEMA has the regulatory responsibility for any petroleum activity within Commonwealth waters covered in this OPEP.

Table 3-7: Summary of Regulatory Responsibilities (Statutory and Control Agencies)

SPILL LOCATION	SPILL LEVEL	SPILL SOURCE			
		VESSEL		PETROLEUM ACTIVITY	
		LEVEL 1	LEVEL 2/3	LEVEL 1	LEVEL 2/3
State Waters (<3nm from the coast)	Jurisdictional Authority	Vic DTP/ Tas EPA / Transport for NSW		Vic DTP/ Tas EPA / Transport for NSW	
	Control Agency	Vessel Owner/ Operator	Vic DTP/ Tas EPA/ Transport for NSW / Relevant Port Authority*		Titleholder
Commonwealth Waters (>3nm from the coast)	Jurisdictional Authority	AMSA**		NOPSEMA	
	Control Agency	Vessel Owner/ Operator	AMSA	Titleholder	

*Within Port waters.

**Within the 500m MODU exclusion zone the Jurisdictional Authority will be NOPSEMA

3.3.1. Cross-jurisdictional Response

In the event of a spill originating in Commonwealth waters, and migrating into Victorian, Tasmanian or NSW State Waters, the relevant State authority as outlined in Table 3-5 will assume the role of the Control Agency for the response activities occurring within these waters following a specified handover from the established Authority/Agency for Commonwealth Waters. The management and coordination of cross-jurisdictional incidents will follow the NatPlan Coordination of Cross-border Incidents Guideline (NP-GUI-023) (AMSA 2017).

To facilitate effective coordination during a Level 2 or Level 3 spill, a Joint Strategic Coordination Committee (JSCC) will be established. The JSCC will be chaired by the Senior Maritime Pollution Controller (SMPC). Attendance is required from the following parties:

- Emperor Energy Crisis Management Team (EE CMT)
- AGR IMT Lead (AGR IMT Lead)
- Emperor Energy IMT Liaison Officer
- AMOSC Advisor (if requested by Emperor Energy)
- State Incident Controller (State IC) and Deputy Incident Controller (DIC)
- State Liaison Officer (State LO)
- NOPSEMA
- AMSA (if required).

The JSCC will be administered by the relevant State agency (Victoria being the most likely). The inaugural JSCC meeting will be convened by the Control Agency once both the titleholder and the State agency have formally transferred the role of Control Agency. In this instance, the titleholder should collaborate closely with the State agency, sharing response resources and providing qualified personnel to support the State Control Agency's IMT.

As the relevant jurisdictional authority in Commonwealth waters, NOPSEMA may choose to participate in the JSCC at its discretion.

As the Titleholder, Emperor Energy will maintain an IMT for incidents in jurisdictions where it is the Control Agency for the duration of the response. This will be achieved through the step up of Emperor Energy's CMT and AGR's IMT. Figure 3-4 shows the arrangement between the CMT, IMT and ORT and the JSCC arrangements

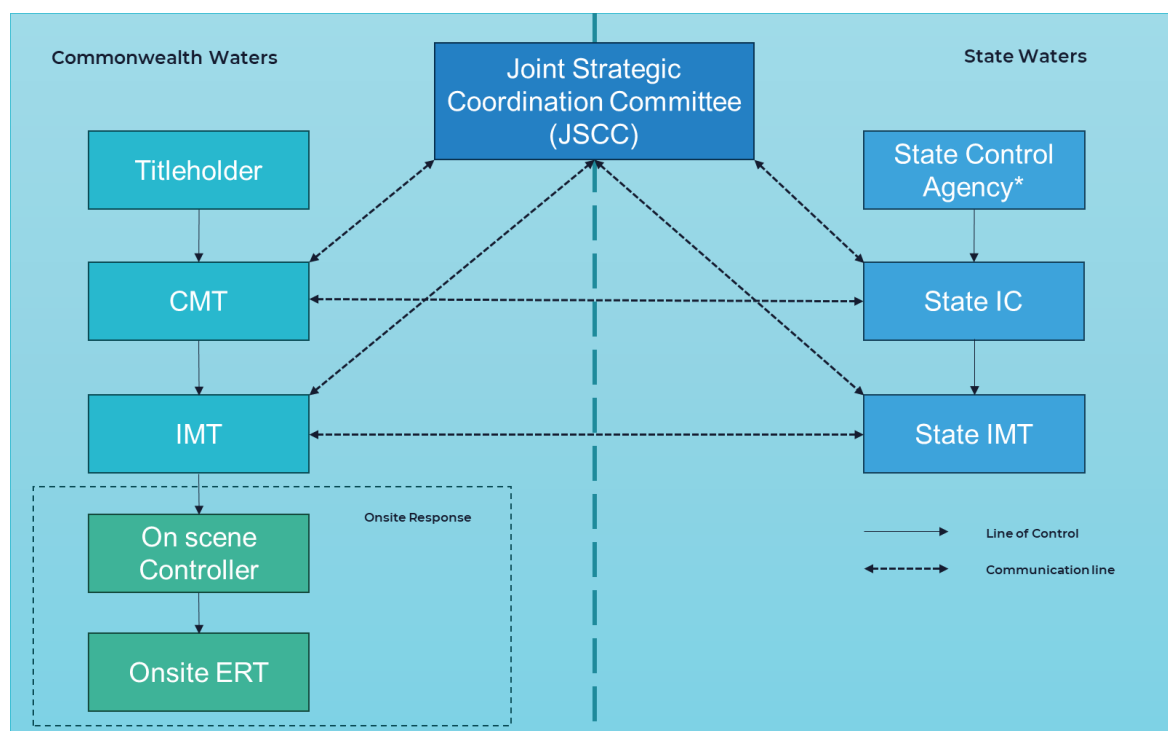


Figure 3-4: Joint Strategic Coordination committee (JSCC) Arrangements

3.4. Communication and Integration with Government Organisations

For a spill originating from MODU operations, the IMT will be responsible for both internal (i.e., CMT, Operational Response Team/SCB) and external communications related to the spill response with the following organisations (contact details will be in the Emergency and Operational Contact Directory, EOCD):

- Commonwealth Agencies
 - NOPSEMA
 - NOPTA
 - AMSA
 - Director of National Parks (DNP)
 - DCCEEW
 - AFMA
 - DFAT
- Victorian State Agencies
 - DTP
 - DEECA
- Tasmanian State Agencies
 - EPA
 - NRE TAS
- New South Wales State Agencies
 - NSW Maritime / Transport for NSW
- External Agencies

- AMOSC/OSRL
- Australian Energy Producers (AEP).

The Emperor Energy CMT is responsible for managing all external communications related to government regulatory bodies, media liaison, and other key stakeholders. Depending on the scale and jurisdiction of the spill, Emperor Energy may receive support from a range of mutual aid agencies and organisations. Key supporting entities are outlined in the following sub-sections.

3.4.1. Australian Maritime Safety Authority (AMSA) and NatPlan

The NatPlan is managed by AMSA and is Australia's key marine emergency contingency and response plan. NatPlan sets out the national arrangements, policies, and roles and responsibilities of states, territories, and industry in managing maritime environmental emergencies. NatPlan integrates Commonwealth and State government oil spill response frameworks to facilitate effective response to marine pollution incidents. AMSA works with State governments (who manage the equivalent State sub-plans that integrate into the NatPlan), shipping, petroleum, chemical industry and emergency services, to optimise Australia's marine pollution response capability.

AMSA can be activated through the NatPlan, via the provision of a POLREP, if the Control Agency for any spill type requires additional support and/or resources to mitigate the impacts of a spill incident.

In the event of a vessel spill within Commonwealth waters, AMSA will assume the control of the response in alignment with AMSA's Marine Pollution Response Plan and the NatPlan (AMSA 2020). The vessel master should notify AMSA immediately via the Rescue Coordination Centre (RCC) of all ship-source spill incidents. AMSA manages the trained National Response Team (NRT) and the National Response State Team (NRST) trained to provide support to control agencies in the event of a major marine oil pollution incident.

All resources under the NatPlan, including the NRT, will be available through request to AMSA via the AMOSC service contract. In the event that AMSA response equipment and/or personnel are required, a request through AMOSC will be undertaken.

3.4.2. Victorian Arrangements

3.4.2.1. Victoria Department of Transport and Planning (Vic DTP)

For hydrocarbon spill incidents that occur within Commonwealth waters and have the potential to impact Victorian State waters, the DTP will assume the Control Agency role over the impacted area in State Waters. The established Control Agency in Commonwealth Waters will remain responsible for managing the spill outside Victorian coastal waters in consultation with DTP.

The Victorian MENSAR Plan prescribes the emergency management arrangements for preparedness and response to marine pollution from vessels, offshore petroleum activities and other sources in Victoria.

The State Controller Maritime Emergencies (SCME) has the overall responsibility for ensuring there is adequate response to spill incidents in State waters, including marine pollution resulting from a petroleum activity and from a vessel originating in Commonwealth waters. In these circumstances, the provision of an adequate response will be primarily achieved through the coordinated employment of the titleholder's resources. The SCME provides overall strategic management response and executive level support and guidance to the IC. DTP's Preparedness and Coordination team will assist the SCME and DTP to fulfil their statutory obligations in response to a marine pollution incident in state waters.

Where state waters are impacted by cross-jurisdictional marine pollution incidents, DTP will only assume the role of Control Agency for response activities occurring in Victorian state waters, in accordance with the

MENSAR Plan. In this instance, Emperor Energy will work in collaboration with DTP, sharing response resources and providing qualified personnel to the DTP IMT. It is an expectation that Emperor Energy will conduct initial response actions in state waters as necessary in accordance with this OPEP and continue to manage those operations until formal incident control can be established by Victorian DTP.

Following the establishment of incident control by DTP, Emperor Energy will continue to provide planning and resources in accordance with the OPEP. This includes incident response resources and contractual arrangements referenced throughout this OPEP, such as those related to equipment, waste management, transport, and personnel (both operational and IMT staff), as well as agreements with third-party response service providers (e.g. AMOSC)

Emperor Energy and DTP will establish separate IMTs to manage response activities in Commonwealth and State waters, respectively. DTP and Emperor Energy will each deploy an Emergency Management Liaison Officer (EMLO) to corresponding IMTs to facilitate greater communication, coordination and efficiency between the two IMTs during the response. During an incident, any matters pertaining to this arrangement that can't be addressed through direct communications between the two IMTs can be referred to the JSCC. Where resolution of a compliance matter is not possible, it will be referred to NOPSEMA.

3.4.2.2. Victoria Department of Energy, Environment and Climate Action (DEECA)

If an incident affecting wildlife occurs in Commonwealth waters close to Victorian State waters, the Control Agency may request support from DEECA to assess and lead a wildlife response. The Victorian Emergency Animal Welfare Plan (VEAWP) provides principles and policy for use in emergency planning, response, and recovery phases for addressing animal welfare in an emergency. The DEECA State Agency Controller should be notified in the event of wildlife impacted or impeding impact from a hydrocarbon event.

The VEAWP is a joint responsibility of the DEECA and the Victoria Department of Jobs, Skills, Industry and Regions (DJSIR). DEECA is responsible for coordination of activities relating to wildlife during emergencies, supported by Parks Victoria and Phillip Island Nature Park, and DJSIR is responsible for the coordination of activities relating to all animals other than wildlife.

The VEAWP rescue plan for marine pollution emergencies provides safe procedures and guidelines for the rescue, treatment and rehabilitation of wildlife affected by marine pollution. The plan specifies the operational structure and responsibilities in dealing with affected wildlife. The main aim of rescue operations is to safely return as many animals as possible to the wild.

Response plan activities include the search and rescue of affected wildlife, triage, rehabilitation and post-spill monitoring of populations and habitat. Impacted wildlife is generally treated at the Phillip Island Nature Park, Victoria, or by other wildlife rehabilitators with relevant experience.

3.4.3. Tasmanian Arrangements

3.4.3.1. Tasmania Environment Protection Authority (Tas EPA)

As per the TasPlan, the Tasmanian EPA is the advisory agency and management authority for prevention and mitigation, preparedness, and response for marine pollution incidents within Tasmania under the management of the TEM.

For hydrocarbon spill incidents that occur in Commonwealth waters and have the potential to impact Tasmanian State waters, EPA Tasmania will assume the Control Agency role for the impacted area in State waters while the Commonwealth waters Control Agency will remain responsible for managing the spill outside Tasmanian coastal waters in consultation with the State. If the marine spill incident goes outside the scope, authority and/or capacity of the EPA, TEM emergency management arrangements will be applied.

When under direction of Tasmania EPA, an EMLO from Emperor Energy, shall be allocated to Tasmania EPA.

3.4.3.2. Tasmania Department of Natural Resources and Environment (NRE Tas)

The Tasmanian Oiled Wildlife Response Plan (WildPlan) is administered by the Tasmanian NRE and outlines priorities and procedures for the rescue and rehabilitation of oiled wildlife within Tasmania.

3.4.4. New South Wales Arrangements

3.4.4.1. New South Wales Roads and Maritime Services (Transport for NSW)

For hydrocarbon spill incidents that occur within Commonwealth waters and have the potential to impact NSW State waters, Transport for NSW or Port Authority of NSW will assume the Control Agency role over the impacted area in State Waters. The established Control Agency in Commonwealth Waters will remain responsible for managing the spill outside NSW coastal waters in consultation with the State Control Agency.

While there will not be any Level 1 incidents originating within State Waters from this activity, the Port Authority of NSW, or Transport for NSW will be the Control Agency for all incidents in State waters in NSW (NSW Government. 2022). Transport for NSW would assume responsibility for responding to the maritime incident and handover to Port Authority of NSW only if a port becomes impacted. The Marine Pollution Controller will consult with the relevant Port Authority or Transport for NSW and determine which agency will assume the Control Agency role (known as Combat Agency in the NSW plan).

Emperor Energy shall conduct initial necessary response actions within NSW State waters, in accordance with this OPEP, and continue to manage response operations until a formal handover is conducted following the establishment of the Transport for NSW Control Agency. An EMLO provided by Emperor Energy will be mobilised to the State incident control centre.

As stated within the NSW Coastal Waters Marine Pollution Plan (NSW Government 2022), the NSW coastline has been divided in distinct areas and assigned either a specific Port Authority or the Transport for NSW to be responsible as the Control Agency for a spill within that area (Table 3-8).

Figure 3-5 shows the maritime regions and their boundaries for the purposes of notification and response. In cases where oil or chemical pollutants also impact an adjoining area of State waters or the shoreline, the Agency that took on the initial role will remain the acting Control Agency for the entire incident unless there is a mutual agreement to hand over the role.

Table 3-8: NSW State waters division of responsibility for response to hydrocarbon spills (NSW Government, 2022)

LOCATION OF INCIDENT	CONTROL AGENCY
From the QLD border to Fingal Head (Port Stephens) excluding the Port of Yamba	Transport for NSW
Port of Clarence River (Yamba) (Port Waters)	Port Authority of NSW (Newcastle)
Fingal Head to Catherine Hill Bay, including: • Port of Newcastle • Sydney Harbour • Botany Bay • Port Kembla	Port Authority of NSW (Newcastle)
Gerroa to the Victorian border, excluding the Port of Eden	Transport for NSW
Port of Eden	Port Authority of NSW
Inland waterways, rivers, estuaries	Fire and Rescue NSW
Australian Territorial Sea and High Sea (outside 3 nautical mile State limit)	AMSA
Declared naval waters	Royal Australian Navy

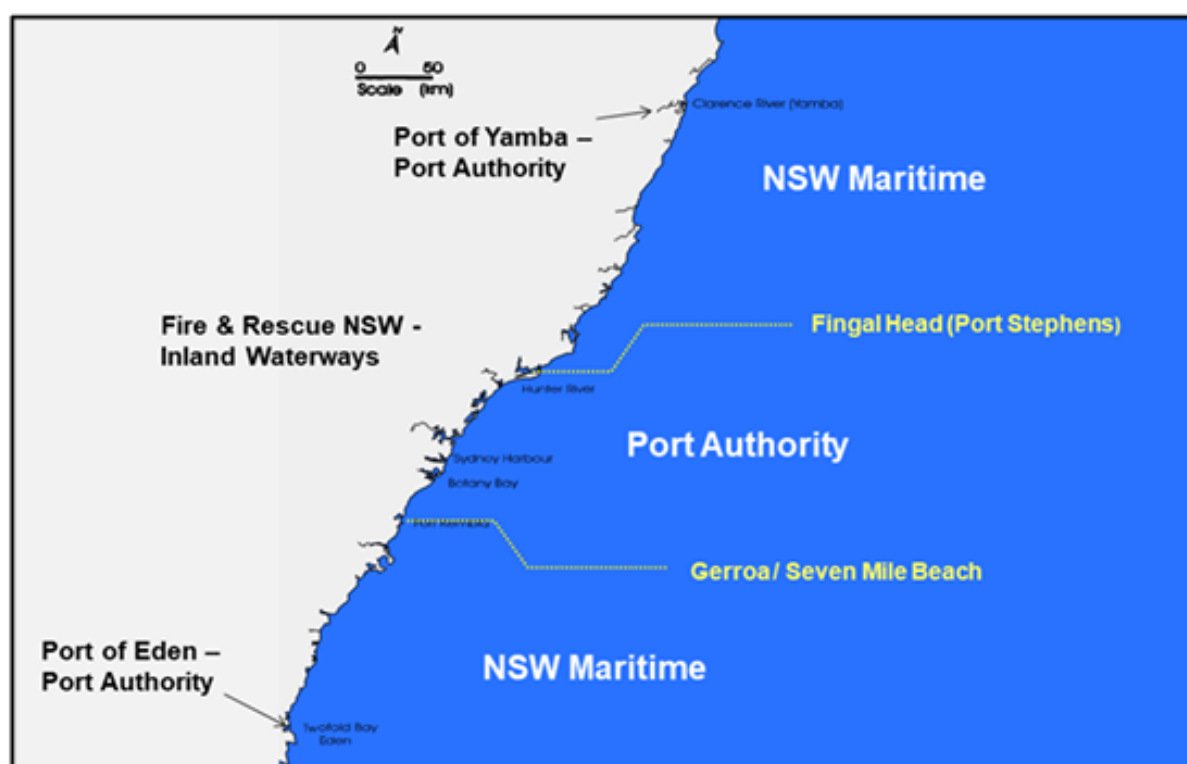


Figure 3-5: Regional boundaries for response agencies.

* Source: NSW Coastal Waters Marine Pollution Plan (NSW Government, 2022)

3.4.4.2. Port Authority of New South Wales (NSW)

The NSW Coastal Waters Marine Pollution Plan and the Port Safety Operating License (PSOL) issued by the portfolio minister to the Port Authority of NSW outlines the division of responsibility for Control Agencies responding to oil and chemical spills. Table 3-8 summarises the division of responsibility for Control Agencies for the NSW coastline.

The PSOL requires the Port Authority of NSW to respond to maritime incidents in the major ports and assigned area of State waters on behalf of the NSW government. Additionally, the Port Authority of NSW as the manager of the regional ports of Eden and Yamba also has responsibility for responding to maritime incidents in those Port waters (Table 3-8).

In the event that a place of refuge is requested, Transport for NSW will assume the Combat Agency role until a place of refuge is granted. At that time control of the incident may be transferred to the Port Authority of NSW as the designated maritime incident control agency (NSW Government, 2022).

3.4.4.3. New South Wales Department of Primary Industries (NSW DPI)

The NSW DPI is responsible for supporting agencies to manage the impact of emergencies to agriculture, fisheries, companion and commercial animals under the Coastal Waters marine Pollution Plan (NSW Government, 2022). NSW DPI has a MOU with multiple organisations that will provide animal services resources to assist in an emergency response under the coordination of NSW DPI.

The DPI is appointed the Agriculture and Animal Services Functional Area (AASFA) to be responsible for activating the Agriculture and Animal Services Functional Area Supporting Plan, risk assessment, notification of key stakeholders, coordinate rescue, evacuation, emergency care of animals and the assessment, humane destruction, and providing a Liaison Officer upon request.

3.4.4.4. New South Wales Environment Protection Authority (NSW EPA)

The NSW EPA is the coordinating agency for the Environmental Services Functional Area (EnvSFA). The EnvSFA is responsible for providing advisor(s) to give expert scientific/technical advice and/or environmental personnel to support the response for protecting the environment. This may include assistance with environmental impacts, identification of hazardous material, provisions or sourcing environmental monitoring equipment, supporting emergency wildlife response, advice for clean-up and disposal of hazardous waste, suggestions of agencies to involve, and the provision of a Liaison Officer upon request.

3.4.5. Commonwealth Department of Industry, Science and Resources (DISR)

The DISR will be the lead Commonwealth Agency for the provision of strategic oversight and Commonwealth government support to a significant offshore petroleum incident (Level 2/3). DISR will be notified by NOPSEMA of a significant oil pollution incident and under the Offshore Petroleum Incident Coordination Framework will stand up the Offshore Petroleum Incident Coordination Committee (OPICC). The OPICC will provide Commonwealth strategic advice and support to the incident. To facilitate information between the response IMT and OPICC, a Liaison Officer/s will be deployed from DISR to the response IMT.

For incidents that are classified at a greater level than Significant (i.e., Crisis level), a whole of government crisis committee will be formed under the Australian Government Crisis Management Framework to provide strategic advice and support, and the OPICC will not be convened, although DISR will remain as the lead agency.

3.5.NOPSEMA Inspector Support

Under NOPSEMA Policy PL1922 (Regulatory compliance monitoring, enforcement and intervention for offshore oil pollution incidents), NOPSEMA may deploy Inspectors to relevant locations of a significant oil pollution response, including the ICC, the AGR Perth office, the Source Control Branch, monitoring vessels and shoreline response sites. The Inspector will collect information on the incident and monitor compliance with the response commitments set out in the accepted EP and (this) OPEP.

Emperor Energy will provide a structured and defined method for timely incident and ongoing response reporting to NOPSEMA Inspectors throughout the response, consistent with the regulatory notification and reporting obligations set out in Regulations 47, 48 and 49 of the OPGGS(E) Regulations and NOPSEMA Guidance Note GN2303. Initial regulatory notification timeframes to NOPSEMA are addressed in Table 2-4.

To support NOPSEMA Inspectors deployed during a response, Emperor Energy will provide:

- A nominated NOPSEMA Liaison point of contact within the IMT, reporting to the IC and supported by the External Agency Liaison Officer (EALO). For Level 2/3 responses, this role will be filled by a dedicated person and will not be combined with another IMT function.
- Working space at the ICC with access to power, network connectivity, printing and the ICC common operating picture.
- Access on request to current and historical IAPs, SITREPs, the Incident Log, OSM outputs (per the OSMP), Operational NEBA records, EPS compliance records, and any other response documentation requested.
- Scheduled briefings at the IMT operational period cadence, with the option for ad-hoc briefings on request.
- Logistical support for site access where Inspectors elect to attend offshore or shoreline response locations, including safety case familiarisation for any MODU or facility visits, induction, PPE, medical clearance verification, and transport coordination.
- A secure information transfer arrangement for documents that cannot be released into the broader response environment

The NOPSEMA Liaison role will be identified in the IAP for each operational period and recorded in the EOCD. Where NOPSEMA Inspectors do not deploy to the ICC, the equivalent information will be provided remotely through the SITREP cadence agreed with NOPSEMA.

3.6.Additional Support from External Organisations

In the event of a level 2 or 3 spill requiring resources exceeding those of the Emperor Energy organisation, additional personnel and resources will be obtained from:

- Industry organisations (e.g., AMOSC).
- AEP Mutual Aid MoU
- Third party contract services and agency hire, these include, but are not limited too:
 - WWC Specialists
 - Oil Spill Trajectory modelling provider
 - OSM provider
 - Waste contractor
 - Aviation providers

- Labour hire
- Vessel brokerage.

A list of the key contract organisations that will be involved in the establishment and execution of the response is provided in this section. Based on situational information during the response, additional resources will likely be required and directed by the Control Agency in charge. Contact details are available in the EOCD (Section 2.1).

3.6.1. Australian Marine Oil Spill Centre (AMOSC) and AMOSPlan

In the event of an emergency, Emperor Energy has access to AMOSC's Level 2 and 3 oil spill response equipment and response personnel, through the AMOSC Master service subscription for spill response, as stated within the AMOSPlan.

The AMOSPlan outlines the Australian industry cooperative arrangements in a series of international agreements and relationships designed to support the petroleum industry during a Level 3 response.

Activation of the AMOSPlan provides access to AMOSC's equipment, technical advice and support, AMOSC personnel, and Core Group personnel (consisting of AMOSC trained personnel from other member companies). Additionally, AMOSC is a member of the Global Response Network, which provides them with access to additional personnel and equipment if required.

Activation of the AMOSPlan during an oil spill response is via AMOSC's 24/7 Duty Officer, who will provide the initial point of contact for oil spill responses that require AMOSC assistance.

3.6.2. Australian Energy Producers (AEP)

AEP (formerly APPEA) is the peak national body representing Australia's oil and gas exploration and production industry. It has about 60 full member companies, and about 140 associate member companies. In the event of a Level 2 or 3 hydrocarbon spill, Emperor Energy will engage with other AEP members via a signed Mutual Aid Memorandum of Understanding (MoU) and source assistance from nearby operators.

During significant incidents such as hydrocarbon spills, operators may access shared resources and expertise through informal mutual aid arrangements. These capabilities are mobilised to support Level 2 and Level 3 responses and are aligned with regulatory expectations under NOPSEMA and state-based emergency frameworks. Specialised capabilities likely to be available via the Mutual Aid MoU include:

- Offshore spill response assets: containment booms, skimmers, dispersant systems, and support vessels.
- Trained HAZMAT and marine response teams: personnel experienced in offshore and coastal pollution control.
- Environmental monitoring and impact assessment: mobile labs, water and sediment sampling, and ecological survey teams.
- Subsea intervention and well control: access to specialist contractors and equipment for containment and recovery.
- Decontamination and waste management: facilities and expertise for handling contaminated materials and site remediation.

- Emergency logistics and communications: mobile control centres, interoperable radio systems, and satellite communications.
- Technical advisory and IMT support: experienced personnel for incident control, planning, and regulatory liaison.

4. OPERATIONAL RESPONSE

4.1. Incident Action Plan (IAP)

The Incident Action Plan (IAP) process governs the ongoing response following the first strike response actions (Section 5) and initial notifications and activation (Sections 2 and 3). The IAP informs response personnel of the objectives for that operational period, appropriate response priorities, specific operational information (e.g., weather, constraints, limitations, etc), response specific resources that will be applied, and actions or tasks to be taken during the Operational Period (typically 12-24 hours) to achieve the objectives. An IAP will be developed and reviewed for each Operational Period (as defined by the IC). The Initial IAP facilitates the transition from the Initial Response phase to an ongoing Operational response period.

4.1.1. Reactive Phase

The initial phase of the response (first 48 hours) is considered the Reactive Phase of the IAP development. After the First Strike Response Actions, IMT activation, and initial notifications (as detailed within this OPEP) have been completed, information on the incident can be established via communications with the ORT. During the reactive phase, the strategic NEBA and preliminary response strategies (Section 1.1) should be reviewed and combined with current situation information to start the development of the IAP to guide the response strategies of the Pro-active Phase/Operational Period of the response.

4.1.2. Pro-active Phase

The Pro-active Phase of the IAP process is the phase that follows the initial response phase (first 48 hours). It is within this phase that the response strategies listed within the IAP (Section 5) are communicated by the IMT to the field response personnel to be actioned. The Operational Period is defined as the period scheduled for the execution of actions specified within the IAP often decided by the IC. A typical Operational Period during the pro-active phase is 12 to 24 hours, as determined by the IC. This timeframe provides sufficient opportunity for planning, briefing, task execution, and monitoring within the IAP cycle while maintaining flexibility to adjust strategies as conditions evolve. The CMT and IMT will determine the Operational Period timeframe based on and following the initial response phase.

It is important for the response strategies implemented to be reviewed and assessed on their performance success. These results are communicated back to the IMT from the field response team and are used to obtain situational awareness and guide the IAP development for the next operational period.

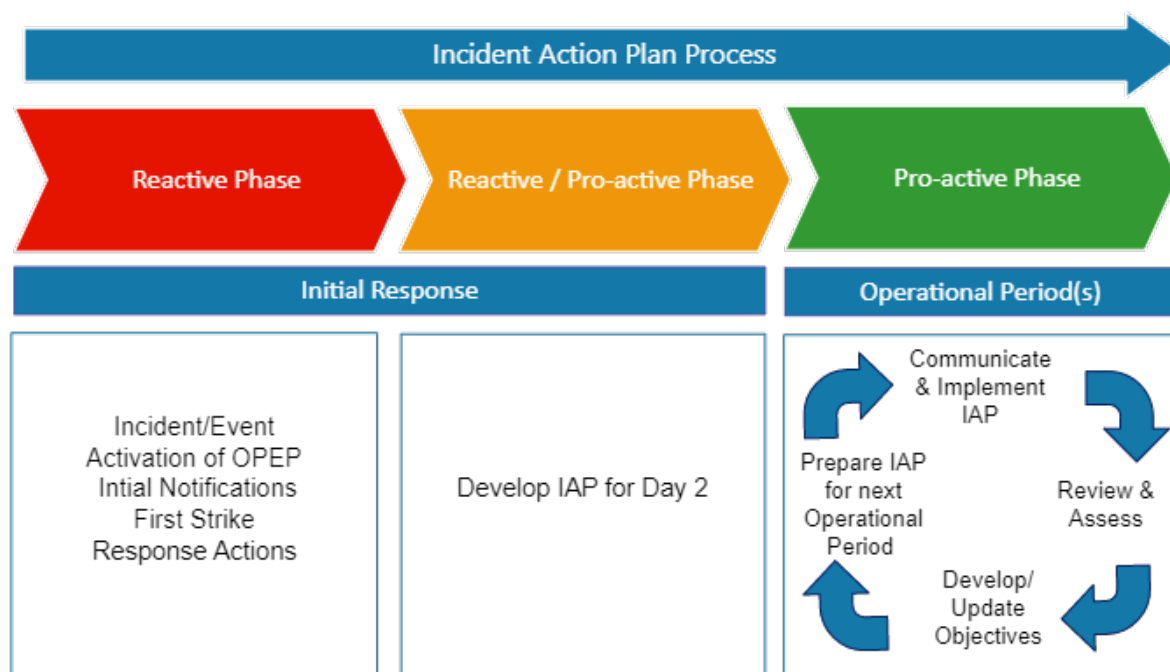


Figure 4-1: Incident Action Plan Process and Response Phases

4.2. Net Environmental Benefit Analysis (NEBA)

The IMT will implement a Net Environmental Benefit Analysis (NEBA) to inform the IMT during the IAP process. The NEBA process will inform the most effective response strategies, with the least detrimental environmental impacts to be identified, documented, and executed and will take into consideration SMV findings, cultural and environmental sensitivity mapping and advice from State agencies (where appropriate).

4.2.1. Strategic NEBA

A NEBA is a structured decision-making process used in both oil spill preparedness (pre-spill strategic planning) and spill response (operational). It aims to identify ecological, social and economic receptors at risk, evaluate and compare benefits of individual response strategies, and determine which combination of actions will reduce the impact of the hydrocarbon spill on the environment.

The focus of the NEBA is to compare the environmental consequences that would occur if no action were taken against the identified sensitivities versus if each available response strategy was implemented.

The NEBA process comprises of four stages:

Compile and evaluate data to identify an exposure scenario and potential response options, and to understand the potential impacts of that spill scenario.

Predict the outcomes for the given scenario, to determine which techniques are effective and feasible. For and operational response, this is based on the specific criteria of the actual spill event (location, volume, wind conditions, etc) while the planning NEBA uses the potential inputs from the credible worst case modelling scenarios.

Balance trade-offs by weighing a range of ecological benefits and drawbacks resulting from each feasible response option.

Select the best response options for the given scenario, based on which combination of tools and techniques will minimize impacts.

Multiple stakeholders are involved in the NEBA process, which relies on collaboration among governments, industry and communities to ensure that informed response decisions can be made that takes all perspectives into account.

Pre-spill Strategic NEBA provides an overarching assessment of the different response strategies that have been considered for the worst case LOWC scenario with consideration of the potential sensitivities at risk within the EMBA and the viability of those strategies. The additional layer of tactical information for each of the selected response strategies can be found under Section 5 of the OPEP.

The following information reflects good practice as outlined in the IPIECA-IOGP Guideline: Response strategy development using net environmental benefit analysis (NEBA). The pre-spill Strategic NEBAs have been developed and are presented in Table 4-1 (MDO) and Table 4-2 (Condensate), with the criteria used to determine the ranking of the sensitive receptors included in Table 4-3.

Table 4-1: Strategic NEBA – Marine Diesel Oil

Category	Sensitivity	Ranking (L/M/H)	Source Control	Surveillance, Modelling & Visualisation	Natural Dispersion	In-situ Burn	Dispersant	Contain & Recover	Protect & Deflect	Shoreline Clean-up	Oiled Wildlife Response	Waste Management	Operational & Scientific Monitoring
Ecological	Water Surface	Medium	P	P	P	NP	NP	NR	NP	NP	V	NP	P
	Upper Water Column	Medium	P	P	P	NP	NP	NR	NP	NP	V	NP	P
	Lower Water Column	Low	P	P	P	NP	NP	NR	NP	NP	NP	NP	P
	Benthos/Seabed	Low	P	P	P	NP	NP	NR	NP	NP	NP	NP	P
	Sandy Beaches	Low	P	P	P	NP	NP	NR	P	P	V	P	P
	Rocky Shores	Low	P	P	P	NP	NP	NR	NP	NP	V	NP	P
	Coastal Threatened Ecological Communities	Medium	P	P	P	NP	NP	NR	NP	NP	NP	NP	P
	Wetlands – RAMSAR and Nationally	High	P	P	P	NP	NP	NR	P	NR	V	NP	P
	Victorian Coastal Reserves/Onshore Parks	Low	P	P	P	NP	NP	NR	P	NR	V	NR	P
	Australian Marine Parks	High	P	P	P	NP	NP	NR	NP	NP	V	NP	P
	State Marine Parks (Point Hicks, Batemans, Jervis Bay, Beware Reef)	High	P	P	P	NP	NP	NR	NP	NP	V	NP	P
	Seamounts South and east of Tasmania	Low	P	P	P	NP	NP	NR	NP	NP	NP	NP	P
	Shelf rocky Reefs	Low	P	P	P	NP	NP	NR	NP	NP	NP	NP	P
	Big Horseshoe Canyon	Low	P	P	P	NP	NP	NR	NP	NP	NP	NP	P
	Upwelling East of Eden	Medium	P	P	P	NP	NP	NR	NP	NP	NP	NP	P
	Canyons of the Eastern Continental Shelf	Low	P	P	P	NP	NP	NR	NP	NP	NP	NP	P
	Tasman Front and Eddy Field	Low	P	P	P	NP	NP	NR	NP	NP	NP	NP	P
	Tasmania Seamount Chain	Low	P	P	P	NP	NP	NR	NP	NP	NP	NP	P
	Benthic Habitat	Low	P	P	P	NP	NP	NR	NP	NP	NP	NP	P
	Plankton	Low	P	P	P	NP	NP	NR	NP	NP	NP	NP	P
	Marine Invertebrates	Low	P	P	P	NP	NP	NR	NP	NP	NP	NP	P

Category	Sensitivity	Ranking (L/M/H)	Source Control	Surveillance, Modelling & Visualisation	Natural Dispersion	In-situ Burn	Dispersant	Contain & Recover	Protect & Deflect	Shoreline Clean-up	Oiled Wildlife Response	Waste Management	Operational & Scientific Monitoring
	Fish (including sharks)	High	P	P	P	NP	NP	NR	NP	NP	P	NP	P
	Marine Mammals (Cetaceans and Pinnipeds)	Medium	P	P	P	NP	NP	NR	NP	NP	P	NP	P
	Marine Reptiles (Turtles)	Medium	P	P	P	NP	NP	NR	NP	NP	P	NP	P
	Seabirds, Shorebirds, Migratory Birds and Aquatic Birds	Medium	P	P	P	NP	NP	NR	NP	NP	P	NP	P
	Saltmarshes	Medium	P	P	P	NP	NP	NR	P	V	V	NR	P
Social	Shipwrecks	Low	P	P	P	NP	NP	NR	NP	NP	NP	NP	P
	National Cultural Heritage Sites	Medium	P	P	P	NP	NP	NR	P	V	V	V	P
Economic	Commonwealth Managed Fisheries	Medium	P	P	P	NP	NP	NR	NP	NP	NP	NP	P
	State Managed Fisheries (Victoria, NSW)	Medium	P	P	P	NP	NP	NR	NP	NP	NP	NP	P
	Commercial Fisheries	Medium	P	P	P	NP	NP	NR	NP	NP	NP	NP	P
	Shipping Traffic	Medium	P	P	P	NP	NP	NR	NP	NP	NP	NP	P
	Defence Activities	Medium	P	P	P	NP	NP	NR	NP	NP	NP	NP	P
	Offshore Infrastructure (e.g. other titleholders)	Medium	P	P	P	NP	NP	NR	NP	NP	NP	NP	P
	Coastal Settlements (ports, marinas)	Medium-High	P	P	P	NP	NP	NR	P	NR	NP	NR	P
Key													
P	Proposed	The strategy will be deployed where safe to do so and where the NEBA indicates that it will result in net environmental benefit, and if the response or the spill is likely to impact State waters, the response will be approved by the State Jurisdictional Authority.											
V	Viable	The strategy will be considered as a viable option, but deployment may not be warranted because of the size of spill, conditions, and operational factors at the time of the spill.											
NR	Not Recommended	The strategy may be viable but is not recommended either due to safety considerations or limited impacts of the strategy itself.											
NP	Not Practical	The strategy cannot be implemented for the resource type, e.g., resource type is inaccessible and/or the resource type does not warrant this response.											

Table 4-2: Strategic NEBA – Condensate

Category	Sensitivity	Ranking (L/M/H)	Source Control	Surveillance, Modelling & Visualisation	Natural Dispersion	In-situ Burn	Dispersant	Contain & Recover	Protect & Deflect	Shoreline Clean-up	Oiled Wildlife Response	Waste Management	Operational & Scientific Monitoring
Ecological	Water Surface	Medium	P	P	P	NP	NP	NR	NP	NP	V	NP	P
	Upper Water Column	Medium	P	P	P	NP	NP	NR	NP	NP	V	NP	P
	Lower Water Column	Low	P	P	P	NP	NP	NR	NP	NP	NP	NP	P
	Benthos/Seabed	Low	P	P	P	NP	NP	NR	NP	NP	NP	NP	P
	Sandy Beaches	Low	P	P	P	NP	NP	NR	P	P	V	P	P
	Rocky Shores	Low	P	P	P	NP	NP	NR	NP	NP	V	NP	P
	Coastal Threatened Ecological Communities	Medium	P	P	P	NP	NP	NR	NP	NP	NP	NP	P
	Wetlands – RAMSAR and Nationally	High	P	P	P	NP	NP	NR	P	NR	V	NP	P
	Victorian Coastal Reserves/Onshore Parks	Low	P	P	P	NP	NP	NR	P	NR	V	NR	P
	Australian Marine Parks	High	P	P	P	NP	NP	NR	NP	NP	V	NP	P
	State Marine Parks (Point Hicks, Batemans, Jervis Bay, Beware Reef)	High	P	P	P	NP	NP	NR	NP	NP	V	NP	P
	Seamounts South and east of Tasmania	Low	P	P	P	NP	NP	NR	NP	NP	NP	NP	P
	Shelf rocky Reefs	Low	P	P	P	NP	NP	NR	NP	NP	NP	NP	P
	Big Horseshoe Canyon	Low	P	P	P	NP	NP	NR	NP	NP	NP	NP	P
	Upwelling East of Eden	Medium	P	P	P	NP	NP	NR	NP	NP	NP	NP	P
	Canyons of the Eastern Continental Shelf	Low	P	P	P	NP	NP	NR	NP	NP	NP	NP	P
	Tasman Front and Eddy Field	Low	P	P	P	NP	NP	NR	NP	NP	NP	NP	P
	Tasmania Seamount Chain	Low	P	P	P	NP	NP	NR	NP	NP	NP	NP	P
	Benthic Habitat	Low	P	P	P	NP	NP	NR	NP	NP	NP	NP	P
	Plankton	Low	P	P	P	NP	NP	NR	NP	NP	NP	NP	P
	Marine Invertebrates	Low	P	P	P	NP	NP	NR	NP	NP	NP	NP	P

Category	Sensitivity	Ranking (L/M/H)	Source Control	Surveillance, Modelling & Visualisation	Natural Dispersion	In-situ Burn	Dispersant	Contain & Recover	Protect & Deflect	Shoreline Clean-up	Oiled Wildlife Response	Waste Management	Operational & Scientific Monitoring
	Fish (including sharks)	High	P	P	P	NP	NP	NR	NP	NP	P	NP	P
	Marine Mammals (Cetaceans and Pinnipeds)	Medium	P	P	P	NP	NP	NR	NP	NP	P	NP	P
	Marine Reptiles (Turtles)	Medium	P	P	P	NP	NP	NR	NP	NP	P	NP	P
	Seabirds, Shorebirds, Migratory Birds and Aquatic Birds	Medium	P	P	P	NP	NP	NR	NP	NP	P	NP	P
	Saltmarshes	High	P	P	P	NP	NP	NR	P	V	V	NP	P
Social	Shipwrecks	Low	P	P	P	NP	NP	NR	NP	NP	NP	NP	P
	National Cultural Heritage Sites	Medium	P	P	P	NP	NP	NR	P	V	V	V	P
Economic	Commonwealth Managed Fisheries	Medium	P	P	P	NP	NP	NR	NP	NP	NP	NP	P
	State Managed Fisheries (Victoria, Tasmania, NSW)	Medium	P	P	P	NP	NP	NR	NP	NP	NP	NP	P
	Commercial Fisheries	Medium	P	P	P	NP	NP	NR	NP	NP	NP	NP	P
	Shipping Traffic	Medium	P	P	P	NP	NP	NR	NP	NP	NP	NP	P
	Defence Activities	Medium	P	P	P	NP	NP	NR	NP	NP	NP	NP	P
	Offshore Infrastructure (e.g. other titleholders)	Medium	P	P	P	NP	NP	NR	NP	NP	NP	NP	P
	Coastal Settlements (ports, marinas)	Medium-High	P	P	P	NP	NP	NR	P	NR	NP	NR	P
Key													
P	Proposed	The strategy will be deployed where safe to do so and where the NEBA indicates that it will result in net environmental benefit, and if the response or the spill is likely to impact State waters, the response will be approved by the State Jurisdictional Authority.											
V	Viable	The strategy will be considered as a viable option, but deployment may not be warranted because of the size of spill, conditions, and other factors at the time of the spill.											
NR	Not Recommended	The strategy may be viable but is not recommended either due to safety considerations or limited impacts of the strategy itself.											
NP	Not Practical	The strategy cannot be implemented for the resource type, e.g., resource type is inaccessible and/or the resource type does not warrant this response.											

Table 4-3: Criteria used to determine receptor sensitivity in the MDO and LOWC EMBA's

SENSITIVITY*	PROTECTED AREAS AND/OR BIA	SPECIES STATUS	COASTAL HABITAT SENSITIVITY	SOCIO-ECONOMIC
LOW	No State marine protected areas.	Species is EPBC Listed, and impact expected to be limited to individuals with no population level impact.	Low sensitivity habitat, such as sandy beaches and exposed rocky shores, with rapid recovery from oiling (approximately 1 year or less).	Public recreation beaches are not present or not widely used.
	No BIA or limited to only a few species of a particular faunal grouping.			No harbours or marinas. No known cultural heritage sites of significance.
MEDIUM	No State marine protected areas.	Species may be EPBC Listed threatened or vulnerable and impact expected to be limited to individuals with no population level impact.	Moderately sensitive habitat present, such as sheltered rocky rubble coasts, exposed tidal flats, gravel beaches, mixed sand and gravel beaches, with a medium recovery period from oiling (approximately 2–5 years).	Public recreation beaches present but not often used.
	Little to no Commonwealth special purpose zonation. Intersection with one or more BIAs, generally for distribution or foraging rather than breeding.			No harbours or marinas. Possible areas of cultural heritage significance.
HIGH	State marine protected area present.	Species are EPBC Listed Endangered or Critically Endangered	Sensitive habitat present, such as mangrove, salt marshes, and sheltered tidal flats, with long recovery periods from oiling (> 5 years).	Public recreation beaches present that are widely used.
	Commonwealth special purposes zones are the dominant component of the protected area. Significant intersection with one or more BIAs. Notable overlap with spatially restricted BIA (e.g. breeding, nesting, migration)	Species known to be present at time of activity, undertaking biologically important behaviours. Known to be susceptible to oiling and populations may take a long time to recover.		Active harbours or marinas. Known significant areas of cultural heritage.

*not to be confused with the risk rating under Environmental Risk and Impact Assessment Methodology

4.2.2. Operational NEBA

In the event of a spill, an Operational NEBA will be developed and applied to the current spill situation with supporting information collected as part of surveillance, modelling and visualisation (SMV) (Section 5.3) to achieve the following:

- Identify all ecological and socioeconomic sensitivities within the spill trajectory area specific to that time of the year.
- Prioritise and allocate resources to sensitivities with a higher protection and response priority.
- Determining the appropriate response strategies with support of real-time metocean conditions, oil spill tracking, operational considerations, and hydrocarbon fate modelling.

The Operational NEBA documents the rationale behind the recommendations provided to the IC and informs the IMT. These recommendations guide the development of the IAP and are reviewed and updated each operational period for the specific spill incident and will revalidate or confirm what response strategies are to be deployed for the specific scenario.

4.3. Response Protection Priorities

As outlined in Section 2, the PEARL Framework is to be applied to guide response in prioritising protection efforts during an oil spill response. Review Effectiveness

The effectiveness of the response is assessed every Operational Period, based on updated situational awareness (i.e., updates in predictive modelling and SMV data, current environmental conditions, hydrocarbon release status and weathering). Where a change to operational conditions has occurred, the effectiveness review process may be conducted using the Operational NEBA. The outcomes of the review of response effectiveness is to inform the IAP process.

5. SPILL RESPONSE STRATEGIES

This section outlines the spill response strategies applicable to all potential spill incidents associated with the Judith-2 activities, based on the 100 simulations for each scenario. In accordance with regulatory requirements, and under the overarching Environmental Performance Outcome (EPO12) in the Judith-2 EP (*Undertake oil spill response in a manner that will not result in additional impacts to marine environment, coastal habitat and oiled wildlife*), Control Measures (CM), Environmental Performance Standards (EPS) and Measurement Criteria (MC) have been developed for the implementation of the OPEP to ensure an effective and compliant response. Detailed information on these control measures, standards and criteria is provided in Appendix G of this document.

5.1. Evaluation of Response Strategies

An analysis of the feasibility and effectiveness of available response strategies has been completed in accordance with the NEBA process outlined in Section 4.3.

Based on the preliminary NEBA and outlined in Section 6.1.1 of the EP, each of the potential response strategies was then assessed with consideration of environmental receptors and sensitivities that may be impacted from implementation of the response strategy, including as assessment of whether the strategies have been considered not feasible and/or not effective. Table 5-1 summarises the preliminary screened response options that may be implemented for these Hydrocarbon release events.

Table 5-1: Preliminary screened response options for Judith-2 hydrocarbon release scenarios

RESPONSE STRATEGY	TACTIC	APPLICABILITY AND ASSIGNED STRATEGY SELECTION*	
		CONDENSATE	MDO
Source Control	Vessel source control activities (SOPEP)	N/A	Primary
	BOP Emergency Intervention	N/A	N/A
	Well Capping Stack ^	N/A	N/A
	Relief Well	Primary	N/A
	Subsea Dispersant Application	N/A	N/A
	Subsea First Response Toolkit	N/A	N/A
Surveillance, Modelling and Visualisation (SMV)	Oil Spill Trajectory Modelling (OSTM)	Primary	Primary
	Visual Surveillance – Aerial / Vessel	Primary	Primary
	Remote Imagery / Observation – Satellite/ Tracking Buoys	Primary	N/A
In-situ Burning	Ignition of hydrocarbons	Reject	Reject
Dispersant Application	Surface – Aerial / Vessel	Reject	Reject
Containment and Recovery	Offshore booms and skimmers deployed from vessels to contain and collect oil	Reject	Reject
Shoreline Protection and Deflection	Nearshore booms to protect sensitive receptors	Primary	Primary
Shoreline Clean-Up	Physical removal, flushing, surf washing and bioremediation activities	Primary	Secondary

RESPONSE STRATEGY	TACTIC	APPLICABILITY AND ASSIGNED STRATEGY SELECTION*	
		CONDENSATE	MDO
Oiled Wildlife Response (OWR)	Hazing, pre-emptive capture, oiled wildlife rescue, cleaning, rehabilitation, and release	Primary	Primary
Waste Management	Collection, storage, and disposal of hazardous waste	Primary	Primary
Operational and Scientific Monitoring (OSM)	Monitoring of environmental receptors to distinguish the level of impact from spill and/or response activities	Primary	Primary

* Primary = response strategy used and applied as soon as possible.

Secondary = Only applied as needed and when practical.

N/A = Option not applicable for specific hydrocarbon type or well configuration.

Reject = Option not used due to the lack of net environmental benefit.

^ Can only be deployed on subsea wellheads (i.e. does not apply if drilled by a jack up MODU).

5.2.Source Control

5.2.1. Overview

The initial and highest-priority response to a spill is to prevent or limit further loss of hydrocarbons to the marine environment. Source control will only be attempted where it can be undertaken safely and where the activity is not expected to cause greater environmental harm. In most circumstances, the net environmental benefit of achieving source control outweighs the risks associated with the intervention.

Table 5-2 outlines the EPO, initiation and termination criteria for source control (LOWC or MDO spill).

Table 5-2: Source Control Environmental Performance Outcome, Initiation and Termination Criteria

EPO	Prevent or limit the amount of hydrocarbon being released into the marine environment.
Initiation Criteria	Immediately after a LOWC or following a loss of MDO from a vessel-based incident.
Response Mobilisation Strategy Timeframes	• Vessel source control: Vessel source control actions are those in accordance with the vessel's SOPEP/SMPEP and dependent on the scenario type. ○ It may include transfer of the fuel from the damaged tank and repairing the damaged tank • Source Control (LOWC): SCERP activated within 2 hours of LOWC notification. • AEP MoU activated within 24 hours. • Identify relief well rig options as soon as AEP MoU is activated • Target well kill within 67 days
Termination Criteria	• Once the release of hydrocarbon has ceased, or • An alternative control measure has successfully been implemented to control the release

5.2.2. Tactics

In the event of a vessel fuel tank rupture of MDO the source control activities that may be undertaken during the Judith-2 Exploration Drilling Program include:

- **Vessel Source Control Activities (as outlined in the vessel SOPEP).**

In the event of a LOWC, the immediate response is dependent on the level of damage to the wellhead infrastructure and the rate of flow of hydrocarbons. The source control activities that may be undertaken in the event of a LOWC during the Judith-2 Exploration Drilling Program include:

- **Relief Well Drilling.**

Table 5-3 and Table 5-4 provide information regarding the activation of source control tactics, the relevant documentation for implementation, and outlines the applicability and capability to implement those tactics for the drilling program.

5.2.2.1. LOWC

Table 5-3: Source Control Tactic - LOWC

RELIEF WELL

Relevant Implementation / Activation Documentation	- Judith-2 SCERP. - Judith-2 Exploration Relief Well Plan. - Relief Well MODU Register.
Applicability	The drilling of a relief well is the primary source of well control, to be achieved by intersecting the well bore below the release location, circulating kill weight drilling fluid to stem the flow of hydrocarbons.
Considerations	The drilling of a relief well requires availability of a suitable MODU and a NOPSEMA accepted Safety Case. A Safety Case Revision will be prepared following identification of an appropriate MODU during the mobilisation process. Gaining a Safety Case Revision is expected to take 4 weeks (preparation, submission and approval) and is to be undertaken concurrently with other planning and relief well mobilisation tasks.
Activation Procedure	The CMT IMT Liaison Officer and IMT IC will initiate contact with operators of suitable MODUs, as identified in the Relief Well MODU Register. This process ensures timely access to appropriate MODUs for relief well drilling in the event of a well control incident. (as per Table 2-3).
Capability Provider	Emperor Energy is a member of the AEP MOU for Mutual Assistance to share drilling units during an emergency. Suitable relief well drilling units will be tracked by AGR on a register which is updated on a monthly basis. Register to include Safety Case status / information. Emperor Energy and AGR have in place a contract for a suitable Source Control Contractor (Wild Well Control).
Availability / Timeframe	Approximately 67 days from activation. The discharge modelling assumed in the hydrocarbon spill modelling report (RPS, 2022) assumed a conservative 77 days.

5.2.2.2. MDO Source Control

Table 5-4: Source Control Tactics – MDO Source Control

VESSEL SOURCE CONTROL

Relevant Implementation / Activation Documentation	Vessel SOPEP and the International Convention for the Prevention of Pollution from Ships (MARPOL)
Applicability	Involves several different tactics, the most applicable and safe procedures will be decided by the Vessel Master, some include: • Transfer of fuel from the ruptured tank into a temporary storage, an alternative fuel tank, or another vessel; • Attempt to repair the damaged tank; and • Pumping seawater water into ruptured tank.
Considerations	The safe and effective implementation of vessel source control activities is subject to sea state operating limits, availability of alternate storage options, trained personnel, and situation of the incident.
Activation Procedure	The vessel's SOPEP, as applicable under MARPOL, or the vessel-specific procedures for responding to a ruptured fuel tank will be followed by the vessel crew in communication with the IC (Vessel Master) and AMSA
Capability Provider	The Vessel Master will be responsible, in coordination with the relevant Control Agency, for following the SOPEP procedures.
Availability / Timeframe	As soon as practicable.

5.2.3. Response Resources

Response resourcing requirements are estimated based on the worst-case discharge scenarios (LOWC event).

Emperor Energy has in place the necessary contracts / agreements with specialist contractors to supply source control services and guidance.

Well source control activities are detailed in the SCERP. Table 5-5 provides a summary of the contracted resources available.

Table 5-5: Resource requirements for Source Control activities

RESOURCE	NEED/REQUIREMENT	AVAILABILITY / PROVIDER
SURVEY, INTERVENTION		
Engineering Support	Well and subsea engineering support services	Available throughout executed contracts with well and subsea engineering support specialists (AGR and WWC).
Vessels	Installation support vessel with capacity to deploy remotely operated vehicle (ROV)	Vessels of opportunity available in the region accessible via AGR Contract with Clarksons brokers.
Offshore Personnel	Personnel to install, run and monitor equipment	- Vessel crew provided through vessel operator. - Equipment technicians provided through response specialists. - Equipment operator provided through source control contractor or separate offshore engineering contractor (AGR, WWC).
Relief Well		
Engineering Support	Well and subsea engineering support services.	- Available throughout existing contracts with AGR and WWC. - For additional support, Emperor Energy will maintain contracts and agreements with organisations that can provide technical and risk services to support regulatory documentation workflows, submission, and review process (Aventus Consulting and Xodus).
Relief Well MODU	Technically suitable rig and support vessels	- AGR monthly rig register in place to confirm suitable rigs are available in Australian waters. - AEP MoU has been established between Australian operators (including Emperor Energy) to expediate access to suitable MODUs for relief well drilling.
Materials	Casing and Wellhead Drilling fluids	- Multiple materials suppliers to Australia, to enable mobilisation of relief well materials to site inside 50-days of an incident requiring response activation. - Conductors – NOV - Casing and liner – Boma Australia

RESOURCE	NEED/REQUIREMENT	AVAILABILITY / PROVIDER
		- o Wellhead - TFMC • Multiple providers of drilling fluids with plants either operational or can be set-up in the southeast Australian region (Haliburton or SLB).
Offshore Personnel	Vessel crew and response equipment technicians to install, run and monitor equipment.	• Vessel crew provided through vessel operator. Equipment technicians provided through response specialists. Equipment operator provided through source control contractor.
Regulatory Approvals	Vessel Safety Case and/or MODU Revision required for vessels undertaking well activities	• Preferential selection of MODUs and vessels with existing Australian safety cases (monitored via the relief well readiness form). • Safety case specialists available within Australia to enable expedition of Safety Case and/or Revision preparation (technical limit to prepare estimated at three weeks + one week for prioritised regulatory approval). Emperor Energy has agreements in place with AGR, Aventus Consulting and Xodus to prepare approvals documentation in the event of a LOWC.

5.2.4. Implementation

Table 5-6 provides a guide for the IMT when implementing source control.

Table 5-6: Source Control - Implementation Guidance

TACTIC	ACTION	COMPLETE
Relief Well Drilling	Identify suitable MODU (Suitable MODUs are identified 3 months prior to spud and updated monthly. Signatory to AEP MOU).	☐
	Activate third party contractors as required (refer to Table 2-5).	☐
	Safety Case Revision Schedule developed	☐
	Meet NOPSEMA to discuss imminent source control response and its urgency.	
	Safety Case Revision submitted to NOPSEMA.	☐
	Safety Case Revision Review process (Ongoing dialogue with NOPSEMA to optimise RFFWI response).	☐
	Spud equipment loaded to MODU. Specialised equipment mobilised.	☐
	Safety Case Revision Accepted.	☐
	MODU drills relief well (well killed).	☐
Vessel Source Control Activities	Vessel Master to ensure safety of crew.	☐
	Conduct first strike response action for a ruptured fuel tank as outlined within the vessel's SOPEP, as applicable under MARPOL.	☐
	Ensure AMSA has been notified.	
	Specific source control actions to be implemented to be decided by the vessel master in consultation with the relevant Control Agency. These may include: • Transfer of fuel from the ruptured tank into a temporary storage, an alternative fuel tank, or another vessel; • Attempt to repair the damaged tank; and • Pumping seawater into ruptured tank.	☐
	Ensure crew are briefed on response plan and termination criteria for the strategy.	☐

5.3. Surveillance, Modelling and Visualisation

5.3.1. Overview

SMV activities will be undertaken to assist in directing response resources, anticipating resources at risk of exposure and evaluating the effectiveness of response techniques. SMV activities are conducted throughout the incident response. Table 5-7 outlines the Environmental Performance Outcome, initiation and termination criteria for SMV.

Table 5-7: SMV Environmental Performance Outcome, Initiation and Termination Criteria

EPO	To gain situational awareness of the spill and assess the effectiveness of response strategies being deployed throughout the spill response, to inform CMT and IMT decision making to minimise impacts and facilitate recovery to an acceptable level.
Initiation Criteria	As soon as a spill incident has occurred. The specific SMV tactics employed will vary depending on the size, severity and location of the spill and will be dependent upon communication from the CMT IC.
Response Mobilisation Strategy Timeframes	- OSTM modelling request to RPS via AMOSC within 2 hours of notification; - Preliminary output within 4 hours. - Vessel surveillance undertaken by in-field vessels within 30 min - Aerial surveillance requested by IMT within 3 hours. - Initial survey within 24 hours (daylight permitting) with untrained observers and 48 hours with trained observers. - Tracking buoys deployed from drilling support vessel within 1 hour of spill.
Termination Criteria	- A spill is no longer visible to surveillance personnel (specifically a spill sheen is not identifiable – defined within the Bonn Agreement Oil Appearance Code); or - Relevant OSMP Termination Criteria have been reached in consultation with appropriate subject matter experts, or - An agreement is made with the Jurisdictional Authorities and stakeholders to terminate the response.

5.3.2. Tactics

This OPEP includes several SMV tactics that may be used to evaluate the parameters and potential trajectory of the spill depending on the spill scenario, including:

- Hydrocarbon fate and weathering modelling – uses computer modelling (e.g., WebGnome) to estimate the fate and weathering of the spill;
- Visual Observation:

- Aerial Surveillance.
- Vessel Surveillance.
- OSTM.
- Remote Sensing:
 - Satellite imagery (e.g., KSAT);
 - Tracking buoys.

5.3.2.1. Hydrocarbon modelling

Following the initial identification and characterisation of the hydrocarbon involved in the incident, computer modelling and computational techniques can be used to estimate the weathering of an oil spill.

Hydrocarbon fate and weathering:

WebGNOME is a web-based modelling tool developed by NOAA to simulate the fate and transport of hydrocarbons in marine environments. It provides trajectory modelling that predicts how oil moves across the water surface, factoring in environmental conditions such as wind, currents, and tides. This capability is essential for planning response strategies and protecting sensitive areas. WebGNOME also includes a comprehensive oil type library, allowing users to model the behaviour of various hydrocarbon products with realistic physical and chemical properties.

In addition to trajectory modelling, WebGNOME simulates key weathering processes that influence hydrocarbon fate, including evaporation, dispersion, emulsification, dissolution, sedimentation, and biodegradation. These processes are critical for understanding how oil changes over time and how it interacts with the marine environment. The tool supports scenario planning for spill response, training, and risk assessment, and integrates with other NOAA tools such as ADIOS for more detailed analysis. Its visual outputs and reporting features make it a valuable asset for decision-making and stakeholder communication. It is a publicly available oil spill trajectory and fate modelling tool with users being able to access it via a web interface to simulate oil movement and weathering processes, and it supports custom scenario creation using uploaded environmental data and oil characteristics from the ADIOS Oil Database.

Oil Spill Trajectory Modelling (OSTM):

OSTM utilises computer models and computational techniques (e.g. OILMAP, SIMAP) to estimate the speed and direction of movement, weathering and dispersal patterns. An advantage of OSTM is that the movement and weathering of the hydrocarbon can be forecasted for multiple days, also the tactic can be used day and night and has limited operational restrictions (i.e. as those associated with aerial surveillance).

For Level 2 or 3 spills, the IMT can access the forecasted movement and fate of the hydrocarbon slick by engaging RPS Group to undertake real-time modelling of an actual spill event via its arrangements with AMOSC (notification to 24/7 Duty Officer).

Preliminary modelling results are generally available within 4 hours of an initial request following a spill event.

Oil Spill Vectoring:

The movement and behaviour of a hydrocarbon slick may be manually estimated by undertaking vectoring calculations. The advantage of oil spill vectoring is that it can be initiated as soon as the preliminary information on the spill is known and can provide rudimentary information on the potential trajectory of the

spill to the response IMT. The data should be used to support real-time surveillance (aerial/vessel) and the comprehensive fore-cast modelling (OSTM).

Manual estimation of oil trajectory movement applies only to floating oil on the sea surface. The calculation is based on the spill slick moving at 100% of the current vector and 3% of the wind vector as the general rule. Therefore, current and wind information for the incident location is required and can be accessed via the Bureau of Meteorology observation station (winds) website or equivalent. Information of the calculation process can be found in NOAA's 'Trajectory Analysis Handbook' on the Office of Response and Restoration website.

5.3.2.2. Visual Observation – Aerial Surveillance

Aerial surveillance is utilised to gain situational awareness of the presence, size, location, nearby sensitive receptors, visual appearance, slick descriptions, metocean conditions, and the fate and weathering of the hydrocarbon to inform the IMT during the response. Aerial surveillance is typically activated for Level 2 or 3 spills and will be commissioned and directed by the IC. Requests for aircraft to conduct aerial observations should be made and directed by the IC.

If an aviation asset is available near the incident location, the aviation asset should be utilised to provide an initial surveillance flight to obtain details of the spill incident. If no aviation asset is available, the IMT should utilise arrangements made through contracts with other aviation providers. It is likely that the initial flight will not include a trained ariel observer on board and will be conducted with standard crew until a trained observer is available.

Trained aerial observers can provide coarse estimates of spill volume by utilising the Bonn Agreement Oil Appearance Code (BAOAC). Further information on aerial surveillance techniques can be found in AMSA's 'Identification of Oil on Water – Aerial Observation and Identification Guide' which can be found on the AMSA website ([AMSA Identification of Oil on Water](#)). Aerial observations should be documented in the format shown in the Aerial Observer log forms.

AMOSC can provide accredited marine pollution aerial observers as part of their internal capability and through AMOSC Core Group. Trained aerial observers are also available through AMSA (National Response Team (NRT) Members) and can be activated through the AMOSC service contract. The observers will undertake observations over the spill location and any predicted areas of shoreline contact capability.

5.3.2.3. Visual Observation – Vessel Surveillance

Direct observation can be provided from field support or vessels within the vicinity of the incident to provide real-time situational awareness of the slick to support / verify the modelling predictions and trajectories. Vessels of opportunity (as available) and contracted vessels can be contacted following a spill incident to provide vessel surveillance. Spill observers may include project team members, vessel crew and in the event of a Level 2 or 3 spill, AMOSC Core Group Resources and/or AMSA NRT members.

Depending on the scale of the spill, additional vessels may need to be chartered for various tasks such as monitoring, operational monitoring sampling collection, deployment of spill deflection and protection equipment and recovery of personnel and equipment.

Any vessel that is chartered must be commercially registered and suitable for its intended purpose. Once a suitable vessel has been identified, the Logistics Officer must organise an official contract for supply.

Due to the proximity of the vessel to the water's surface, surveillance from a vessel will be limited in its coverage compared to aerial surveillance.

Vapours from the fresh hydrocarbon and rough sea state may also pose a safety concern and operational restriction. HAZMAT detection capability for vessels will be provided as part of the marine service contracts.

5.3.2.4. Tracking Buoys

Each of the vessels involved in the activity will carry one oil spill tracking buoy for deployment in the event of a Level 2 or 3 spill. Instructions will be provided to the Vessel Master for the deployment of the tracking buoy. At the time of a spill, the monitoring buoys will be activated and deployed overboard at the leading edge of the slick (if able to be identified), if safe to do so to allow for real-time satellite tracking of the spill.

The tracking buoys' movement will be monitored by the IMT and used in assessing the trajectory of the slick.

Additional tracking buoys can be mobilised from AMOSC stockpiles (nearest being Geelong) via the AMOSC Duty Officer if the IMT determines that more are required.

5.3.3. Response Resources

Table 5-8 details the resources required to support an SMV response, including resource type and availability.

Table 5-8 Summary of SMV resources

RESOURCE	NEED/REQUIREMENT	AVAILABILITY / PROVIDER
Satellite Tracking Buoys	<u>During G&G Activity</u>	Satellite tracking buoys will be located offshore and ready for deployment for the duration of the campaign.
	1x Satellite Tracking Buoy on each of the G&G vessels)	Additional Satellite tracking buoys can be accessed from AMOSC from Geelong (4) and/or Fremantle (4) stockpiles and could be released every 24 hours if required.
	<u>During Drilling</u>	Access via AMOSC to activate KSAT Imagery within 60 mins. Timeframes for imagery will be subject to satellite availability when ordered (Appendix F).
	2x Satellite Tracking Buoy (1 on each drilling support vessel)	
Aerial/ Vessel Surveillance	1x pilot & aircraft 1x Trained Aerial Observer 1x Vessel 1x Aerial FOB Lead	Suitable aircraft (ADA Gold – fixed wing, contractors can have wheels up within 4 hours of notification. Fixed wing via ADA Gold Aviation (based out of Essendon Fields) Vessels of opportunity (via Clarkson's Brokerage through AGR) 5x Trained aerial observers from AMOSC 12x Trained aerial observers AMOSC Core Group 18x AMOSC Staff – preliminary FOB 50x AMOSC Core group for additional FOB support if needed or handover.
Manual Trajectory Calculation (Vectoring + WebGNOME)	1x IMT member Current and Wind data Fate & behaviours assessment using WebGNOME	2x IMT Planning Officers via AGR Bureau of Meteorology to find current and wind data. Tracking buoy data
OSTM	Access to RPS via contract to initiate callout on a 24/7 basis.	Access via AMOSC to activate RPS for OSTM within 60 mins. First report to be provided within 4 hrs.

5.3.4. Implementation

Table 5-9 provides a guide for the IMT when implementing SMV.

Table 5-9: Surveillance, Modelling and Visualisation - Implementation Guidance

TACTIC	ACTION	COMPLETE
Initial Information Gathering	Obtain initial oil spill data from:	☐
	- The OIM or vessel master (e.g., location, weather conditions, and oil type/volume/characteristics) - The in-field response teams (e.g., visual characteristics and movement of oil) - Additional data sources (i.e., weather data via of the Bureau of Meteorology).	
Hydrocarbon Fate And Weathering Assessment	Activate OSTM to estimate the movement, fate and weathering of potential spill:	☐
	- Through AMOSC via the Duty Officer number, or - Through AMSA through National Plan arrangements: - Electronic request via the NEMO system or - Notifying the AMSA RRC 24/7 Duty Officer and completing the AMSA OSTM request form.	
	Login to the RPS Group (or equivalent) data sharing website (e.g. SharePoint site established by RPS) and maintain connection.	☐
	Download modelling results.	
	Conduct the initial hydrocarbon fate and weathering assessment:	☐
	Use the computer software WebGnome modelling utilising the hydrocarbon characteristics detailed in this OPEPSection 1.4	
	Predict initial oil spill trajectory:	☐
	Use manual vectoring as outlined in NOAA's 'Trajectory Analysis Handbook' (available here).	
Tracking Buoy Monitoring	Organise vessels to deploy tracking buoys for a Level 2 or 3 incident.	☐
	Access oil spill tracking buoy live feed data if a buoy has been deployed from the vessel / MODU:	☐
	- Tracking Buoy service will be activated prior to activities and vessel and rig operators will be trained on their deployment. - Emperor Energy - can log into the tracking buoy account and monitor location via the contracted provider.	
Aerial Surveillance	Contact contracted aviation provider to provide details of incident and request mobilisation to spill site for initial surveillance.	☐

TACTIC	ACTION	COMPLETE
	Initial aerial observation can be conducted by the contracted helicopter asset within the vicinity if available.	
	Mobilise Aerial Observation aircraft (if Level 2/3 incident) to commence operations in daylight hours (through IMT Operation Section Chief).	☐
	Develop flight plan	☐
	Pre-flight briefing	☐
	Commence surveillance by using the Aerial Surveillance log (Appendix D)	☐
	Relay surveillance records to the IMT.	☐
Vessel Surveillance	Obtain vessel observations from any vessels on location / spill source vessel (if appropriate)	☐

5.4.Shoreline Protection and Deflection

5.4.1. Overview

Protection and deflection booming aims to prevent or reduce the volume of hydrocarbons reaching high-priority shoreline receptors. By intercepting and redirecting floating hydrocarbons, the strategy reduces the potential for smothering, contamination, and long-term habitat disturbance of shorelines. This control acts on consequence reduction by limiting the area and severity of shoreline impact. They are typically used to protect smaller, high-priority sections of shoreline.

Spill modelling indicates that if a worst-case spill were to occur as a result of the Judith-2 exploration drilling activity, shoreline contact would occur and therefore the protection and deflection of shorelines is likely to be required.

To identify key areas of shoreline sensitivity where protection and deflection is most likely needed to occur based on the worst case spill modelling, the East Gippsland Region Response Plan (EGRRP, Appendix E) has been developed in collaboration with AMOSC to provide a structured, risk-informed framework for shoreline response planning and execution (including protection and deflection). The EGRRP informs IMT decision-making by identifying region-specific ecological, socio-economic and cultural sensitivities, defining priority shoreline areas, and establishing response actions and minimum resourcing requirements based on shoreline type and scale. The plan is informed by stochastic OSTM and applies to approximately 220 km of the East Gippsland coastline, while also providing a scalable framework that may be applied to adjacent regions should modelling indicate broader impacts.

In Victoria, DTP is the designated Control Agency for marine pollution incidents that impact the shorelines of Victorian State waters, operating under the VicPlan. In NSW, TfNSW serves as the Combat Agency responsible for responding to oil and chemical spills within NSW State waters, including shoreline impacts, as outlined in the NSW State Waters Marine Oil and Chemical Spill Contingency Plan. In Tasmania, the EPA Tasmania is the Control Agency for spills affecting the Tasmanian coastline, coordinating response efforts under the TasPlan and the *Marine-related Incidents (MARPOL Implementation) Act 2020*.

Shoreline protection and deflection effectiveness will be dependent on the spill characteristics, hydrocarbon type, and the operating environment. Due to the very light nature of the condensate gas (and MDO) and the rapid natural dispersion predicted by the modelling, the opportunity to deploy effective protection and deflection tactics may be limited. However, protection and deflection may be beneficial where sensitive resources are predicted to be threatened at the time of the release. An Operational NEBA will also guide the prioritisation of shoreline protection and deflection strategies at locations where these actions can be safely and effectively deployed and are likely to deliver a net environmental benefit.

This strategy is part of the shoreline response which will be managed by the relevant Control Agency (refer to Section 3.3).

Where Emperor Energy is not the Control Agency, it will undertake first strike protection and deflection activities as required. Emperor Energy will provide relevant information on shoreline characteristics and oiling collected as part of SMV response activities carried out under its control (refer Section 5.3).

Where Emperor Energy is not the Control Agency, the ongoing response outcomes, methodology, deployment locations and resource allocation will be controlled by the relevant Control Agency and therefore may differ from that included below.

Table 5-10 outlines the EPO, initiation and termination criteria for shoreline protection and deflection.

Table 5-10: Shoreline Protection and Deflection – Environmental Performance Outcome, Initiation and Termination Criteria

EPO	To prevent and limit hydrocarbon contact with coastal protection priorities.
Initiation Criteria	- Level 2 or Level 3 spills where shorelines with identified or potential protection priorities will potentially be contacted; and - Approval has been obtained from the relevant Control Agency to initiate the response strategy.
Response Strategy Mobilisation Timeframes	- AMOSC boom resource mobilisation confirmed within 6 hours of activation. - Resources available at Geelong within 2 hours of activation. - Deployment to first priority site within 12 hours of activation.
Termination Criteria	- Operational NEBA has determined that this strategy is unlikely to result in an overall benefit to the affected shoreline/s; and - An agreement has been reached with Jurisdictional Authorities and stakeholders to terminate the response.

5.4.2. Tactics

This OPEP includes several protection and deflection tactics that may be used to protect sensitive receptors depending on the spill scenario, including:

- Nearshore booming, including:
 - Exclusion booming: boom acts to exclude the spill from areas requiring protection
 - Diversion booming: booms divert the spill to a specific location where it may be removed (e.g. sandy beach)
 - Deflection booming: booms deflect the spill away from an area requiring protection.
- Nearshore exclusion – use of sandbags or embankments to exclude oil from sensitive areas.
- Nearshore recovery:
 - Passive recovery: uses sorbent booms or pads to collect oil and remove it from the environment.

The effectiveness of these tactics will be dependent on local bathymetry, sea state, currents/tides, access, safe recovery techniques and wind conditions and the available resources.

5.4.3. Response Resources

The EGRRP (Appendix E) outlines the resources required for the implementation of response tactics for priority receptors. These resources will be validated based on real-time response information and scaled according to predicted shoreline impacts, shoreline loading, and the duration of response. Additional resources for non-priority shorelines may also be required to support an ongoing response in accordance with the State Control Agency developed Shoreline Response Sub-Plan.

Given the small volume of shoreline loading predicted in the OSTM as a result of the two credible worst-case spill scenarios, the equipment available from the AMOSC and AMSA stockpiles is adequate for a shoreline protection and deflection and shoreline clean-up response. The following resources are available to support response activities, subject to the scale and extent of the incident.

Local Resources: The resources available in the state of Victoria, NSW and Tasmania are considered a local resource and may be sourced from the port authorities, state agencies or access to locally available equipment from AMSA and AMOSC.

Regional/National Resources: Additional resources are available nationally through AMSA, AMOSC, and the AMOSPlan mutual aid arrangements with Industry. Mobilisation times will apply to ensure these resources are transported to the location of impact.

AMSA maintains significant stockpiles of response equipment in Adelaide, Brisbane, Dampier, Darwin, Devonport, Fremantle, Melbourne, Sydney, and Townsville. A live full inventory of AMSA equipment is available from the AMSA website: <https://amsa-forms.nogginoca.com/public/equipment.html>.

AMOSC equipment and resources closest to the operations are located in Geelong. Additional equipment in Perth, Exmouth and Broome can be mobilised to the Port of Geelong in approximately 48-72hrs subject to truck availability/loading, transportation routes, and timing.

AMOSC also provides access, through the AMOSPlan mutual aid arrangements, to additional equipment from AMOSC member organisations. AMOSPlan also provides Emperor Energy access to the AMOSC Core Group, comprising industry-trained marine spill response personnel available to quickly surge personnel into a response.

Additional personnel resources required to support a worst case shoreline response surge capacity may include the engagement of contracted labour and the provision of on-the-job training to support shoreline protection and clean-up activities.

Table 5-11 provides the requirements of shoreline protection and deflection resources that will be required to support a response. The requirement is based on supply of minimum of one (1) shoreline protection team at the key priority area identified from the SMV in an actual spill and based on the requirements outlined by AMOSC in the EGRRP (Appendix E). The availability for peak resources shows that even if more than one shoreline and deflection team were needed, there are adequate resources to do so. Given the maximum credible scenario of shoreline hydrocarbon loading is very small (28 m³), there is adequate ability to scale up for a bigger response even though this is unlikely.

Table 5-11: Shoreline protection and deflection minimum needs at a priority 1 location and total availability

RESOURCE TYPE	NEED	AVAILABILITY	DESCRIPTION
Trained Oil Spill Response Personnel	1x Site Supervisor (Shoreline operations manager) boom deployment personnel.	18x AMOSC Staff	Trained personnel are required to effectively setup and maintain boom deployments to protect or deflect hydrocarbons away from sensitive receptors.
	3x Activity Leads (Shoreline response team leads)	50X AMOSC Core Group	
	15x General responders	50x AMOSC Core Group	

	1x Preliminary Shoreline Assessment Team (Consists of 3 AMOSC staff) 1x SCAT Team (1x Wildlife specialist, 1x Oil spill response specialist, 1 x Local Guide (Local Govt/Traditional Owner/Ranger) 1x Shoreline FOB Lead	18x AMOSC Staff Mobilised if required via AMOSC to State control agency with escalation to wildlife groups. 18x AMOSC Staff – preliminary 50x AMOSC Core Group if required for handover.	
Booms And Ancillary Equipment	• 4x 25m Shore sealing boom • 10x 25m lengths Nearshore booms (Zoom boom or similar) • 250m Sorbent booms • 6x nearshore anchor kit • 2x Shoreline Anchor kit • 6x VHF Radio communications	Available from AMOSC equipment stockpile • Beach Guardian Shore seal boom, 45x Geelong, 30x Jandakot, 4x Broome, 20x Exmouth • Nearshore boom, zoom boom, 129x Geelong, 30x Jandakot 19x Exmouth, 6x Broome • Sorbent Booms 66X Geelong, 6x Broome • Anchor Kit, 29x Geelong, 28x Jandakot, 4x Broome, 10x Exmouth AMSA NatPlan equipment	Different types of booms will be required to effectively protect/deflect varied shoreline types and conditions.
Boom Deployment Vessel	• 1x work vessel • 1x workboat, shallow draft	1x AMOSC Vessel contractor, Vessels of opportunity (via AGR contract with Clarksons broker)	To effectively deploy protection and deflection booming systems, a shallow draft work vessel and competent coxswain are required to position

			and anchor booming sets in place.
Decontamination Package	- Typically consist of, but are not limited to, the following: - Marquees - Bunds - Scrubbing brushes - Waste receptacles - Detergents - Hand wash stations - Jet washers - Tape/cones	Available from AMOSC equipment stockpile	To minimise secondary contamination beyond the impacted shorelines in the operational area, decontamination stations are set up where hot zone is the clean-up area, warm zone is to allow responders, vehicles and equipment to be cleaned prior to entering an uncontaminated cold zone that is oil free.
Waste Management Support Services	Waste management contractor (Veolia)	Emperor Energy waste management contractor(s)	Once waste has been temporarily collected on the shoreline, whether it be liquid oily waste, solid oily waste, or contaminated PPE, Veolia will assist with the removal of waste from the operational area.
Temporary Waste Storage	- Fastank/Vikoma temporary storage. - Intermediate Bulk Containers (IBC). - Specialised bins (plastic lined) used for storage and transport of waste. - Vac-trucks/trailer	Available from AMOSC equipment stockpile	Suitable storage containers need to be available to collect waste until the waste management support can remove it from site.

5.4.4. Implementation

Table 5-12 provides guidance for shoreline protection and deflection implementation.

Table 5-12: Shoreline Protection and Deflection – Implementation Guidance

TACTIC / STAGE	IMPLEMENTATION / ACTIVATION CHECKLIST	COMPLETE
Activation	Ensure initial notifications to the relevant Control Agency have been made.	☐
Preparedness	Ensure that spill trajectory modelling, operational monitoring data, and environmental sensitivity mapping—including outputs from Scientific Monitoring and Validation (SMV)—are readily available and shared with the Control Agency during the notification process. This information must be used to confirm priority protection areas and support an operational NEBA.	☐
	Where the operational NEBA indicates a net environmental benefit, develop a Shoreline Protection Plan (IAP Sub-Plan) or field tasking assignment for each deployment area, detailing tactical objectives, resource requirements, and environmental constraints to guide site-specific implementation.	☐
	The Shoreline Protection Plan (IAP) for each deployment area is to include, but not limited to, the following: • Priority areas for protection • Locations to deploy equipment • Permits required (if applicable) • Appropriate tactics to be employed at each location • List of resources required • Logistical arrangements • Timeframes for deployment • Access (i.e., from land or sea) and access limitations • Equipment maintenance/inspection requirements • Waste management information • Demarcation zones for sensitive areas • Safety concerns.	☐
	If required identify vessels with relevant capabilities (e.g. shallow draft) for equipment deployment in consultation with Control Agency. Ensure vessels have shallow draft and/or a suitable tender (with adequate towing capacity and tie-points) if they are required to access shorelines.	☐
Mobilisation of Resources	Deploy shoreline protection response teams to each shoreline location selected and implement response. Note: If passive recovery and/or non-oiled debris removal has been selected as a tactic, ensure deployment activities prioritise their implementation prior to hydrocarbon contact.	☐
On-going Actions	Conduct daily re-evaluation of operational NEBA, integrating feedback from Shoreline response teams to assess varying net benefits and impacts of continuing to conduct shoreline protection and deflection activities.	☐

TACTIC / STAGE	IMPLEMENTATION / ACTIVATION CHECKLIST	COMPLETE
	Shoreline Response Team Lead to report to the Operations Section Chief on the effectiveness of the tactics employed.	☐
	Response teams to conduct daily inspections and maintenance of equipment.	☐
	Shoreline protection efforts will be maintained through the forward operation(s) facilities setup at mainland locations under direction of the Control Agency. Response crews will be rotated on a roster basis, with new personnel procured on an as needs basis from existing human resource suppliers. Contact details are available in the EOCD.	

5.5. Shoreline Clean-up

5.5.1. Overview

Spill modelling indicates that if a worst-case spill were to occur as a result of the Judith-2 exploration drilling activity, shoreline contact would occur and therefore the clean-up of shorelines may be required. Further assessment of where this shoreline contact may occur is provided in Section 1.5, which shows the key areas of the East Gippsland coastline. No other areas are predicted to have any actionable shoreline loading that can be responded to.

Exposure thresholds have been incorporated into shoreline modelling to determine the likelihood and significance of hydrocarbon accumulation at the shoreline. A shoreline accumulation threshold greater than 100 g/m² is considered actionable for a shoreline response and indicates that active clean-up may provide a greater environmental benefit than natural recovery. Shoreline areas predicted to receive hydrocarbon concentrations below this threshold are generally expected to be suitable for natural recovery unless site-specific sensitivities warrant further intervention (NOPSEMA, 2025). Consistent with at-sea thresholds, moderate floating oil concentrations (10 g/m² and above) are considered actionable for offshore response, while low concentrations (1 g/m²) trigger scientific monitoring only.

The actionable level for a shoreline clean-up is at the moderate threshold (>100 g/m²) (noting no shoreline loading at the high threshold is predicted in the modelling). Section 1.5 of this OPEP presents the shoreline risks from the MDO and gas condensate release scenarios, which shows the likelihood of shoreline contact is low and volumes predicted to accumulate ashore are low.

Table 5-13 outlines the EPO, initiation and termination criteria for shoreline clean-up.

For the following reasons, MDO and gas condensate accumulated on shorelines will be difficult to remove:

- The hydrocarbons are light in nature (see Section 1.4).
- The hydrocarbons will be rapidly dispersed naturally.
- Most of the shorelines predicted to be impacted are sandy beaches (see images in Section 1.5), which means that the hydrocarbons will rapidly percolate through the sediments and be washed from the sediments by wave and tidal flushing.
- Several sections of shoreline predicted to be contacted (e.g., Gabo Island) are entirely rocky and considering the light nature of the hydrocarbons, these shorelines are best left to natural clean-up processes (i.e., wave action against the rocks will naturally weather the hydrocarbons).
- Natural dispersion (primarily through evaporation) will continue after shoreline contact, which will reduce the volumes of hydrocarbon available to clean-up.

- Vehicle access to the shorelines of east Gippsland predicted to be impacted is largely absent, or at best, very limited.

Table 5-13: Shoreline Clean-up - Environmental Performance Outcomes, Initiation and Termination Criteria

EPO	To remove accumulated hydrocarbons from shorelines in order to limit impact on coastal protection priorities and facilitate habitat recovery.
Initiation Criteria	• Level 2 or Level 3 spills where shorelines with identified or potential protection priorities that will be, or have been, contacted • Hydrocarbons accumulate on the shoreline above actionable thresholds (> 100g/m²) • If the operational NEBA indicates that shoreline clean-up will benefit receptors • Approval has been obtained from the Control Agency to initiate response strategy.
Response Strategy Mobilisation Timeframes	• SCAT team deployment within 14 hours based on confirmed shoreline contact from output from initial Operational NEBA, SMV and IAP objectives. • Shoreline Response IAP developed when SMV predicts shoreline contact..
Termination Criteria	• Further Shoreline Clean-up will not result in a change to the scale or location of active response options; or • Agreement has been reached with the Jurisdictional Authority relevant to the spill to terminate the response; or • Continuation of shoreline clean-up is likely to increase overall environmental impact; or • Relevant scientific monitoring components termination criteria have been triggered.

Contaminated debris (marine wrack, including seaweed and driftwood) will be the main waste products from a shoreline response, with small volumes of contaminated sand as the secondary waste product.

The information obtained from SMV response strategies (refer Section 5.3), will be used by the IMT in the development of the operational NEBA to inform the most effective clean-up tactics (if any) to apply to individual sites.

Intrusive shoreline clean-up techniques have the potential to damage sensitive shorelines. The appropriateness of clean-up tactics will be assessed against natural attenuation for sensitive sites. Selection of shoreline clean-up methods and controls to prevent further damage from the clean-up activities are to be undertaken in consultation with the relevant Control Agency and selected based on an operational NEBA.

This response strategy is part of the shoreline response which will be managed by the relevant Control Agency (refer to Section 3.3). Where Emperor Energy is not the Control Agency, it will undertake first strike shoreline clean-up activities as required. Emperor Energy will provide relevant information on shoreline

character and oiling collected as part of SMV response activities carried out under its control (refer Section 5.3).

The numbers of personnel required based on the highest volume of shoreline loading were assessed and outlined by AMOSC, as outlined in the capacity requirements in Appendix E (EGRRP). Based on the AEP guidelines, one SCAT team is assumed to be able to cover 10 km of shoreline per day. Therefore with the largest area of shoreline affected at the actionable level being 7km, one SCAT team is sufficient to clean this.

To determine worst case resourcing requirements (i.e., the highest number of people required), a range of deterministic modelling results of the worst case scenarios is used for estimating the expected volumes of hydrocarbons ashore and timing at priority locations.

The most common deterministic modelling runs used to identify volume and timing are the following, which provide worst case in terms of volume of shoreline oil requiring clean-up, and locations impacted at any one time as well as earliest arrival and peak accumulation timing:

- Maximum length of shoreline oil accumulation $>100 \text{ g/m}^2$
- Minimum time to shoreline accumulation $>100 \text{ g/m}^2$.

Deterministic modelling can be utilised to further evaluate volume and locations impacted include the modelling run with the maximum length of shoreline oil accumulation $>100\text{g/m}^2$.

Although not all of the coastline sections within this area of shoreline contact will be amenable to manual clean-up, the total volume of oil ashore can be conservatively used to estimate worst case capability required.

Alternately the shoreline types amenable to clean-up can be considered in a more detailed assessment to justify a less conservative estimation of volume of oil requiring clean-up.

Given the relatively long duration of shoreline activities, the phasing of resources throughout a response is less likely to be appropriate than for SCAT and protection and deflection.

An IPIECA-IOGP (2015) estimate of the impact of shoreline clean-up efforts on oil spill budget is that one person can remove 1–2 m³ of oily water from a shoreline per day with an average of 1.5m³ considered a reasonable figure (unless there are operational considerations that may impact this).

IPIECA-IOGP (2015c) suggest that the optimum number of workers in a manual clean-up team is about 10, headed up by a team leader. This size of team can be replicated a number of times with team leaders reporting to a worksite supervisor or beachmaster.

To support this decision-making process, the EGRRP (Appendix E) has been developed in collaboration with AMOSC to provide a structured, risk-informed framework for shoreline response planning and execution. The EGRRP informs IMT decision-making by identifying region-specific ecological, socio-economic and cultural sensitivities, defining priority shoreline areas, and establishing response actions and minimum resourcing requirements based on shoreline type and scale. The EGRRP is informed by stochastic oil spill modelling and applies to approximately 220 km of the East Gippsland coastline, while also providing a scalable framework that may be applied to adjacent regions should modelling indicate broader impacts.

In Victoria, DTP is the designated Control Agency for marine pollution incidents that impact the shorelines of Victorian State waters, operating under the VicPlan. In NSW, TfNSW serves as the Combat Agency responsible for responding to oil and chemical spills within NSW State waters, including shoreline impacts, as outlined in the NSW State Waters Marine Oil and Chemical Spill Contingency Plan. In Tasmania, the EPA Tasmania is the Control Agency for spills affecting the Tasmanian coastline, coordinating response efforts under the TasPlan and the *Marine-related Incidents (MARPOL Implementation) Act 2020*. Where Emperor

Energy is not the Control Agency, the ongoing response outcomes, methodology, deployment locations and resource allocation will be controlled by the relevant Control Agency and therefore may differ from that included below.

5.5.2. Tactics

This OPEP includes several shoreline clean-up tactics that may be used to remove hydrocarbons from shorelines or intertidal habitats following impact from a spill (specific tactics depend on the spill scenario), including:

- Shoreline Clean-up Assessment Technique (SCAT) – uses assessment processes (refer to Judith-2 Exploration Well OSM-BIP and OMP: Shoreline Cleanup Assessment [APPEA, 2021]) to assess shoreline character, assess shoreline oiling and develop recommendations for response.
- Natural recovery – oiled shorelines are left untreated, and the hydrocarbon naturally degrades over time. Often implemented where the operational NEBA indicates that there will not be a net benefit to the environment
- Pre-impact non-oiled debris removal – removes debris from the shoreline before it is impacted to reduce overall waste volumes from shoreline clean-up
- Manual Removal – removal of contaminated wrack using hand tools (i.e. rakes, spades, personnel)
- Mechanical Removal – removal of contaminated wrack using machinery
- Washing, Flooding and Flushing – uses water, steam, or sand to flush hydrocarbons from impacted shoreline areas, and
- Sediment reworking and Surf washing – uses various methods to accelerate natural degradation of oil by manipulating the sediment.

The effectiveness of these tactics is dependent on the nature and scale of the spill, as well as the local bathymetry, sea state, currents/tides and wind conditions and the available resources.

5.5.3. Response Resources

Based on the modelled worst-case scenario, The EGRRP (Appendix E) outlines the personnel and equipment resources required for the implementation of response tactics for priority receptors. These resources will be validated based on real-time response information and scaled according to predicted shoreline impacts, shoreline loading, and the duration of response. Additional resources for non-priority shorelines may also be required to support an ongoing response in accordance with the State Control Agency developed Shoreline Response Sub-Plan.

The numbers of personnel have been calculated based on the worst-case volume of actionable level (28m³) and an assessment of number of personnel to clean up based on 1m³ per day. The EGRRP outlines the location priorities for a response, which would be assessed based on the specific SMV results for an actual spill. Given the very small shoreline loading volumes, it is likely only one clean up team would be required. In the event that multiple clean-up locations are identified, multiple teams could be mobilised.

Table 5-14 provides a the required resources for a one team shoreline clean-up response and shows the availability is in place that could be used to scale up to a larger response if required (noting this is unlikely).

Table 5-14 Summary of Shoreline Clean-up resources required and available

RESOURCE TYPE	NEEDS	AVAILABILITY	DESCRIPTION
Trained SCAT personnel	Preliminary SCAT team 3x personnel State DtP SCAT if required for escalation from preliminary results SCAT Team includes: • 1x Wildlife specialist • 1x Oil spill response specialist • 1 x Local Guide (Local Govt/Traditional Owner/Ranger)	18x AMOSC staff Vic DTP NSW Maritime (Transport NSW) TasEPA, AMSA National Response Team (NRT)	To effectively inform the IMT of an appropriate shoreline clean-up recommendation, a qualified SCAT is required (as outlined in Appendix B).
Shoreline Clean-up Team Leaders	1x trained shoreline response team leader.	50x AMOSC Core Group Vic DTP NSW Maritime (Transport NSW) TasEPA AMSA NRT	Shoreline response team leaders are required to coordinate shoreline clean-up operations. Each team of clean-up responders should be assigned a team leader.
Shoreline Clean-up Responders	10x trained shoreline clean-up responders (1 team).	50X AMOSC Core Group Vic DTP NSW Maritime (Transport NSW) TasEPA	A shoreline response team should consist of 10 responders to perform the clean-up of the assigned shoreline. This team will be responsible to set up booms, manually clean the shoreline and manage temporary waste storage.
Shoreline Clean-up Package	Beach clean-up packages consist of hand tools used to assist with the collection of waste from the shoreline and transport it to the temporary waste storage containers (e.g. shovels, rakes, brooms, wheelbarrows, trowels)	AMOSC equipment stockpile AMSA NatPlan equipment Bulk purchase from hardware store(s)	Pre-cleaning and post spill removal of waste from a shoreline is a labour-intensive manual clean-up process. It is chosen over mechanical removal to prevent driving hydrocarbons deeper into sediment or when heavy machinery cannot access the site.
Decontamination Package	1x decontamination kits consist of all equipment necessary to ensure that oil spill responders and	AMOSC equipment stockpile	To minimise secondary contamination beyond the impacted shorelines in the operational area, decontamination

RESOURCE TYPE	NEEDS	AVAILABILITY	DESCRIPTION
	equipment are suitably catered for when travelling from the hot zone (contaminated) to the cold zone (uncontaminated). These kits typically consist of, but are not limited to, the following: • Marquees • Bunds • Scrubbing brushes • Waste receptacles • Detergents • Hand wash stations • Jet washers	1x Geelong, 1x Exmouth, 1x Broome	stations are setup where hot zone is the clean-up area, warm zone is to allow responders, vehicles and equipment to be cleaned prior to entering an uncontaminated zone and the cold zone is hydrocarbon-free areas.
Mechanical Equipment	Mini Excavator Bobcat Bulldozers	Available through equipment hire contractors (e.g. Kennards, DirtWorks in Drouin, Jaco in Warragul, Orbest Plumbing, Gippsland Mini Hoe)	In areas where bulk oil has accumulated on the shoreline, it may be possible to assist in the removal with the use of mechanical equipment as opposed to manual labour alone. Mechanical equipment can help increase the amount of waste removed from the shoreline.
Flushing and ancillary equipment	Passive Weir Skimmer Nearshore booms Sorbent snares Ro Vac Rock Cleaning Brush System Shoreline Flushing kits Vac-trucks/trailers	AMOSC equipment stockpile • Passive -weir • 1x Geelong, • 1x Jandakot, • 1x Exmouth • Nearshore boom, zoom boom, • 129x Geelong, • 30x Jandakot • 19x Exmouth, • 6x Broome • Minimax 12-Brush, • 1x Geelong, • 2x Jandakot, • 1x Exmouth, • 1x Broome • Komara 12K DISC	Any deflected or remobilised oil is caught in nearshore booms and removed prior to it stranding on the shoreline. Shoreline flushing may also remobilise stranded hydrocarbons for collection in booms and sorbent snares.

RESOURCE TYPE	NEEDS	AVAILABILITY	DESCRIPTION
		• 2x Geelong, • 1x Jandakot, • 1x Exmouth • Lamor rock cleaning brush • 2x Jandakot • Canadyne multi head – brush/disc/drum • 1x Geelong • Versatech multi head- brush/disc/drum • 1x Geelong • Egmpol barge with brush skimmer • 1x Geelong • Decontamination kit • 1x Geelong, • 1x Jandakot • 1x Exmouth • Decontamination Vehicles/washdown trailer, • 1x Geelong, • 1x Jandakot	
Waste Management Support Services	Waste management contractor (Veolia)	Emperor Energy waste management contractor(s) (e.g. Veolia,)	Once waste has been temporarily collected on the shoreline, whether it be liquid oily waste, solid oily waste, or contaminated PPE, Veolia has been engaged to assist with the removal of waste from the operational area.
Temporary Waste Storage	Fastank/Vikoma temporary storage. Intermediate Bulk Containers (IBC). Specialised bins (plastic lined) used for storage and transport of waste.	AMOSC equipment stockpile AMOSC Shoreline waste stockpile; Waste Land Vikotank (13,000L) 1x Geelong,	Shoreline clean-up has the potential to generate large amounts of varying waste streams. Suitable storage containers need to be available to collect this waste until the waste management support can remove it from site.

RESOURCE TYPE	NEEDS	AVAILABILITY	DESCRIPTION
	Vac-trucks/trailer	1x Broome Waste Fastank (land) Temporary storage(3000L) 3x Geelong, 1x Jandakot, 2x Exmouth	

5.5.4. Implementation

Table 5-15 provides guidance for implementing shoreline clean-up.

Table 5-15: Shoreline Clean-up – Implementation Guidance

TACTIC / STAGE	IMPLEMENTATION / ACTIVATION CHECKLIST	COMPLETE
Activation	Initiate Shoreline Clean-up Assessment (if not already activated). Refer to Judith-2 Exploration Well OSM-BIP for further information.	☐
Preparedness	Using results from Shoreline Clean-up Assessment, conduct Operational NEBA to assess shoreline-clean up suitability and recommended tactics for each shoreline location. SCAT teams are responsible for preparing field maps and forms detailing the area surveyed and make specific clean-up recommendations. The condition of affected shorelines will be constantly changing. Results of shoreline surveys should be reported as quickly as possible to the IMT to help inform real-time decision-making. Engage a Heritage Adviser if spill response activities overlap with potential areas of cultural significance (contact details are available in the EOCD).	☐
	If operational NEBA supports shoreline clean-up, prepare a Shoreline Clean-up Plan for inclusion in the IAP. The IMT will develop a Shoreline Response IAP Sub-Plan that integrates the following components: • Shoreline Clean-up Unit (SCU) – Operational coordination of clean-up teams and tactics. • Protection & Deflection (P&D) – Tactical deployment to prevent further shoreline contamination. • Scientific Monitoring & Validation (SMV/OSMP) – Environmental impact assessment and recovery tracking. • OWR – Wildlife reconnaissance, rescue, and rehabilitation. The Shoreline Clean-up Plan within this sub-plan should include (but not be limited to):	☐

TACTIC / STAGE	IMPLEMENTATION / ACTIVATION CHECKLIST	COMPLETE
	- Defined clean-up objectives and end points (informed by Shoreline Clean-up Assessment) - Prioritisation of clean-up zones based on environmental sensitivity and oiling severity - Identification of staging areas and worksites, including HSE constraints and zoning - Assessment of local utility and community support capacity - Required permits and approvals - Onsite chain of command and resource lists (personnel, equipment, PPE) - Accommodation, transport, and security arrangements - Waste management logistics (storage, segregation, decontamination, disposal) - No-access and demarcation zones to protect sensitive areas (e.g. nesting sites, vegetation) For further guidance, refer to IPIECA-IOGP (2015) on shoreline clean-up planning and implementation here.	
Mobilisation of Resources	In consultation with the Control Agency (i.e. Victoria DTP), procure and mobilise resources to a designated port location for deployment, or directly to location via road transport.	☐
Response	Deploy shoreline clean-up response teams to each shoreline location to begin operations under direction of the Control Agency. Each clean-up team to be led by a Shoreline Response Team Lead, who could be an AMOSC Core Group Member or trained member of the AMSA administered NRT (accessed as per the service contract between Emperor Energy and AMOSC). Clean-up teams and equipment will be deployed and positioned as per those observations by the Shoreline Clean-up Assessment Teams in consultation with the Control Agency. Team members will verify the effectiveness of clean-up, modifying guidelines as needed if conditions change.	☐
On-going Actions	Shoreline Response Team Lead shall communicate daily reports to the IMT Operations Section Chief to inform of effectiveness of existing tactics and any proposed tactics and required resources.	☐
	The IMT Operations Section Chief shall work with the Planning Section Chief to incorporate recommendations into the Incident Action Plans for the following operational period, and ensure all required resources are released and activated through the Supply and Logistics Team Leaders.	☐
	Monitor progress of clean-up efforts and report to the Control Agency.	☐

5.6.Oiled Wildlife Response

5.6.1. Overview

A marine oil pollution incident has the potential to immediately impact wildlife. As such, rapid establishment of an OWR is critical for the prevention and mitigation of impact to un-oiled wildlife and responding to oiled animals through capture and rehabilitation. Table 5-16 outlines the EPO, initiation and termination criteria for OWR.

Observations of oiled wildlife would occur during aerial and vessel-based surveillance, as well as through shoreline assessment and monitoring activities. Based on these observations, and in consultation with relevant organisations, agencies, and SMEs, a decision would be made on whether to activate OWR.

The responsibility for implementing OWR is determined by the location and source of the spill and managed under the authority of the appropriate jurisdictional agency and established wildlife response arrangements.

Table 5-16: OWR - Environmental Performance Outcome, Initiation and Termination Criteria

EPO	To minimise and mitigate impacts to wildlife by limiting exposure to hydrocarbons, capturing and rehabilitating affected animals, and managing carcasses to reduce secondary environmental effects.
Initiation Criteria	- Any oiled wildlife is reported or predicted to be impacted by oil; and - The operational NEBA indicates that the OWR strategy will result in an environmental benefit.
Response Strategy Mobilisation Timeframes	- Relevant State wildlife authority notified as soon as reasonably practicable upon observation of oiled wildlife - OWR hazing/monitoring team mobilised within 24 hrs hours of confirmed wildlife at risk.
Termination Criteria	Wildlife Response Completion - All affected animals have been rescued, rehabilitated, released, or appropriately managed (e.g. euthanised or necropsied). Environmental Recovery Confirmed - Impacted habitats and shorelines are clean or recovering, with no further risk to wildlife. Facility and Resource Demobilisation - Wildlife centres and field operations are closed, and equipment is returned or decommissioned. Regulatory and Incident Objectives Met - All response objectives are achieved and approved by relevant authorities (e.g. AMSA, state agencies). Final Reporting and Stakeholder Communication - Outcomes are documented, shared with stakeholders, and lessons learned are captured for future preparedness.

5.6.1.1. Commonwealth Waters

Emperor Energy will activate AMOSC, and AMSA (via AMSOC service agreement) when required, in the event of a Level 2 or 3 spill. Part of this activation will be the standby of OWR teams. AMOSC and AMSA both have on call personnel and equipment who can be activated if necessary. The OSTM (undertaken by RPS via AMOSC contract) will determine the direction of the spill and the potential interaction of any wildlife. Fixed-wing aircraft would be mobilised and will be used to observe the movement of the spill. If it is safe to do so, vessels will be mobilised to the area.

DCCEEW will be contacted in the event of oiled or potentially oiled wildlife in Commonwealth waters, as well as the Director of National Parks if there is the potential for Australian Marine Parks to be impacted.

Refer to Section 2.6 (External Notification and Reporting) and the EOCD for contact details for Regulatory agencies.

5.6.1.2. Victorian State Waters

As discussed within Section 3.4.2.2, for a spill that has impacted, or is impeding impact, wildlife within Victorian State Waters, Emperor Energy will be responsible for notifying the DEECA State Agency Controller and providing support where possible when requested to support the oiled wildlife response.

DEECA is responsible for coordination of activities relating to wildlife during emergencies, including oil spill response, and the DJSIR is responsible for the coordination of activities relating to all animals other than wildlife. This is stated within the Victorian MENSAR Plan.

DEECA and DJSIR have arrangements with multiple organisations, such as Phillip Island Nature Park, Victoria, that will provide animal services resources to assist in an emergency response. The DEECA State Agency Controller should be notified in the event of wildlife impacted or impeding impact from a hydrocarbon event. Further details on the specifics of the oiled wildlife response (e.g., rescue, triage, treatment and rehabilitation) can be found within the Victorian Emergency Animal Welfare Plan (VEAWP).

Response plan activities include the search and rescue of affected wildlife, triage, rehabilitation and post-spill monitoring of populations and habitat. Impacted wildlife is generally treated at the Phillip Island Nature Park, Victoria, or by other wildlife rehabilitators with relevant experience.

5.6.1.3. Tasmanian State Waters

As discussed within Section 3.4.3.2, for a spill that has impacted, or is impeding impact of wildlife within Tasmanian State Waters, Emperor Energy will be responsible for notifying the NRE Tas) and providing support where possible when requested to support the oiled wildlife response.

The NRE Tas is responsible for administering the Tasmanian WildPlan.

The WildPlan outlines priorities and procedures for the rescue and rehabilitation of oiled wildlife within Tasmania State Waters.

5.6.1.4. New South Wales State Waters

As discussed within Section 3.4.4.3 and 3.4.4.4, for a spill that has impacted, or is impeding impact of wildlife within NSW State Waters, Emperor Energy will be responsible for notifying the NSW DPI Duty Officer and providing support where possible when requested to support the oiled wildlife response.

The NSW DPI is responsible for undertaking all notifications in NSW, coordinating agriculture and fisheries services, to support the oil/chemical spill lead agency as stated under the NSW State Emergency

Management Plan and Coastal Waters Marine Pollution Plan. NSW DPI has a MOU with multiple organisations that will provide animal services resources to assist in an emergency response under the coordination of NSW DPI.

The NSW EPA is the coordinating agency for the Environmental Services Functional Area (EnvSFA). The EnvSFA is responsible for providing advisor(s) to give expert scientific/technical advice and/or environmental personnel to support the response for protecting the environment. This may include assistance with environmental impacts, identification of hazardous material, provisions or sourcing environmental monitoring equipment, supporting emergency wildlife response, advice for clean-up and disposal of hazardous waste, suggestions of agencies to involve, and the provision of a Liaison Officer upon request.

The DPI is appointed the Agriculture and Animal Services Functional Area (AASFA) to be responsible for activating the Agriculture and Animal Services Functional Area Supporting Plan, risk assessment, notification of key stakeholders, and providing a Liaison Officer upon request.

5.6.2. Tactics

Typical OWR can be separated into different stages, these include:

- Reconnaissance – establishing situational awareness through aerial, marine, or ground surveys to identify species present, assess exposure risk, and determine the extent of potential impacts.
- Preventative Actions – measures to reduce wildlife exposure, including deterrence (e.g. hazing by auditory or visual scarers), displacement (e.g. fencing or barricading techniques), and pre-emptive capture and relocation of wildlife to a staging facility or adequate area not expected to be impacted.
- Wildlife Rescue – capture of oiled wildlife by training personnel and transport to appropriate field processing or primary care facilities.
- Triage – veterinary assessment to determine condition, prioritise treatment, and identify cases requiring euthanasia.
- Stabilisation – provision of initial medical care, hydration, and thermal support to prepare animals for cleaning.
- Cleaning – removal of oil contamination through washing, rinsing, and drying procedures using approved methods.
- Rehabilitation – ongoing care including feeding, monitoring, and conditioning to restore health, behaviour, and waterproofing.
- Release – return of rehabilitated wildlife to suitable, uncontaminated habitats following veterinary clearance.

Supporting activities such as carcass management, data collection, logistics, and health and safety management are integral to the effectiveness and coordination of the overall response.

5.6.3. Response Resources

Table 5-17 details the capability required to support an OWR response, including resources required and availability.

Table 5-17: Summary of OWR Resources

RESOURCE TYPE	NEED/ REQUIREMENT	AVAILABILITY	DESCRIPTION
OWR Personnel	1x AMOSC Oiled Wildlife Specialist	2x AMOSC staff Specialist	Available via trained AMOSC staff
	1x oiled Wildlife coordinator	2x AMOSC Staff Coordinator AMOSC Core group for escalation	Industry personnel (via Mutual Aid) and supporting National OWR organisations.
	State agency controlled – supported by AMOSC	AMOSC Industry Oiled Wildlife Response Team supports state Agency	
		Third party support agencies/organisations	
OWR Facility Establishment and Management	OWR Facilities establishment group (DWYERtech Response Ltd)	Via AMOSC SLS	Call-off contract via AMOSC with service available on-site within 24hrs of call-out.
OWR Containers	1x OWR Container	1x OWR Container (Geelong)	AMOSC OWR containers available onsite within 24hrs of call-out.
		1x OWR Container (Perth)	
OWR Kits	1x OWR fauna kit	Geelong:	AMOSC OWR kits available onsite within 24hrs of call-out.
		1x OW First Strike Response Kit	
		1x Wildlife Fauna Hazing & Exclusion Kit	
		Perth:	
		1x OW First Strike Response Kit	
		1x Wildlife Fauna Hazing & Exclusion Kit	
		Exmouth:	
		1x OWR Fauna Kit	
		Broome:	
		1x OWR Fauna Kit	

5.6.4. Implementation

Table 5-18 provides guidance for implementing OWR.

Table 5-18: OWR - Implementation Guidance

TACTIC	IMPLEMENTATION / ACTIVATION CHECKLIST	COMPLETE
OWR Activation	Notify AMOSC if the oil spill occurs in Commonwealth waters and wildlife is affected or has the potential to be impacted. Notify the relevant State Duty Officer or State Agency Controller for wildlife within the jurisdiction immediately.	☐
Wildlife Reconnaissance	Determine potential wildlife resources at risk based on initial SMV data (aerial and vessel surveillance). Determine the exact location of the animal(s) and provide accurate directions. Maintain observation until State agency can deploy staff to the site. If shoreline contact is predicted, mobilise personnel to conduct shoreline observations. Focus resources on potential species at risk, based on trajectory analysis (SMV tactics). Information gained from these surveys is key to mounting effective deterrence, search and capture, and response efforts and will be used to determine the scope and scale of wildlife response.	☐
Mobilisation of Resources	Mobilise personnel, equipment, and facilities in coordination with VIC/TAS/NSW State Agencies, relevant stakeholders and AMOSC (if required and requested by the state agency).	☐
Incident Action Plan Wildlife Sub-Plan	Develop the IAP in coordination with regulatory agencies (Vic/Tas/NSW State Agencies and AMOSC) based on known conditions and information gathered from wildlife reconnaissance and SMV. The OWR IAP is to be modified or amended throughout the incident as needed when conditions change. The plan is to include the appropriate response options: • Wildlife priorities for protection from contact with oil • Deterrence / hazing measures; • Recovery and treatment of oiled wildlife; • Resourcing of equipment and personnel.	☐
Oiled Wildlife Response	The following is a framework guide for the State Agency to conduct an OWR, based on the phased approach under the National Plan: Phase 1: Wildlife Reconnaissance • Deploy aerial, vessel, and shoreline teams to identify affected or at-risk wildlife. • Map sensitive habitats and species distribution. • Record observations and report to the IMT. Phase 2: Preventative Actions • Implement deterrents (e.g. hazing, exclusion zones) to keep wildlife away from oil. • Coordinate with Traditional Owners (Gunaikurnai) and (contacts in the EOCD).	☐

TACTIC	IMPLEMENTATION / ACTIVATION CHECKLIST	COMPLETE
	- Prepare capture and transport logistics in case of escalation. Phase 3: Wildlife Rescue - Mobilise trained responders to safely capture oiled or injured animals. - Use species-specific handling protocols. - Transport animals to designated wildlife centres. Phase 4: Field Processing - Conduct triage: stabilise, tag, and assess animals. - Determine suitability for rehabilitation or humane euthanasia. - Log data for impact assessment. Phase 5: Intake & Processing - Live animals: Admit to care facilities, begin cleaning and treatment. - Dead animals: Collect for necropsy and documentation. - Maintain biosecurity and welfare standards. Phase 6: Cleaning & Rehabilitation - Clean animals using approved methods (e.g. warm water, detergent). - Provide veterinary care and behavioural monitoring. - Assess readiness for release and identify safe release sites. If additional equipment is requested by the state agency, AMOSC should be notified for the OWR kit(s) and containers managed to be mobilised to site (only if required).	

5.7. Waste Management

5.7.1. Overview

Oil spills to the marine environment can generate significant amounts of oily waste that need to be collected and disposed of properly, in accordance with MARPOL 73/78 Annex V – Garbage, relevant Commonwealth and State/Territory laws and regulations.

Immediately upon knowledge of an oil spill, Emperor Energy will develop an Oil Spill Waste Management Plan (OSWMP) in consultation with AMOSC and the relevant control agency. The OSWMP will ensure the ongoing supply and backload of appropriate waste management equipment.

Based on the hydrocarbon characteristics of diesel and gas condensate, and the predicted outcomes of the modelling of credible worst-case spill scenarios, large volumes of waste are not expected to be generated. Waste generated from the spill is anticipated to be managed and contained within small transportable waste receptacles, suitable for the storage capacity on support vessels and port waste reception facilities. All waste stored or transferred will be fully documented, including details of exact volume and nature of the

waste, date and time, receiver of the waste and destination of the waste, in accordance with vessel Garbage Management Plans and the onshore licenced waste contractor's waste tracking process.

Emperor Energy has engaged a waste service provider (Veolia) to ensure sufficient temporary waste storage items are utilised, and that the waste is collected, stored, transported, and disposed of as per regulatory requirements. Table 5-19 outlines the EPO, initiation and termination criteria for waste management.

Table 5-19: Waste Management - Environmental Performance Outcome, Initiation and Termination Criteria

EPO	Ensure that waste treatment, transport and disposal regulations are being adhered to, and any secondary contamination is prevented, limited and mitigated.
Initiation Criteria	When any response activity that has the potential to generate waste has been initiated
Response Strategy Mobilisation timeframes	• Veolia notified within 24hrs hours of Level 2 or 3 activation. • First waste management assets available at priority sites within 14 hours of notification
Termination Criteria	• Once all waste has been stored, transported, and disposed of as per the regulatory requirements; and • An agreement has been reached with Jurisdictional Authorities and stakeholders to terminate the response

5.7.2. Implementation

Table 5-20 provides guidance for implementing waste management.

Table 5-20: Waste Management - Implementation Checklist

TACTIC	ACTION	COMPLETE
Waste Management	Contact waste service provider(Veolia). Contact details are available in the EOCD.	☐
	Utilise initial modelling, hydrocarbon type and chosen response strategies to communicate expected type and volume of liquid and solid waste to waste service provider.	☐
	Shoreline Response teams to identify and establish suitable locations for temporary waste storage items, ensuring measures are in place to minimise the risk of secondary contamination.	☐
	Waste segregation at site will be managed and co-ordinated as part of the competency of the Shoreline Response team.	☐
	Mobilise waste management resources and services to determined locations – in communication with the waste service provider.	☐
	Ensure waste handling, transport and disposal comply with local legislative requirements.	☐

5.8. Operational and Scientific Monitoring

5.8.1. Overview

OSM is a key component of the environmental management document framework for offshore petroleum activities. Operational monitoring is instrumental in providing situational awareness of a hydrocarbon spill, enabling the IMT to mount a timely and effective spill response and continually monitor the effectiveness of the response. Scientific monitoring is also the principal tool for determining the extent, severity and persistence of environmental impacts from a hydrocarbon spill and for informing resultant remediation activities.

Table 5-21 outlines the EPO, initiation and termination criteria for OSM.

Table 5-21: OSM Environmental Performance Outcome, Initiation and Termination Criteria

EPO	Evaluate the impact and recovery of environmental receptors from the of the incident and response activities to guide remediation efforts following a Level 2/3 spill.
Initiation Criteria	• IMT Planning Section confirms spill classification and triggers OSM BIP activation • Environment Unit Lead appoints an OSM Implementation Lead • OSM provider is notified within 12 hours (or sooner) via 24/7 call-out arrangements
Response Mobilisation Strategy Timeframes	• First strike monitoring deployed within 72 hours ◦ Monitoring activities include: ▪ Surveillance and trajectory validation ▪ Water and hydrocarbon sampling ▪ Shoreline reconnaissance and SCAT
Termination Criteria	• OSM continues until: ◦ environmental impacts are diminishing or no longer detectable • receptors demonstrate recovery to acceptable levels ◦ termination is endorsed by the Control Agency and relevant authorities • OMPs and SMPs will be terminated in accordance with the termination criteria provided in 9-1 and 9-2 of the Joint Industry OSM Framework (APPEA, 2021)

Emperor Energy has developed its Judith-2 Exploration Well OSM-BIP, which describes a program of monitoring oil pollution that will be adopted in the event of a hydrocarbon spill incident (Level 2 or 3) to marine waters. It is aligned to the [Joint Industry Operational and Scientific Monitoring Framework](#) (APPEA, 2021) and describes how this Framework applies to the Emperor Energy activities and spill risks in Australian waters.

The OSM-BIP is structured so that it can provide a flexible framework that can be adapted to individual spill incidents. A series of Operational Monitoring Plans (OMPs) and Scientific Monitoring Plans (SMPs) form part

of the Joint Industry Framework and provide detail on monitoring design, standard operating procedures, data management and reporting. Details on personnel, resources, logistics and mobilisation times are outlined in the OSM-BIP.

The OSM-BIP is structured as a flexible but implementation ready framework, supported by a contracted third party OSM provider with established personnel, equipment and systems capable of mobilisation within 12–72 hours and sustained deployment for the duration of a credible worst case discharge (77 days).

A series of OMPs and SMPs provide detail on monitoring design, standard operating procedures, data management and reporting. Details on personnel, resources, logistics and mobilisation times are outlined in the OSM BIP. Table 5-23 lists the plans that are relevant to Emperor Energy's activities.

5.8.2. Tactics

There are two types of monitoring that would occur following a Level 2 or 3 spill event:

- Operational Monitoring (OM) – is undertaken during the course of the spill and includes any physical, chemical and biological assessments which may guide operational decisions such as selecting the appropriate response and mitigation methods and / or to determine when to terminate a response activity. This monitoring is additional to the activities (visual surveillance, tracking buoys, oil spill trajectory modelling and satellite tracking) performed as part of the Surveillance, Modelling and Visualisation Strategy (Section 5.3). Operational monitoring is:
 - Rapidly deployed and adaptive
 - Designed for decision making rather than scientific certainty
 - Integrated directly into IMT processes and IAP development.
- Scientific Monitoring (SM) – which can extend well beyond the termination of response operations. Scientific monitoring has objectives relating to attributing cause-effect interactions of the spill or associated response with changes to the surrounding environment. The SMs will be conducted on a wider study area, extending beyond the spill footprint, will be more systematic and quantitative and aim to account for natural or sampling variation. These activities are tailored to the nature and scale of the spill, and the sensitivities of the impacted environment, which may include:
 - Water and sediment sampling for hydrocarbon levels
 - Biological surveys (e.g. fish, coral, seabirds)
 - Toxicity testing on key species
 - Remote sensing and aerial shoreline assessments
 - Ecological recovery tracking
 - Cultural site impact assessments
 - Data modelling and integration
 - Reporting and stakeholder engagement.

5.8.3. Implementation

OSM will be implemented through a phased, IMT-integrated approach, demonstrating that monitoring can be activated, deployed and sustained for the nature and scale of the Judith 2 activities. Table 5-22 provides guidance for implementing operational and scientific monitoring.

Table 5-22: Operational and Scientific Monitoring - Implementation Checklist

TACTIC / STAGE	IMPLEMENTATION / ACTIVATION CHECKLIST	COMPLETE
Preparedness	- Review Strategic NEBA, spill modelling and sensitive receptors to confirm monitoring priorities - Access baseline datasets (Integrated Marine Observing System, Atlas of Living Australia, Marine Biodiversity Values, etc.) and assess adequacy - Identify first-strike monitoring priorities where baseline data is insufficient - Confirm OSM roles (Environment Unit Lead, OSM Implementation Lead, coordinators) - Ensure permits, access approvals and jurisdictional requirements identified - Confirm availability of personnel, equipment and laboratories via OSM provider - Validate competencies and readiness (training, standby capability) - Confirm QA/QC and data management systems are ready - Review communication protocols and stakeholder interfaces	☐
Activation (0-24 hours)	- IMT Planning Section confirms spill classification and triggers OSM BIP activation - Environment Unit Lead appoints an OSM Implementation Lead - OSM provider is notified within 12 hours (or sooner) via 24/7 call-out arrangements - Mobilisation planning initiated (personnel, vessels, equipment, laboratories) - OSM objectives incorporated into initial IAP	☐
Initial Deployment (24-72 hours)	- OSM provider mobilises field teams and resources from established regional bases - First strike monitoring deployed within 72 hours - Monitoring activities include: - Surveillance and trajectory validation - Water and hydrocarbon sampling - Shoreline reconnaissance and SCAT - Baseline or early impact sampling is initiated where practicable	☐

TACTIC / STAGE	IMPLEMENTATION / ACTIVATION CHECKLIST	COMPLETE
Mobilisation of resources	- Mobilise OSM Implementation Lead, coordinators and field teams - Deploy first-strike monitoring teams within 72 hours - Arrange logistics (vessels, aircraft, accommodation, transport, sampling equipment) - Undertake safety planning (HAZIDs, field safety plans) - Finalise monitoring plans (OMPs and SMPs) including sampling design and SOPs	☐
Integration with Response Decision Making	OSM outputs are integrated into IMT processes through the IAP cycle: - Daily monitoring reports submitted to Planning Section - Environment Unit Lead: - informs Operational NEBA - evaluates response effectiveness - recommends adjustments to response strategies Monitoring outputs directly inform: - protection priorities - shoreline response - wildlife response - response optimisation	☐
Sustained Operations (Day 3 to 77 days)	- Monitoring effort scales with spill extent and duration - Multiple field teams operate on rotating rosters to maintain endurance - OMPs provide: - situational awareness - response effectiveness monitoring - SMPs are triggered where impact thresholds are met - Monitoring design is adaptive and refined based on: - spill trajectory - receptor exposure - IMT priorities	☐
Termination	- OSM continues until: - environmental impacts are diminishing or no longer detectable - receptors demonstrate recovery to acceptable levels - termination is endorsed by the Control Agency and relevant authorities	☐

Emperor Energy will review the initiation criteria for OMPs and SMPs (Provided in Table 9-1 (OMPs) and Table 9-2 (SMPs) of the Joint Industry Operational and Scientific Monitoring Framework (APPEA, 2021)) during the preparation of the initial IAPs, and subsequent IAPs. If any initiation criteria are met, then that relevant OMP and/or SMP will be activated via the Monitoring Service Provider. Table 5-23 outlines which of the joint industry OMP and SMP are relevant to the Judith-2 drilling spill scenarios.

Table 5-23: Joint industry OSM plans relevant to Emperor Energy's Judith-2 Exploration Well Activities

OPERATIONAL MONITORING	RELEVANT FOR JUDITH-2 EXPLORATION WELL ACTIVITIES	SCIENTIFIC MONITORING	RELEVANT FOR JUDITH-2 EXPLORATION WELL ACTIVITIES
Hydrocarbon Properties and Weathering Behaviour at Sea	✓	Water Quality Impact Assessment	✓
Water Quality Assessment	✓	Sediment Quality Impact Assessment	✓
Sediment Quality Assessment	✓	Intertidal and Coastal Habitat Assessment	✓
Surface chemical dispersant effectiveness and fate assessment	✗	Seabirds and Shorebirds Assessment	✓
Subsea chemical dispersant effectiveness and fate assessment	✗	Marine Mega-fauna Assessment	✓
Marine Fauna assessment	✓	Benthic Habitat Assessment	✓
Shoreline Clean-up Assessment	✓	Marine fish and elasmobranch assemblages assessment	✓
		Fisheries Impact Assessment	✓
		Heritage Features Assessment	✓
		Social Impact Assessment	✓

5.8.4. Response resources

The OSM capability available to Emperor Energy is delivered through its engaged OSM provider (Stantec) and is structured to support rapid mobilisation, scalable resourcing and multi-disciplinary field operations, contact details are available in the EOCD (Section 2.1). The provider maintains a standing pool of more than 150 trained personnel, enabling deployment within a 12 to 72 hour window depending on incident location, scale and logistical requirements. This capacity is supported by an established operational presence within

the Gippsland Basin, facilitating efficient access to offshore and coastal environments relevant to Emperor Energy activities.

Operational delivery is organised across core OSM functions, including surveillance and modelling to inform spill trajectory and risk forecasting, water and sediment sampling to characterise environmental exposure, and SCAT surveys to support shoreline impact assessment and response planning. Additional specialist functions include fauna monitoring, air quality assessment, and fisheries and ecotoxicology investigations, allowing environmental effects to be assessed across multiple receptors concurrently.

Personnel resourcing is scalable to meet incident demands, with indicative availability of up to approximately 93 personnel for water sampling programs, 76 for SCAT field teams, and 39 for surveillance and modelling tasks. This structure enables simultaneous execution of parallel workstreams where required, supporting both offshore and shoreline operations during extended or complex response scenarios.

Field activities are supported by established equipment and logistics arrangements. These include access to survey vessels for nearshore and offshore deployment, supplemented by offshore vessel support available through the OSM provider via standing arrangements with marine operators such as Bhagwan Marine and Avcon Marine. Sampling systems are deployed to meet relevant technical and quality requirements, with collected samples analysed through accredited laboratory facilities to ensure data integrity and timely reporting.

Environmental Remediation

Environmental remediation may be required following a significant spill. The decision to initiate remediation activities will follow this process:

- The OSM lead confirms, through operational or scientific monitoring, that hydrocarbon levels at one or more receptor sites exceed the remediation trigger thresholds defined in the Judith-2 Exploration Well OSM-BIP.
- The OSM lead prepares a Remediation Options Assessment for review by the IMT Planning Section Chief and the Emperor Energy Environment Manager.
- The IC, in consultation with the relevant Control Agency and jurisdictional environmental authority, approves a Remediation Action Plan. In State waters, the State Control Agency has primary authority to approve or direct remediation activities.
- Approved remediation activities are incorporated into the IAP for the relevant operational period. Resources and contractors for remediation will be identified through the Logistics Section and sourced via existing AMOSC and labour hire arrangements.

5.9. Response Hazards

Each hydrocarbon pollution response strategy adopted in this OPEP has been evaluated to identify the additional environmental, safety and cultural hazards that may be introduced by the implementation of that strategy, and the control measures in place to ensure that each strategy continues to deliver a Net Environmental Benefit over the duration of a response.

The response hazards identified in this section have been considered in the Strategic NEBAs (Table 4-1 and Table 4-2), in the design of each individual response strategy (Section 5.1 to Section 5.8), and in the corresponding EPS. They are also the subject of an Operational NEBA process at the time of an incident

(Section 4.2.2), where site-specific factors are evaluated by the IMT to confirm the selected strategy or to refine the response approach to a particular site or receptor.

As described in Section 4.3 (NEBA), surface dispersant application, subsea dispersant injection, capping stack deployment, and at-sea containment and recovery have been excluded from this OPEP. The response hazards specific to those excluded strategies are not introduced by this OPEP and are not addressed in Table 5-24.

Where response hazards or the controls applied to manage them change materially during an incident — for example, due to changed environmental conditions, unexpected receptor exposure, heritage discoveries, or operational constraints — the IMT will re-run the Operational NEBA and document any changes to the selected response strategy or technique in the IAP for the relevant operational period.

Table 5-24 summarises the principal response hazards arising from each strategy adopted by this OPEP and cross-references where relevant the existing control measures and EPS that manage those hazards.

Table 5-24: Response Hazard Assessment

SPILL RESPONSE STRATEGY	POTENTIAL HAZARDS	EXISTING CONTROLS
Source Control	Additional drilling operational footprint (MODU emissions, drilling discharges, lighting, noise); vessel and aviation activity in the extended operational area; fuel and chemical inventory on the second MODU and supporting vessels; worker safety in a high-consequence environment	• Safety Case Revision lodged with NOPSEMA within 4 weeks of LOWC (OPEP EPS01.07). • IMS risk assessment for designated source control response vessels (OPEP EPS01.5). • Source Control Personnel Mobilisation Plan (OPEP EPS01.7). • Relief well activity assessed within the Judith-2 EP scope and SCERP. • Vessel SOPEPs for all source control vessels
SMV	Aircraft disturbance to seabirds and marine mammals, particularly at low altitudes; vessel approach disturbance to MNES; aviation safety during low-level overflight; fuel spill risk from surveillance vessels and aircraft; potential loss of satellite tracking buoys as marine debris	• Aircraft chartered from CASA-accredited operators with marine fauna observation experience; minimum approach distances and altitudes maintained in accordance with EPBC Act Australian National Guidelines for Whale and Dolphin Watching and the EPBC Regulations Part 8 Division 8.1 (OPEP EPS09.1 – 09.3). • AMSA aviation safety arrangements. • Vessel SOPEPs. • Tracking buoys deployed per SMV implementation arrangements (OPEP EPS07.2).
Shoreline Protection and Deflection	Physical disturbance to intertidal habitats from boom deployment; anchor damage to substrate including seagrass; foot and vehicle traffic disturbance to roosting and breeding wildlife; spread of marine pests between regions via gear movement; light and noise impact from 24/7 operations; damage to sites of cultural or heritage significance	• EGRRP (Appendix E) defines priority areas, sensitivity ratings and site-specific technique guidance. • Shoreline Protection IAP developed and approved with the relevant State Control Agency prior to implementation (OPEP EPS11.4-11.6). • Heritage Adviser engaged (OPEP EPS15.6).

SPILL RESPONSE STRATEGY	POTENTIAL HAZARDS	EXISTING CONTROLS
Shoreline Clean-up	Physical disturbance to substrate, intertidal vegetation, sandy beach communities from mechanical techniques; trampling and human presence disturbance to fauna; habitat fragmentation from access tracks; damage to middens, rock art and registered cultural sites; discharge from onshore decontamination operations; spread of marine pests between treatment sites; worker exposure to hydrocarbons; waste generation requiring downstream management	- Wildlife exclusion zones coordinated with OWR, as outlined in the OWR IAP (OPEP EPS17.1). - Vessel SOPEPs. - SCAT-led technique selection in consultation with the relevant State Control Agency (OPEP EPS15.2). - Operational NEBA applied at each site to select the least-invasive effective technique (OPEP EPS14.1). - Heritage Adviser advises on access, technique and site clearance (OPEP EPS15.6). - Demarcation zones managed (OPEP EPS15.9). - Decontamination arrangements are in place (OPEP EPS25.1). - Wildlife exclusion managed under OWR, as outlined in the OWR IAP (OPEP EPS17.1). - Waste managed per Section 5.7.
Oiled Wildlife Response	Capture-related stress and mortality of target wildlife; disturbance to non-target wildlife at capture sites; hazing potentially driving wildlife into oiled areas if poorly executed; disease introduction or transmission at rehabilitation facilities; animal welfare risks during triage, treatment; worker safety (zoonoses, sharps, hydrocarbon exposure); carcass disposal biosecurity	- OWR led by AMOSC-trained personnel and veterinary professionals (OPEP EPS16.1). - State OWR plans (WildPlan Tas, VEAWP, AASFA) and State wildlife authority direction (OPEP EPS17.1) provide species-specific protocols. - Hazing only deployed where established protocols and pre-cleared receiving habitat exist. - Carcass disposal per State Control Agency direction. - Worker PPE and welfare protocols.

SPILL RESPONSE STRATEGY	POTENTIAL HAZARDS	EXISTING CONTROLS
Waste Management	Secondary spills during transport or temporary storage; cross-contamination between waste streams; off-site environmental impacts at disposal facilities; worker exposure during handling; capacity exceedance of available disposal facilities for large-volume responses; loss of waste during road transport	• Licensed waste contractors engaged (OPEP EPS23.1). • Waste tracking and chain-of-custody (OPEP EPS24.1-24.2). • Waste segregation at source (OPEP EPS23.1). • Decontamination at controlled sites (OPEP EPS25.1). • Compliance with State waste regulations and licensing requirements (OPEP EPS24.2).
OSM	Vessel and aircraft disturbance to wildlife during sampling and survey work; gear and sampling equipment loss; worker safety during vessel-based sampling and any in-water work; chemical exposure during sample collection and handling	• OSM provider personnel competency requirements (OPEP EPS26.1). • Vessel SOPEPs and aviation safety standards as for SMV. • Sample handling, chain of custody and laboratory accreditation per OSM-BIP. • SCAT and field methods aligned with State Control Agency direction.

5.10. Response Termination

The Control Agency is responsible for the overall decision to terminate response operations. Termination may be staged by strategy and is subject to the following strategy-specific criteria and decision process:

- Source control - Termination upon written confirmation from the Source Control Branch Lead and the well control contractor that hydrocarbon flow has permanently ceased and wellbore integrity has been restored. Well kill parameters must be consistent with those established in the Judith-2 SCERP.
- Surveillance and trajectory monitoring - Termination when a minimum of two consecutive aerial or vessel surveillance surveys spaced 24 hours apart confirm no surface oil detectable at or above the Bonn Agreement Oil Appearance Code Category 1 threshold, and OSTM confirms no further plume transport risk to priority receptors. Relevant OSMP Termination Criteria have been reached in consultation with appropriate subject matter experts, or
- Shoreline protection and deflection / shoreline clean-up - Termination when:
 - SCAT assessment confirms hydrocarbon residue is below the established clean-up endpoint at all active shoreline segments, or
 - An Operational NEBA confirms continued intervention would cause greater environmental harm than natural recovery.
 - Relevant scientific monitoring components termination criteria have been triggered
 - The relevant State Control Agency (Vic DTP / Tas EPA / Transport for NSW, as applicable) must provide written endorsement of shoreline response termination before demobilisation.
- Oiled wildlife response - Termination upon confirmation from the OWR Lead that all affected or potentially affected wildlife have been recovered, treated, and released or appropriately managed, and no new oiling of wildlife has been observed. Impacted habitats and shorelines are clean or recovering, with no further risk to wildlife. Wildlife centres and field operations are closed, and equipment is returned or decommissioned. Confirmation from the relevant State wildlife authority (DEECA / NRE Tas / NSW DPI) is required prior to formal demobilisation.
- OSM - Termination criteria are strategy-specific and defined in the OSM-BIP. Active monitoring continues until OSM-BIP trigger thresholds confirm diminishing environmental impact and receptors are recovering. Termination criteria must be agreed with relevant jurisdictional and environmental authorities.

All termination decisions must be documented in the Incident Log and the IAP for the relevant operational period. Final demobilisation requires the IC to confirm that all strategy-specific termination criteria have been met and that the relevant Control Agency and jurisdictional authorities have been notified.

6. SPILL RESPONSE RESOURCES

A response to a Level 2 or 3 spill requires specialist skills for an extended period for the response to be successfully executed. The initial response IMT personnel will be fulfilled by personnel from AGR and other contracted organisations along with provision of additional support to provide complete coverage of all IMT positions.

Emperor Energy has conducted an analysis of peak IMT resourcing requirements and competencies to manage the response in the event of an extended duration 'worst case discharge' scenario, and the capacity to meet those requirements (see Appendix B for the detailed assessment).

The availability of key spill response equipment and personnel from external and mobilisation timeframes referred to this OPEP will be confirmed, and related contractual arrangements and / or agreements will be in place prior to mobilisation activities commencing for the geophysical, geotechnical and drilling campaigns.

The peak IMT resourcing requirements will undergo testing during a hydrocarbon spill response desktop exercise, prior to the commencement of geophysical, geotechnical and drilling activities (see Section 7.3). Table 6-1 provides a summary of the likely support services and organisations that Emperor Energy will utilise to successfully establish a Level 2 or 3 response. This table is not an exhaustive list and will potentially be subject to change after the Judith-2 Drilling OPEP has been approved and contracts established.

The availability of key spill response plans, equipment, and personnel from external organisations (e.g. WWC, AMOSC, OSM provider) and mobilisation timeframes referred to this OPEP will be confirmed and related contractual arrangements and/or agreements will be in place prior to mobilisation activities commencing for the Judith-2 Exploration Drilling Program.

Current information about the location, quantity, and specifications of all response equipment is maintained by the equipment owners and will be confirmed as part of the testing arrangements. Spill response equipment is stored and maintained as per the manufacturers' specifications, and regular inspections are undertaken by the equipment owner. Verification of maintenance and inspection records will be undertaken by AGR no later than 1 month prior to drilling activities.

See Section 2.6: External Notification and Reporting for contact details.

Table 6-1: Spill Response Support Resources and Capability

SUPPORT RESOURCE	SUPPORT SERVICES CAPABILITY	ACTIVATION PROCEDURE
Internal Support Resources		
IMT	Personnel trained in emergency response and crisis management.	IMT Activation (as described in Section 3.2.2).
Judith-2 SCB	Established for a LOWC Level 2 and above response.	Judith-2 SCERP.

SUPPORT RESOURCE	SUPPORT SERVICES CAPABILITY	ACTIVATION PROCEDURE
External Support Agencies		
WWC (Well Control Specialist)	Third-party well control first responders: • Mobilising Well Control Specialists and Engineers to the well site and to the AGR Perth office; • Provide logistics support for well control equipment; • Planning and implementation of intervention procedures; • Planning and drilling of relief wells; and • Design and implementation of dynamic kills or other special kill procedures.	Judith-2 SCERP.
AMOSC	An associate member company with AMOSC can access oil spill response equipment, resources and personnel Australia wide. Equipment stockpiles are located in Geelong, Fremantle, Broome, and Exmouth. An overview of the equipment AMOSC has available is on the AMOSC website http://www.amosc.com.au/equipment.php An inventory with live readiness status and locations available via the members section of the AMOSC website https://amosc.com.au/member-login/. Access to this information is available via the AMOSC Duty Officer. AMOSC also provides access via the AMOSPlan to Mutual Aid equipment via its members. This equipment can be made available to AMOSC members in the event of a response under best-endeavour arrangements. AMOSPlan provides AMOSC members access to the AMOSC Core Group. A group of industry trained marine spill response personnel available to rapidly expand and surge well trained personnel into a spill response. Core Group provides additional personnel to support a complex and/or sustained response, including Incident Management Team and field (aviation, marine and shoreline) personnel. For OWR AMOSC provides access to:	First call as early as possible to 24-hour AMOSC Duty Manager emergency number.

SUPPORT RESOURCE	SUPPORT SERVICES CAPABILITY	ACTIVATION PROCEDURE
	• OWR Personnel via AMOSC staff, Core Group, and supporting National and Global OWR organisations. • OWR Facility Establishment / Management via DWYERtech Response Ltd. call-off contract. • OWR Containers (1x Geelong, 1x Fremantle). • OWR Fauna Hazing & Exclusion Kits (Geelong, Fremantle, Exmouth, Broome). <u>Other Services</u> • Oil spill response training and exercising; • Spill fates, weathering, hindcast and trajectory modelling (OSTM); • Aerial Surveillance; • Satellite Imagery (KSAT) • Access to Drones and Certified Pilots	
AMSA	Request for assistance can be made through activation of the NatPlan via AMOSC. <u>Equipment:</u> AMSA maintains nine strategic equipment stockpiles of marine pollution response equipment around the Australian coastline. These stockpiles are located in Sydney (NSW), Brisbane (QLD), Melbourne (VIC), Adelaide (SA), Darwin (NT), Fremantle (WA), Dampier (WA), Broome (WA), and Devonport (TAS), including the following resources: • Aerial surveillance support; • Dispersant stockpiles; • 2 × OWR kits (Fremantle, Karratha); • Oiled Wildlife Response Containers (Dampier, Darwin, Townsville, Karratha, Tasmania); and • OSTM tracking buoys. <u>Personnel and Services:</u> • Advisory services and response personnel; • Spill fates, weathering, and trajectory modelling; • Satellite/optical imagery.	A request should be made initially through the IMT via the AMSA Emergency Response Centre. This request must be followed by written confirmation within three hours of the verbal request.
Aircraft providers	Emperor Energy has contracts in place on an 'as needs' basis with aviation providers ADA Gold and Royal Aero Club Victoria.	First call as early as possible from IMT IC.

SUPPORT RESOURCE	SUPPORT SERVICES CAPABILITY	ACTIVATION PROCEDURE
Vessel providers	Emperor Energy is capable of contracting on an 'as needs' basis with a range of marine providers including within the region. Companies able to provide dive support vessels and divers. Emperor Energy (via AGR) will engage Clarksons vessel brokers to assist in contracting vessels during a response.	The OSC will communicate as soon as practicable to the IMT the requirement for additional vessel resources.
ROV providers	Emperor Energy will have a contract in place with one of the companies listed below to provide ROVs and ROV project Management Services: Subsea 7, Deeplink, Intervention Engineering, Neptune Marine Services, Tamboritha or Total Marine Technology.	Judith-2 SCERP.
Licensed Waste Management Contractor	A licensed Waste Management Contractor (Veolia) has been contracted prior to commencement of the drilling program, and the scope will include management of waste in the event of an oil spill, in accordance with MARPOL 73/78 Annex V – Garbage, relevant Commonwealth and State/Territory laws and regulations.	Judith-2 Exploration Drilling Project HSE Plan.
Mutual Aid Resources	Mutual aid may be used for a variety of response needs, including: • AEP MoU - Supports consistent environmental monitoring and collaboration across operators. Specifically, the transfer of MODUs for emergency situations • AMOSPlan - Industry mutual aid for equipment, personnel, and training • AMSA NatPlan - Leads government response coordination and may provide equipment and personnel via AMOSC. • Response Tools - Containment systems, modelling, and NEBA strategies	Judith-2 SCERP.
OSM	Emperor Energy has a contract in place with an Stantec for OSM support. Stantec will provide the monitoring services in the event of an emergency event. The OSM Services	Contact details available in Emperor Energy EOCD. Review initiation criteria of OMPs and SMPs (provided in Table 9-1

SUPPORT RESOURCE	SUPPORT SERVICES CAPABILITY	ACTIVATION PROCEDURE
	Provider will resource the required OSM Implementation Lead, Monitoring Personnel and equipment, as outlined in the Judith-2 OSM-BIP.	(OMPs) and Table 9-2 (SMPs) of the Joint Industry Operational and Scientific Monitoring Framework) during the preparation of the initial IAPs and subsequent IAPs; and if any criteria are met, activate relevant OMPs and SMPs via the process outlined in Section 12 of the Judith-2 Exploration Well OSM-BIP.
Victorian State Support Agencies		
Victorian DTP	Victoria DTP has the resource capability to provide support if required for spill incidents in Commonwealth waters and fulfil the Control Agency role for spills occurring within State waters. Victorian marine pollution response equipment (stockpiles) is strategically located around the state. Victoria's four commercial port operators have emergency marine pollution response arrangements in place for their designated waters.	For all incidents within State Waters and Commonwealth Waters adjacent to Victorian State waters via activation of the State Controller Maritime Emergencies (SCME).
Victorian DEECA	DEECA is the lead agency for responding to wildlife impacted by marine pollution events. DEECA, along with support agencies (such as Parks Victoria and Philip Island Nature Park) will assess the welfare needs of wildlife, and lead wildlife response activities.	Upon the identification of any wildlife that has been impacted or may be impacted during the incident.
Tasmanian State Support Agencies		
Tas EPA	TasEPA is the advisory agency and management authority for prevention and mitigation, preparedness, and response for marine pollution incidents within Tasmania under the management of the TEM.	For all incidents within State Waters and Commonwealth Waters adjacent to Tasmanian State waters via activation of the State Duty Officer.
NRE Tas	NRE Tas is responsible for identification of the priorities and procedures for the rescue and rehabilitation of oiled wildlife within Tasmania.	Upon the identification of any wildlife that has been impacted or may be impacted during the incident.
New South Wales State Support Agencies		

SUPPORT RESOURCE	SUPPORT SERVICES CAPABILITY	ACTIVATION PROCEDURE
Transport for NSW	Transport for NSW, through its relevant divisions such as NSW Maritime, determines which agency will assume the Control Agency role in accordance with the NSW State Emergency Management Plan and applicable legislation. The Port Authority of NSW may support response operations but does not determine the Control Agency.	For all incidents within State Waters and Commonwealth Waters adjacent to NSW State waters via activation of the Marine Pollution Controller.
NSW Department of Primary Industries	The NSW DPI is responsible for coordinating agriculture and fisheries services. NSW DPI has a MOU with multiple organisations that will provide animal services resources to assist in an emergency response under the coordination of NSW DPI.	Upon the identification of any wildlife that has been impacted or may be impacted during the incident.
NSW EPA	The NSW EPA is the coordinating agency for the Environmental Services Functional Area (EnvSFA). The EnvSFA is responsible for providing advisor(s) to give expert scientific/technical advice and/or environmental personnel to support the response for protecting the environment. The EPA assists with environmental impacts, identification of hazardous material, provisions or sourcing environmental monitoring equipment, supporting emergency wildlife response, advice for clean-up and disposal of hazardous waste, and suggestions of agencies to involve.	For all incidents within State Waters and Commonwealth Waters adjacent to NSW State waters. Transport for NSW will be responsible for the activation.

7. PLAN REVIEW AND TESTING ARRANGEMENTS

7.1. Plan Review

This OPEP will be reviewed and, where necessary, updated in accordance with the following schedule and triggers:

- Pre-reservoir entry review - A targeted review of all source control assumptions, well-kill timeframes, and MODU availability register will be completed 30 days prior to entering the target reservoir.
- Monthly from the point of EP acceptance for the duration of the activity - A full review confirming contract currency, EOCD accuracy and relief rig register status. Review outcomes documented in the Project Action Tracker.
- Post-exercise - All learnings and recommendations from exercises or drills will be incorporated into the relevant documentation (e.g. this OPEP, EOCD, Crisis Management Plan, ERPs) within 30 days of receipt of the exercise report.
- Event-triggered - Following any reportable oil pollution incident, material change to the drilling program or well design, material change to contractor arrangements, or written regulatory feedback from NOPSEMA.
- Post-activity - OPEP archived within 60 days of activity completion. Relevant learnings incorporated into the End-of-Activity EP Performance Report.

Any change to response strategy, risk scenario, or key planning assumptions will be assessed against NOPSEMA's EP Assessment Policy (PL1347, 10 January 2024) to determine whether a revised EP submission is required. Any revisions not requiring a resubmission to NOPSEMA will be undertaken using the Emperor Energy Management of Change (MoC) process as detailed in Section 8.10 of the EP.

7.2. OPEP Training and Competency

Emperor Energy is committed to ensuring staff with functional roles within the IMT and field operations teams are properly trained and skilled to complete the tasks required of them.

All personnel who have been assigned Emperor Energy CMT roles are required to be familiar with their roles and associated responsibilities as defined within the EP and OPEP. Independent training, certification and readiness assessment is provided for the CMT.

All personnel with specific roles or responsibilities within the Emperor Energy CMT Plan shall receive appropriate levels of training and ongoing development commensurate with the responsibility and associated accountabilities required of each position. See Table 3-2 for the composition of the Emperor Energy CMT.

Records are maintained for this training and included in the Competency and Training Register for the Senior Management. A summary of related training and competency requirements for the CMT and IMT personnel is provided in Table 7-1 for the MDO spill scenario and in Table 7-2 for the LOWC scenario, while Table 7-3 outlines the training requirements for the SCB.

Emperor Energy has identified the minimum number of personnel per position to appropriately implement an initial response to an oil spill/pollution event. The minimum number of trained personnel per position for an initial response account for shift rotation (i.e. night and day shift rotations). The number should be used

as guidance, as the CMT is expected to expand and collapse depending on the spill scenario and CMT requirements.

Indication of whether the initial response role will be filled by an Emperor Energy trained responder or an external trained responders (e.g. AMOSC or AGR) is also outlined in Table 7-1 for G&G Activities and Table 7-2 for Drilling activities.

AMOSC Oil Spill Response Specialist will require training as per the AMOSC training and competency training.

AMOSC Core Group Oil Spill Responders are industry personnel that require AMOSC Core Group Workshop (refresher training undertaken every two years), AMOSC IMO L1 and IMO L2 training.

AMSA's NRT is trained and managed in accordance with the National Response Team Policy, approved by the National Plan Strategic Coordination Committee (AMSA, 2021).

Table 7-1: Training Requirements for CMT and IMT Capability - MDO spill scenario

		Training Requirement							
		FAMILIARISATION			DEMONSTRATE		TEST		
		Judith-2 EP & OPEP Induction	Emperor Energy Crisis Management Plan Induction	Emperor Energy CMT - OSR Equipment Introduction	Oil Spill Response Management (IMO 2 Equivalent)	Oil Spill Response Command & Control (IMO 3 Equivalent)	OSR Workshop - Combined CMT & IMT	OSR Exercise - Combined CMT & IMT	
CMT & IMT ROLES		Delivery Agency	Emperor Energy	Emperor Energy	AMOSOC	AMOSOC	AMOSOC	AMOSOC	AMSOC
		Delivery	Remote	Remote	In Person	In Person	In Person	Remote	In Person & Remote
Role Title	Organisation	Duration	1 Hr	2 Hrs	1.0 Day	4.0 Days	4.0 Days	0.5 Day	1.0 Day
CRISIS MANAGEMENT TEAM									
CMT Leader	Emperor Energy		Yes	Yes	Yes	No	Yes	Yes	Yes
Liaison Officer – External IMT	Emperor Energy		Yes	Yes	Yes	No	Yes	Yes	Yes
Health, Safety & Environment Advisor	Emperor Energy		Yes	Yes	Yes	No	No	Yes	Yes
Stakeholder & Media Manager	Emperor Energy		Yes	Yes	No	No	No	No	Yes
Administration Officer	Emperor Energy		Yes	Yes	No	No	No	No	Yes
Legal Advisor	Emperor Energy		No	No	No	No	No	No	No
INCIDENT MANAGEMENT TEAM									
Incident Controller	AGR		Yes	N/A	N/A	No	Yes	Yes	Yes
Safety Officer	AGR		Yes	N/A	N/A	No	No	Yes	Yes
External Agency Liaison Officer	AGR		Yes	N/A	N/A	No	No	Yes	Yes
PLANNING SECTION									
Planning Officer	AGR		Yes	N/A	N/A	Yes	No	Yes	Yes
Environmental Unit	AMOSOC		Yes	N/A	N/A	No	No	No	Yes
Situation Unit	AGR		Yes	N/A	N/A	No	No	No	No
Intelligence Unit	AGR		Yes	N/A	N/A	No	No	No	No
Trajectory Forecasting	RPS via AMSOC		Yes	N/A	N/A	No	No	No	No
LOGISTICS SECTION									
Logistics Officer	AGR		Yes	N/A	N/A	Yes	No	Yes	Yes

			Training Requirement							
				FAMILIARISATION		DEMONSTRATE		TEST		
			Judith-2 EP & OPEP Induction	Emperor Energy Crisis Management Plan Induction	Emperor Energy CMT - OSR Equipment Introduction	Oil Spill Response Management (IMO 2 Equivalent)	Oil Spill Response Command & Control (IMO 3 Equivalent)	OSR Workshop - Combined CMT & IMT	OSR Exercise - Combined CMT & IMT	
CMT & IMT ROLES			Delivery Agency	Emperor Energy	Emperor Energy	AMOSOC	AMOSOC	AMOSOC	AMOSOC	AMSOC
			Delivery	Remote	Remote	In Person	In Person	In Person	Remote	In Person & Remote
Role Title	Organisation	Duration	1 Hr	2 Hrs	1.0 Day	4.0 Days	4.0 Days	0.5 Day	1.0 Day	
FINANCE SECTION										
Finance Officer	AGR		Yes	N/A	N/A	No	No	Yes	Yes	
Administration Officer	AGR		Yes	N/A	N/A	No	No	No	Yes	

Table 7-2: Training Requirements for CMT and IMT Capability - LOWC

		Training Requirement							
			FAMILIARISATION			DEMONSTRATE		TEST	
			Judith-2 EP & OPEP Induction	Emperor Energy Crisis Management Plan Induction	Emperor Energy CMT - OSR Equipment Introduction	Oil Spill Response Management (IMO 2 Equivalent)	Oil Spill Response Command & Control (IMO 3 Equivalent)	OSR Workshop - Combined CMT & IMT	OSR Exercise - Combined CMT & IMT
CMT & IMT ROLES		Delivery Agency	Emperor Energy	Emperor Energy	AMOSC	AMOSC	AMOSC	AMOSC	AMSOC
		Delivery	Remote	Remote	In Person	In Person	In Person	Remote	In Person & Remote
Role Title	Organisation	Duration	1 Hr	2 Hrs	1.0 Day	4.0 Days	4.0 Days	0.5 Day	1.0 Day
CRISIS MANAGEMENT TEAM									
CMT Leader	Emperor Energy		Yes	Yes	Yes	No	Yes	Yes	Yes
Liaison Officer – External IMT	Emperor Energy		Yes	Yes	Yes	No	Yes	Yes	Yes
Health, Safety & Environment Advisor	Emperor Energy		Yes	Yes	Yes	No	No	Yes	Yes
Stakeholder & Media Manager	Emperor Energy		Yes	Yes	No	No	No	No	Yes
Administration Officer	Emperor Energy		Yes	Yes	No	No	No	No	Yes
Legal Advisor	Emperor Energy		No	No	No	No	No	No	No
INCIDENT MANAGEMENT TEAM									
Incident Controller	AGR		Yes	N/A	N/A	No	Yes	Yes	Yes
Safety Officer	AGR		Yes	N/A	N/A	No	No	Yes	Yes
External Agency Liaison Officer	AGR		Yes	N/A	N/A	No	No	Yes	Yes
PLANNING SECTION									
Planning Officer	AGR		Yes	N/A	N/A	Yes	No	Yes	Yes
Environmental Unit	AMOSC		Yes	N/A	N/A	No	No	No	Yes
Situation Unit	AGR		Yes	N/A	N/A	No	No	No	No
Intelligence Unit	AGR		Yes	N/A	N/A	No	No	No	No
Trajectory Forecasting	RPS via AMSOC		Yes	N/A	N/A	No	No	No	No

		Training Requirement							
			FAMILIARISATION			DEMONSTRATE		TEST	
			Judith-2 EP & OPEP Induction	Emperor Energy Crisis Management Plan Induction	Emperor Energy CMT - OSR Equipment Introduction	Oil Spill Response Management (IMO 2 Equivalent)	Oil Spill Response Command & Control (IMO 3 Equivalent)	OSR Workshop - Combined CMT & IMT	OSR Exercise - Combined CMT & IMT
CMT & IMT ROLES		Delivery Agency	Emperor Energy	Emperor Energy	AMOSOC	AMOSOC	AMOSOC	AMOSOC	AMSOC
		Delivery	Remote	Remote	In Person	In Person	In Person	Remote	In Person & Remote
Role Title	Organisation	Duration	1 Hr	2 Hrs	1.0 Day	4.0 Days	4.0 Days	0.5 Day	1.0 Day
OPERATIONS SECTION									
Operations Officer	AGR		Yes	N/A	N/A	Yes	No	Yes	Yes
Source Control Branch Lead	AGR		Yes	N/A	N/A	No	No	No	Yes
Shoreline Response Team Leader	AMOSOC		Yes	N/A	N/A	Yes	No	No	Yes
Air Operations Lead	AGR		Yes	N/A	N/A	Yes	No	No	Yes
Oiled Wildlife Specialist	AMOSOC		Yes	N/A	N/A	Yes	No	No	Yes
LOGISTICS SECTION									
Logistics Officer	AGR		Yes	N/A	N/A	Yes	No	Yes	Yes
Supply Unit	AGR		Yes	N/A	N/A	No	No	No	No
Communications Unit (IT)	AGR		Yes	N/A	N/A	No	No	No	No
FINANCE SECTION									
Finance Officer	AGR		Yes	N/A	N/A	No	No	Yes	Yes
Administration Officer	AGR		Yes	N/A	N/A	No	No	No	Yes

Table 7-3: Training requirements for Source Control Branch (Summary)*

POSITION	REQUIREMENTS
Source Control Branch Lead	Minimum training per IOGP Report 664 (Review of Subsea Well Response Capability) and the Source Control contractor's internal competency framework. SCERP-specific functional exercise completed ≥ 3 months prior to spud
Well Control Specialist (Contracted)	Competency maintained per the contracted well control provider's (e.g. Wild Well Control) internal standards, with current certification evidence held on file by the AGR Project Drilling Manager
Source Control Branch – Support positions	Training requirements specified in the SCERP and consistent with IOGP Report 664 guidance. Records maintained in the Emperor Energy Competency and Training Register.

Evidence of current certification for all contracted Source Control personnel must be available for regulatory inspection prior to the commencement of reservoir section drilling.

*Full requirements for training and competencies are outlined in the Judith-2 SCERP

7.3.OPEP Testing

Emperor Energy will execute a programmed series of exercises ('exercise programme'). The purpose of the exercise programme is:

- To meet the requirements of the Offshore Petroleum and Greenhouse Gas Storage (Environment) Regulations 2023 Section 22, (12), (13) and (14);
- To demonstrate (via testing) that Emperor Energy's arrangements are fit for purpose against the worst credible scenario (LOWC), that they are effective, scalable and maintain response readiness.
- To evaluate areas of its emergency and oil pollution response programme that Emperor Energy can improve upon (demonstration of continuous improvement); and
- Instil a positive learning culture amongst Emperor Energy staff, contractors, third parties and other critical response partners to practice their skills, knowledge and craft outside of 'real' emergency response scenarios.

Consideration of the Emperor Energy exercise programme has also been driven by the programme outcomes, timing/manner of exercises, evaluation/close out, and other methods as detailed in the IPIECA Oil Spill Exercises, Good Practice Guide.

In accordance with Regulation 22(14) of the OPGGS(E) Regulations, the response arrangements will be tested:

- When they are first implemented i.e. prior to commencement of the scoped activity of the accepted EP.
- When they are significantly amended;
- Not later than 12 months after the most recent test;
- If a new location for the activity is added to the EP after the response arrangements have been tested, and before the next test is conducted – testing the response arrangement in relation to the new location as soon as practicable after it is added to the plan; and
- If a facility becomes operational after the response arrangements have been tested and before the next test is conducted – testing the response arrangements in relation to the facility when it becomes operational.

As required by the Regulation 22(12) of the OPGGS(E) Regulation the testing must relate to the nature and scale of the risk of oil pollution relevant to this exploration drilling activity.

A joint emergency response and crisis management exercise will be conducted by the relevant IMT and the CMT, at least 30 days prior to commencement of the activity.

Such simulations are planned by independent agencies and generally included in commitment registers in support of the activity regulatory approvals. Such simulations usually represent the worst-case outcome incident envisaged to have potential to occur during the execution of the activity.

A LOWC response exercise will occur 3 months prior to earliest spud date.

The objectives of the exercises will be to assess:

- Adequacy of the ORT and IMT to facilitate a credible response;
- Adequacy of the OPEP and associated plans;

- The peak IMT resourcing requirements;
- Notification and communication arrangements;
- Engagement of external parties identified to support the response; and
- External Agency liaison and management.

Exercise programmes for other components are provided as follows:

- Arrangement for Source Control Emergency Response Plan (SCERP) testing and exercising are provided in the SCERP.
- Arrangements for the implementation, testing and exercising of the Operational and Scientific Monitoring Program are provided in the OSMP.

Emperor Energy will invite relevant State and Commonwealth control and jurisdictional authorities to participate in certain sections of the exercise programme, however, cannot compel these parties to participate.

Emperor Energy may consider holding a single exercise that concurrently meets testing and exercising needs across the Source Control, OSMP and OPEP implementation.

7.3.1. Evaluation and close of recommendations

Emperor Energy's individual exercises within the exercise programme, will follow the process for development, execution and evaluation outlined within the *Australian Disaster Resilience Handbook Collection, Handbook 3: Managing Exercises and APPEA Guidance Document: Incident Management Team-Knowledge requirements for responding to marine oil spills*.

For each exercise, an aim and one or more objectives will be defined. For each objective, performance indicators will be established to enable an evaluator (or evaluation team) to objectively assess whether the objective has been achieved.

Emperor Energy will ensure subject matter expert evaluators are part of each exercise, with third party evaluators included for discussion, functional 'desktop' and field exercises.

An experienced facilitator will be used for the exercises. After the exercise, the facilitator will hold a debrief session during which the exercise is reviewed, and lessons learned and areas for improvement are identified. Observations during this exercise will be noted and reported (informally and formally) by the facilitator to improve the response in an actual event. A written report, with improvement opportunities, will be provided to Emperor Energy following the exercise.

All personnel involved in the exercise will attend the post-exercise de-briefing and receive the formal report. Findings from the exercise will be recorded and tracked in Emperor Energy's commitments register to closure to ensure continual improvement. The report and evidence of action close out will be included in the End-of-Activity Environmental Performance Report. Any learnings, findings, or recommendations identified as part of the testing exercises will be addressed and incorporated into the relevant emergency response plans and procedures to ensure they remain effective. Undertaking the exercises 3 months prior to the activity commencement ensures there is sufficient time to manage responses to any recommendations or outcomes of the testing prior to the activity commencing.

7.3.2. Types of Exercises

Each activity within the exercise programme is a type of 'exercise'¹. An exercise is defined as a controlled, objective-driven activity used for testing, practicing or evaluating processes and/or capabilities.

The types within this programme include:

- Drill: A coordinated, supervised activity employed to test a single, specific operation or function.
- Discussion exercise: An exercise built around discussion of a scenario – providing an opportunity to explore issues in some depth and give verbal responses to situations.
- Functional 'desktop exercise: An exercise that involves the testing and deployment of incident or crisis management teams, to enact plans and processes against a scenario.

OPEP training and testing arrangements appropriate to the nature and scale of Emperor Energy's activities are included in Table 7-4.

Table 7-4: Judith-2 OPEP Training and Testing Arrangements and Requirements for the CMT, IMT, and Source Control Branch

TRAINING/ EXERCISE TYPE	OBJECTIVES	TIMING/ FREQUENCY
Familiarisation		
Hybrid (face-to-face and/or virtually)	Functional specific training / workshops to validate IMT and CMT roles & responsibilities specific to oil spills as per the OPEP	Within 30 days of OPEP approval. Then, every 6 months, contingent on operational activities.
Hybrid (face-to-face and/or virtually)	Familiarisation sessions with AMOSC, Source Control and OSM Services Providers call-out, mobilisation and integration.	Within 30 days of OPEP approval.
Hybrid (face-to-face and/or virtually)	Incident Management System refresher training for AGR Core IMT including IMT duties related to Judith-2 OPEP	At least 3 Weeks prior to activity start.
Test		
Drill (notifications)	To test all communications and notification processes to service providers & government agencies defined in the OPEP.	<1 month prior to activity. Then, every 6 months, contingent on operational activities.
Drill (call off)	To test the ability of Emperor Energy to execute service contracts with OSROs and supporting agencies.	<2 months prior to activity.
Drill (internal)	To test the ability of Emperor Energy to call out its IMT and CMT. To test the ability of Emperor Energy to call on surge (backfill resourcing) to the IMT.	<2 months prior to spud. Then, every 6 months, contingent on operational activities.
Drill (internal/external)	To test communications between the MODU, AGR IMT, Emperor Energy CMT.	<1 months prior to spud.

¹ These definitions are adapted from the Australian Institute for Disaster Resilience, Australian Disaster Resilience Handbook Collection, Handbook 3: Managing Exercises

TRAINING/ EXERCISE TYPE	OBJECTIVES	TIMING/ FREQUENCY
		Then, every 4 weeks, contingent on operational activities.
Discussion exercise	Practice the ability of the AGR IMT and Emperor Energy CMT to communicate with jurisdictional equivalents on objectives alignment and resource request processes.	<3 months prior to spud.
	Practice the first 24 hours activation of the OPEP with AGR IMT, Emperor Energy CMT, critical contractors and supporting agencies.	<3 months prior to spud.
	Practice the sustained human resourcing requirements into the IMT from internal and external sources (LOWC scenario).	<3 months prior to spud.
Functional 'desktop' exercise	Against a LOWC scenario, test the IMT/CMT - - ability to implement the strategies in the OPEP, - ability to communicate with jurisdictional counterparts, - ability to develop and execute an IAP across multiple planning periods, - ability to forward plan human resources for multiple operational periods including with external contractors.	<3 months prior to spud.

Full offshore field deployment exercises are assessed as grossly disproportionate for a short-duration, single-well exploration activity given the logistical demands and cost of mobilising AMOSC equipment to open water.

Exercise design plans and post-exercise reports will be provided to NOPSEMA upon request.

8. ONGOING STAKEHOLDER CONSULTATION

In accordance with Regulation 22(15) of the OPGGS(E) Regulations, Emperor Energy will maintain ongoing engagement with relevant Jurisdictional Authorities of the Commonwealth, States and Territories and with other relevant interested persons and organisations, throughout the duration of the Activity.

The Judith-2 Exploration Drilling EP and OPEP have been developed following extensive consultation to identify the persons and organisations whose functions, interests or activities may be affected by the planned offshore activities. This consultation included the relevant Commonwealth and State Jurisdictional Authorities (including Vic DTP, Tas EPA, Transport for NSW, AMSA, DCCEEW and the Director of National Parks), State wildlife authorities (DEECA Vic, NRE Tasmania, NSW DPI), state combat and control agencies, AMOSC, AEP, Traditional Owner organisations within the EMBA, commercial fishing representatives, aquaculture operators, and tourism operators. The full record of consultation undertaken in the development of this OPEP is documented in the Judith-2 Exploration Drilling EP Section 7 and Appendix D (Relevant Persons Register).

Engagement and consultation will continue throughout the activity as set out in the following subsections.

8.1. During an incident

In the event of a Level 2 or 3 hydrocarbon oil pollution incident, Emperor Energy will notify and engage with relevant stakeholders in accordance with the notification arrangements set out in Section 2.6 (Table 2-4 and Table 2-5) and the relevant persons contact register. This will be informed by real time modelling to cover not only predicted sea surface and shoreline exposure, but the extent of dissolved and entrained hydrocarbon exposure also.

The Incident Controller, supported by the External Agency Liaison Officer (EALO) EE CMT IMT liaison Officer, will be responsible for ensuring that:

- Jurisdictional Authorities and Control Agencies are notified within the timeframes set out in Table 2-4 that updates are provided through formal SITREPs at a frequency agreed with the receiving agency.
- Where a State Control Agency assumes control of the response in State waters, information sharing and joint planning are maintained via the EALO and the JSCC arrangements described in Section 3.3.
- Traditional Owner organisations whose Sea Country may be affected are notified at the earliest practicable opportunity, and that culturally appropriate engagement is maintained throughout the response, including in relation to shoreline access, heritage protection (as supported by the Heritage Adviser per EPS15.6), oiled wildlife response, and recovery monitoring.
- Other relevant interested persons whose activities may be affected — including commercial fishing operators, aquaculture operators, charter and tourism operators, port users and recreational user groups — receive timely information sufficient to allow them to take their own protective actions or modify their activities. Engagement will be coordinated with the relevant State Control Agency to ensure a consistent public message.
- Consultation undertaken during the response, including agreed actions and information provided, is captured in the Incident Log and rolled into each IAP.

- Post-incident, a consultation debrief will be conducted with relevant stakeholders as part of the response close-out and lessons-learned process described in Section 9.

8.2. Annual review with Jurisdictional Authorities

To provide assurance that the response arrangements in this OPEP remain current and effective, for the life of the EP, Emperor Energy will conduct annual documented consultation with the relevant State and Commonwealth Jurisdictional Authorities, State Control Agencies, and State wildlife authorities identified in Section 3.4, and with the other relevant persons identified in the EP Appendix D register whose activities or interests may be affected by the response.

The outputs of the annual review will be used to:

- Maintain and update the relevant persons contact register
- Confirm protocols and timeframes for notification, escalation, and information sharing
- Reflect any procedural updates, guidance notes, or revised plans issued by the Jurisdictional Authorities, Control Agencies, or AMOSC
- Identify any changes that materially affect the response arrangements described in this OPEP and trigger the OPEP review process under Section 7.1
- Confirm that all interface arrangements (OWR State wildlife authorities and Control Agency interfaces) remain current.

Consultation will also be undertaken on a non-routine basis when triggered by:

- Material changes to response arrangements, contracts, or capability
- New or revised legislation, regulation, or published guidance relevant to oil pollution response
- Lessons identified from exercises, drills, or actual incidents that affect interface arrangements
- Material changes to the Activity scope, schedule, or risk profile.

Records of consultation undertaken under this Section, including dates, participants, matters discussed, outcomes and any agreed actions, will be retained in Emperor Energy's Consultation Database and reflected in the EOCD.

9. ASSURANCE AND CONTINUOUS IMPROVEMENT

Emperor Energy will maintain response readiness and pursue continuous improvement through the following assurance mechanisms:

- Internal Review - The Emperor Energy COO is accountable to ensure AGR compliance with their Well Delivery Process, contractual response and regulatory commitments.
- Internal review - The AGR Project Drilling Manager will conduct a quarterly review of contract currency for all oil spill response contractors, the MODU relief well register (including Safety Case status), and key IMT personnel competency records. Outcomes will be recorded in the Project Action Tracker and reported to the Emperor Energy COO.
- Performance monitoring - EPSs defined in Sections 5 and 7 of the OPEP will be monitored and outcomes recorded throughout the activity. A monthly EPS compliance report will be prepared by the Emperor Energy Environment Manager.
- Industry benchmarking - Emperor Energy will maintain AMOSC membership
- Non-conformance management - Any EPS non-conformance identified during the preparedness phase will be escalated to the COO and addressed through Emperor Energy's MoC process (EP Section 8.10) before activities resume or continue.
- Post-exercise continuous improvement - Exercise results, learnings, and recommendations will be tracked in the Project Action Tracker and actioned within one month of report receipt. Evidence of closure will be included in the End-of-Activity EP Performance Report

10. REFERENCES

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APPENDIX A: FORMS

The following forms are available on AGR's Network Drive:

- POLREP & SITREP
- Status Board Form 1 - Incident Details
- Status Board Form 2 - Initial Assessment
- Status Board Form 3 – Notifications and Contacts
- Status Board Form 4 - Initial Actions
- Status Board Form 5 - Resources at Risk / Protection Priorities / Strategies
- Status Board Form 6 - Incident Action Plan
- Status Board Form 7 – Tactics
- Status Board Form 8 – Resources
- Status Board Guidance
- Sampling Guideline Form

APPENDIX B: EXPANDED CMT, IMT & FIELD RESOURCING

B1. GENERAL

The CMT and IMT structure is designed to be scalable to meet the requirements of any credible spill scenario during the Judith-2 drilling campaign program. The expanded (peak) CMT, IMT and Operations Team (OT) are structured to manage the 'worst case' hydrocarbon release scenario (a LOWC). The IMT will use a planning process to develop an IAP and execute field activities consistent with the requirements of this OPEP, including for source control. To provide Emperor Energy with assurance of adequate personnel availability for the peak IMT and OT structure, the associated maximum IMT and OT resourcing requirements have been determined in consultation with AMOSC.

The evaluation scope includes the following:

- Provision of personnel (e.g. AMOSC) to the State Control Agency's IMT (e.g. Victoria DTP) and/or field operations in the capacity of subject matter experts/ support resources to the spill response.
- Scalability that would allow the IMT the capacity and capability to mount operations that meets the range of incident scenarios described in the OPEP, and more broadly the EP. In particular, this means sustaining arrangements for a period of many months to meet the IMT tasking demands should a LOWC occur. 'Peak' and 'sustained' manning levels need to be identified, as well as recommendations for competency building for persons undertaking those roles.
- Gaps between need and availability are to be highlighted and solutions proposed.
- The operational response activities described in the OPEP are able to be supported by AMOSC, at the direction of the IMT and further expanded to include provision of support to impacted state control agencies (Vic, NSW, Tas).
- The source control / well intervention activities will be supported by Emperor Energy contracted Source Control Contractor, Wild Well Control, at the direction of the IMT.
- OSM services are supported by the OSM Services Provider (Stantec), at the direction of the IMT.

B2. JUDITH-2 IMT REQUIREMENTS

To implement a successful oil spill response, upon notification of an incident, Emperor Energy will stand up its CMT and IMT which is then required to progress through several stages:

- Establish the severity of an oil spill incident, including an assessment of the possible environmental consequences and options to reduce these consequences.
- Draft an IAP that details the spill response strategies to be put in place in the field.
- Provide oversight and execute the IAP.
- Review the ongoing implementation of the IAP for success against incident objectives and Emperor Energy's environmental commitments (contained within its approval documents).
- Continue or cease field incident response operations, depending on level of success against objectives.

These stages are detailed in Section 2 of this OPEP. Section 4.1 also outlines the pre-determined spill response strategies identified by the preliminary strategic NEBA which will be put in place in the event of a spill. These pre-determined strategies are based on:

1. Careful consideration of the likely fate and weathering of the expected oils that may be spilt; and
2. The field operations that can be safely and proportionately put in place to minimise/prevent environmental damage.

By determining:

- The maximum field capacity that could be implemented to execute chosen oil spill strategies for the worse case discharge;
- The IMT tasks required to determine, support and execute those strategies;
- The duration of the response; and
- The IMT 'need' . Against this need, working within Emperor Energy chosen IMT, resources pools can be assigned from Emperor Energy, AGR, AMOSC, Source Control Contractor, OSM Services Provider (Stantec) and other parties.

B3. OPEP PRE-DETERMINED FIELD CAPACITY

For the determination of the field capacity requirements, the worst credible scenario of a 55,256m³ subsea release over 77 days was modelled representing a LOWC scenario. The analogue hydrocarbon, selected based on the likely product in the permit area, is predicted to lose approximately 83% of its volume through evaporation within the first few days. An additional 16% is expected to be entrained and gradually evaporate over a longer period, leaving around 1% as persistent product.

For the purposes of determining the greatest requirement for field resources, consideration was given to the deterministic models that represented the shortest time to shoreline impact for an actionable response, the greatest length of shoreline impacted >100g/m² (7km) and the highest volume of shoreline loading (28m³), all of which the modelling predicted to occur during winter conditions.

Based on the AEP Industry guidelines for spill response, one SCAT team is assumed to be able to cover 10 km of shoreline per day. Therefore, with the largest shoreline affected at actionable level being 7km, one SCAT team will be sufficient.

To determine worst-case resourcing, a range of deterministic modelling results of the worst-case scenarios can be utilised for estimating the expected volumes of oil ashore and timing at priority locations.

The most common deterministic modelling runs used to identify volume and timing are the following, which provide worst case in terms of volume of shoreline oil requiring clean-up, and locations impacted at any one time as well as earliest arrival and peak accumulation timing:

- Maximum length of shoreline oil accumulation >100 g/m²; and
- Minimum time to shoreline accumulation >100 g/m².

Deterministic runs that can be utilised to further evaluate volume and locations impacted in particular include the run with the maximum length of shoreline oil accumulation >100g/m².

Although not all of the coastline sections within this area of shoreline contact will be amenable to manual clean-up, the total volume of oil ashore can be conservatively used to estimate worst case capability required.

Alternately the shoreline types amenable to clean-up can be considered in a more detailed assessment to justify a less conservative estimation of volume of oil requiring clean-up.

An IPIECA-IOGP (2015) estimate of the impact of shoreline clean-up efforts on oil spill budget is that one person can remove 1–2 m³ of oily water from a shoreline per day, with an average of 1.5 m³ considered a reasonable figure unless there are operational considerations that may impact this.

IPIECA-IOGP (2015) suggests that the optimum number of workers in a manual clean-up team is 10, headed up by a team leader. This size of team can be replicated a number of times, with team leaders reporting to a worksite supervisor or beachmaster.

Therefore, with a maximum credible shoreline hydrocarbon loading of 28 m³, one shoreline response team is adequate with regards to a response team.

These numbers are reflected in the minimum peak loading assessment in Appendix B, which also shows the availability of resources is well in excess of anticipated needs.

Given the hydrocarbon properties of the worst-case scenario (gas condensate), and the outcomes from the OSTM, the primary field operations are expected to be:

- Source Control;
- SMV;
- Shoreline Protection and Deflection;
- Shoreline Clean-up (possibly);
- OWR (possibly)
- Waste Management; and
- OSM activities .

Other strategies were considered through the Judith-2 OPEP / EP development process, however, have been discounted through the Emperor Energy strategic NEBA and ALARP assessment process.

B4. STAGING OF FIELD AND IMT OPERATIONS

The IMT will work to immediately execute the primary strategies listed in Section B3 should a spill occur:

- SMV planning for field activities (aerial observation) will take place immediately, supported by real-time deterministic OSTM, the deployment of a satellite tracking buoy, ordering satellite imagery, and shoreline clean-up assessment (if required).
- Source control planning and field activities will commence immediately, directed by the actions detailed in the Judith-2 SCERP.
- OSM planning and field activities will commence immediately, directed by the actions detailed in the Judith-2 OSM-BIP.

The prepared stochastic oil spill modelling and overlaid zone of potential impact suggests that very small quantities of entrained oil will impact state waters, and that the likelihood of this occurring is very low.

Should state waters impacts (or threats to state waters) occur, the IMT will consider and support the execution of the following, working under the relevant State Government Department:

- Shoreline protection and deflection activities;
- Shoreline clean-up activities; and

- OWR field activities.

For field oil spill response assets, the operational response will require selected use of Level 2 resources, all of which are available within Australia, and are able to be coordinated / provided for using AMOSC for equipment, people and technical services. Level 3 providers (Emperor Energy's Source Control Contractor) will aid in provision of source control resources. Additional spill response capability accessed via the Global Response Network (GRN) / AMOSC.

IMT SIZE AND TASKING REQUIREMENTS TO MEET JUDITH-2 WCD SCENARIO

Based on the needs detailed above, the IMT will be required to:

- Activate and mobilise IMT resources to meet the scale of the response,
- Determine, resource & direct:
 - Source Control;
 - SMV, including Shoreline Assessment;
 - Shoreline Protection and Deflection;
 - Shoreline Clean-up;
 - Waste Management;
 - OWR (if required); and
 - OSM activities.
- All of the above are undertaken by contracted external organisations which require activation;
- Support the relevant State Control Agency (e.g. Victoria DTP) and provide the staff to meet the State IMT Industry Guidance Note (IGN) requirements if the spill enters State waters.

The IMT will implement this using the IAP development and planning process as outlined under Section 41 of the OPEP. The IMT will establish the framework outlined in Section 3.5 of the OPEP. The IMT and the field operations will run for the duration of the response, so has a requirement to sustain these operations for at least 11 weeks (relief well source control completion timeframe) until clean-up termination criteria has been achieved following source control. The core constant functional sections of the IMT during the response will be those outlined in Table 3-4.

MANNER OF THE IMT

Delivery of the tasks required of the IMT, and the 'deep dive' into operational outputs may be undertaken using a remote, virtual IMT or with in-person meetings or a combination of the above using AGR's and Emperor Energy's Microsoft Teams software. It will be led by AGR staff and consultants including environmental consultants, supported by remote teams from AMOSC based in Geelong / Fremantle, and WWC based in Singapore, Houston, Malaysia & Perth. Outputs and direction from this group will be provided to the FOB (Victoria).

Specific tasking will be devolved to third-party subject matter experts, and then as close to operational tasking as possible. In practical terms, this means that the IMT will:

- Keep the CMT informed of response activities;
- Manage the safety of personnel and public;
- Determine and set high level response objectives;
- Identify appropriate response strategies and associated tactics;
- Gain and maintain situational awareness;
- Determine the environmental spill risk consequences and response priorities;
- Activate contractual arrangements with AGR, AMOSC and WWC;
- Undertake stakeholder notifications ;
- Provide direction setting and resources (by request) to those organisations;
- Monitor the achievement of EPOs.

Diagrammatically, these relationships are shown in Figure 3-3.

For control, planning and operations:

The IMT will prepare an initial incident briefing sheet that comprises:

- Incident maps;
- Summary of Incident
- Current Actions;
- Current Response Organisation;
- Resources Summary; and
- Site Safety & Controls.

They will complete the IAP that includes Incident Briefing and Response Objectives. High level planning and operational functions will be undertaken by this group, with discipline- specific planning and operations undertaken by AMOSC for specific field spill response activities, RPS for real-time OSTM, Stantec for OSM support, and WWC for source control and well intervention.

For Logistics functions:

WWC will undertake their own logistics planning and execution for any emergency response. AMOSC will rely on the provision of heavy logistics (aircraft, vessels, operating FOBs) to be provided for by the IMT. De-confliction or cross-purpose coordination of assets sharing is to be undertaken by the IMT. Communications and IT functions, facilities management, sustenance and messing will be provided for by Emperor Energy /AGR's Business as Usual (BAU) requirements. The IMT Facilities & Ground Support lead (based in the field) will provide field support & coordination.

For media and public information:

Emperor Energy will task this to a dedicated specialist Media Liaison Officer, who will work with Emperor Energy's CMT, the IC, and the relevant State Control Agency's public information section to provide up to date public statements.

For the initial State LO function:

This will be provided initially through the placement of Emperor Energy contractors into the relevant State Control Agency (i.e. Victoria DTP) (from AGR or AMOSC), escalating to serve the needs of the State Control Agency as needed. For ongoing responses, remote support to the State Control Agency IMT may also be provided from the AMOSC Core Group. Remote support to Federal Government LO agency needs will be served remotely through direct communication with the IMT IC. Should the response escalate, a senior AMOSC resource can be used to service the need of the OPICC in conjunction with the IMT IC.

For source control operations:

The IMT Operations Officer will stand up WWC, who in conjunction with AGR personnel resource the elements under the Source Control Branch under the Operations Function. Emperor Energy and AGR hold separate standing contracts with WWC.

For implementation of the OSM-BIP:

The IMT Planning Officer will stand up Stantec, who will execute the field based OSM activities. The outputs and control of this will be through the IMT Planning/Environment Function. Contact details are available in the EOCD.

PEAK MANNING LEVELS – CMT/EMPEROR ENERGY

As outlined in Section 3.2.1.1, the CMT core roles will be required for day time operations only. Table 3-6 shows the minimum number of required personnel and total available for the duration of the response.

PEAK MANNING LEVELS – IMT

Based on the specific workloads required to run the Emperor Energy peak field operations by the remote IMT, the number of personnel required is significantly less than that required for a crude oil or liquid petroleum spill, because of the nature of the hydrocarbons and the actionable/recoverable volumes (as described in Sections 1.3, 1.4 and 1.5). There is minimal shoreline contact predicated with a short duration of 4 weeks to clean assuming worst case. Given weathering and assuming protection and deflection responses are effective, this requirement will be further reduced. There will be minimal coordination of responses required, and the main response will be SMV activities. With this in mind, only daytime IMT operations will be required (due to response activities not being safe to undertake at night).

Source control activities will run around the clock based on the criticality of the task at the time and be run by WWC remotely - the need for this can be met remotely by the IMT or using 'on-call' arrangements, rather than a fully staffed, 24/7 IMT.

'Peak Resourcing' occurs in two stages – the first being the initial stage when situational awareness is required, external initial briefing to government agencies, risk analysis, and then initial IAP development and objective setting occurs. This would occur in the first two – five days of operations, during the reactive phase of the response, and before requirements settle into a steady state. First contact of condensate onshore is not for 6 days.

In the occurrence of State Water impact, deployment of resources to the State Control Agency's (e.g. Victoria DTP) IMT may be required and will be guided OSTM and aerial surveillance output, as determined in the initial stages. Surging for this stage will be based on the feedback from the State Control Agency's IMT at the time of the spill, and Emperor Energy is ready to meet this need.

Sufficient resources have been identified to fill the roles required of the IMT for the first 'swing' of fourteen days, including all State Control Agency IMT Liaison Officer (e.g. Victoria DTP) positions.

After 14 days, a second shift of IMT personnel will offer relief. These will be drawn from

- AGR personnel;
- AGR's Consultancy Services database;
- AMOSC Core Group; and
- Third-party Environmental SMEs and labour hire.

The IMT Peak Resourcing Requirements is summarised in Table B - 1 and Table B - 2.

State Control Agency IMT Support

The requirements by the relevant State Agency for the petroleum titleholders to provide IMT personnel the State Control Agency's IMT will be met initially with a Liaison Officer (LO) from AGR's Perth team with further requirements from the AMOSC Core Group as determined by whether the spill reaches into State Waters.

Table B-1: Judith-2 Peak IMT capacity and capability - G&G Activities

IMT function role	Need			Available External Resources							Total available
	Day Shift	Night Shift	Total Required	AGR Staff & Consultants	AMOSC Staff	AMOSC Core group	OSTM (Via AMOSC)	Wild Well Control	OSM Services Provider	Third-party service provider (SME or labour hire)	
Incident Controller (IC) AGR (IMO3)	1	0	1	1	-	-	-	-	-	-	1
Safety Officer (AGR)	1	0	1	2	-	-	-	-	-	-	2
Liaison Officer (initial) (AGR)	1	0	1	2	-	-	-	-	-	-	2
Planning Officer (IMO2) AGR	1	0	1	2	-	-	-	-	-	-	2
Environmental Unit Lead AMOSC	1	0	1	-	8	-	-	-	-	-	8
Intelligence Unit lead (AGR)	1	0	1	15	-	-	2	-	-	-	17
Situation Unit lead (AGR)	1	0	1	15	-	-	-	-	-	-	15
Logistics Officer AGR (IMO2)	1	0	1	2	-	-	-	-	-	-	2
Supply Unit (aviation & marine) AGR	1	0	2	2	-	-	-	-	-	-	2
Communications Lead (AGR)	1	0	2	15	-	-	-	-	-	-	15
Finance Officer	1	0	2	2	-	-	-	-	-	-	2
Administrative and log	1	0	2	15	-	-	-	-	-	-	15

Table B-2: Judith-2 peak IMT capacity and capability - Drilling

IMT function role	Need			Available External Resources							Total available
	Day shift Team 1	Day shift Team 2	Total Required	AGR Staff & Consultants	AMOSC Staff	AMOSC Core group	OSTM (Via AMOSC)	Wild Well Control	OSM Services Provider	3 rd party service provider (SME or labour hire)	
Incident Controller (IC) AGR (IMO3)	1	1	2	3							3
Safety Officer (AGR)	1	1	2	3							3
Liaison Officer (initial) (AGR)	1	1	2	4							4
Operations Officer (AGR) (IMO2)	1	1	2	3							3
Source Control Branch Lead (AGR)	1	1	2	2				2			4
Shoreline Response Team Lead (IMO2)	1	1	2		2	50					3
Air Operations Lead (AGR)	1	1	2	2	3						5
Oiled Wildlife Specialist (AMOSC)	1	1	2		2					2	4
Planning Officer (IMO2) AGR	1	1	2	3							3
Environmental Unit Lead AMOSC	1	1	2		8						8
Intelligence Unit Lead (AGR)	1	1	2	15			2				15

IMT function role	Need			Available External Resources							Total available
	Day shift Team 1	Day shift Team 2	Total Required	AGR Staff & Consultants	AMOSC Staff	AMOSC Core group	OSTM (Via AMOSC)	Wild Well Control	OSM Services Provider	3 rd party service provider (SME or labour hire)	
Situation Unit Lead (AGR)	1	1	2	15							15
Logistics Officer AGR (IMO2)	1	1	2	3							3
Supply Unit (aviation & marine) AGR	1	1	2	2							2
Communications Lead (AGR)	1	1	2	15							15
Finance Officer	1	1	2	2							2
Administrative and log keeping support (to sections above)	1	1	2	15							15

Table B-3: Judith-2 peak Operational Response Team capacity and capability

ORT Functional Role	Day shifts need	Night shifts need	Total Required	Total available	Source
FOB Leaders (Air/Shoreline)	2	0	2	18	AMOSC staff/CG for escalation if required
Health and Safety Officer	1	0	1	12	AMOSC/CG
Aerial Observer – Oil Monitoring	1	0	1	5 AMOSC Staff 12 AMOSC CG	AMOSC/CG
Site Supervisors/Shoreline Operations Manager	1	0	1	18	AMOSC/CG
SCAT Team Leads	1	0	1	18	AMOSC/CG
SCAT Team Responders (Wildlife SCAT support not included)	2	0	2	50*	AMOSC CG/state responders
SCAT Drone Operators	1	0	1	3x AMOSC Additional via contractor	AMOSC/ AMOSC contractor
Shoreline Response Team Leads	1	0	1	50*	AMOSC/CG
Shoreline Response Team Responders (includes protection and deflection)	25	0	25	50*	AMOSC CG
Shoreline Response Plant Operators	2	0	2	10	Contractors
Waste Management Coordinator	1	0	1	2	Emperor Waste Contractor
Waste Management Responders	3	0	3	10	Emperor Waste Contractors
Wildlife Response Coordinator	1	0	1	3	AMOSC
Wildlife response teams personnel (state-based response via AMOSC)	TBA	0	TBA	20	AMOSC Wildlife Response Team

* Note that AMOSC core group consists of 124 personnel the reduced availability assumes some time for personnel to respond and allows for redundancy if back to back responders are required. This demonstrates that there is still further redundancy of personnel available. Additional resources also available via labour hire however given the response needs this is seen as additional capacity that would not normally be required.

APPENDIX C: INCIDENT CONTROL HANDOVER FORM

General Information

- Incident Name:
- Incident Number:
- Date/Time of Handover:

- Location of Incident:

- Current Incident Level (AIIMS classification):

- Handover From: - Name: - Role: - Organisation:	- Handover To: - Name: - Role: Incoming Incident Controller - Organisation (AMSA / State Control Agency):
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Operational Status

- Summary of incident history and current status
- Status of response operations
- Weather and sea conditions
- Current objectives and strategies
- Safety issues and risks
- Environmental sensitivities and protection priorities

Incident Management Team (IMT)

- IMT structure and key personnel
- Contact list of IMT members
- Rosters and shift schedules
- Briefing materials and logs

Documentation and Records

- Incident Action Plans (IAPs)
- Situation Reports (SitReps)
- Resource tracking sheets
- Maps and GIS data
- Communications logs
- Finance and procurement records

Document Reference/Location:

Resources and Logistics

- Personnel and equipment on-site
- Vessels and aircraft deployed
- Staging areas and base locations
- Fuel, food, and accommodation arrangements
- Waste management and decontamination plans

Document Reference/Location:

Stakeholder Engagement

- Community liaison updates
- Media and public information releases
- Government agency notifications
- Indigenous and cultural heritage considerations

Handover Confirmation

- Verbal briefing completed
- All documents transferred
- Incoming IC acknowledges receipt and understanding
- Handover signed by both parties

Tick as appropriate:

Signatures

Outgoing Incident Controller

Name: _____

Signature: _____

Date/Time: _____

Incoming Incident Controller

Name: _____

Signature: _____

Date/Time: _____

APPENDIX D: AERIAL SURVEILLANCE OBSERVER LOG – OIL SPILL

Incident		Date		Observers	
Aircraft Type		Call Sign		Area of Survey	
Survey Start Time		Survey End Time		Average Altitude	
Wind Speed (knots)		Wind Direction		Notes	
Cloud Base (feet)		Visibility (nm)			
Time High Water		Time Low Water			
Current Speed (nm)		Current Direction			

SLICK DETAILS

Slick	TIME local	SLICK (CNTR or START)		SLICK (END)		SLICK ORIENT Degrees	OIL SLICK LENGTH			OIL SLICK WIDTH			AREA km ²	COVER AGE %	OILED AREA km ²
		LAT N/S	LONG E/W	LAT N/S	LONG E/W		SOG kt	TIME Seconds	DISTANCE km	SOG kt	TIME Seconds	DISTANCE km			
A															
B															
C															
D															
E															

Slick	OIL APPEARANCE COVERAGE - %						MINIMUM VOLUME - m ³	MAXIMUM VOLUME - m ³	TYPE OF DETECTION (etc. visual, IR)	THE BONN AGREEMENT OIL APPEARANCE CODE (BAOAC)			
	1	2	3	4	5	OTH				No	OIL APPEARANCE	MIM. VOLUME m ³ / km ²	MAX. VOLUME m ³ / km ²
A													
B										1	SHEEN	0.04	0.30
C										2	RAINBOW	0.30	5.00
D										3	METALLIC	5.00	50.0
E										4	DISCONTINUOUS TRUE COLOUR	50.0	200
										5	TRUE COLOUR	200	>200

NOTE: Ground Speed (SOG) is the speed of the aircraft relative to the ground (sea) measured in knots (kt). One knot is one nautical mile (nm) per hour.

1 kt = 1 nm per hour = 1.85 Kilometres (km) per hour = 0.03 km (31m) per minute = 0.0005 km per second

EXAMPLE: A helicopter, flying at 80 knots, takes 120 seconds to fly along the length of an oil slick.

(Speed x Time = Distance) 80 knots x 120 seconds = / 80 x 1.85 x 120 / 60 / 60 = 148 kph x 0.03 hr = 4.9 km

APPENDIX E: EAST GIPPSLAND REGIONAL RESPONSE PLAN



Judith-2 Exploration Drilling OPEP – East Gippsland Regional Response Plan

REVISION	DATE	REASON FOR ISSUE	REVIEWERS	APPROVERS
A	05/05/2023	Initial draft from AMOSC	R. Scullion	S. Marshall
0	27/05/2026	Finalised version for use	R. Scullion	S. Marshall
1	31/08/2026	Re-issued post-NOPSEMA RFFWI #2	Aventus Consulting	S. Marshall

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1 INTRODUCTION

1.1 Intent

The East Gippsland Region Response Plan (EGRRP) is designed to guide the Incident Management Teams (IMTs) from Emperor Energy and Victoria's State Control Agency including the respective Shoreline Response Coordinators in the planning and execution of shoreline protection and pre-clean-up initial operations. The EGRRP focusses on the region's unique ecological, socio-economic, and cultural sensitivity data to facilitate informed decision-making during the initial stages of an incident.

Using categorisation by substrate and scale, the EGRRP outlines priority areas of sensitivity and recommended response actions. It includes guidance on the minimum resourcing requirements, including personnel and equipment, ensuring initial actions are scalable and technically appropriate for the specific environment.

In the event of an incident, the EGRRP and the shoreline response strategy section in the OPEP, should be utilised to undertake first strike shoreline response operations in consultation with the responsible State Control Agency. Initial actions should include:

- IMT to gain situational awareness around the movement, fate and behaviour of spill, using SMV tactics as outlined in OPEP Section 5.2.
- Using spill specific deterministic modelling, identify potential areas of shoreline impact within and beyond the East Gippsland region (if required).
- In consultation with the relevant State Control Agency, using this plan, confirm priority sites for shoreline protection and/or pre-clean operations and mobilise supporting personnel and equipment resources.
- Led by the State Control Agency, develop an Incident Action Plan (IAP)-subplan for shoreline response operations. Shoreline Treatment Recommendations should be used to determine technically appropriate shoreline clean-up techniques and additional resources mobilised to sustain ongoing shoreline clean-up operations.

1.2 Scope

1.2.1 Stochastic Oil Spill Modelling

The development of this plan is primarily informed by the stochastic oil spill modelling provided in RPS Report MAQ1186J (December 2022). The modelling report evaluates potential impact scenarios for both Marine Diesel Oil (MDO) and Condensate across summer and winter conditions.

1.2.2 Impact Thresholds & Relevance

For the purposes of this plan, "high-density hydrocarbon impact" is defined by a shoreline loading threshold of $>100 \text{ g/m}^2$. This specific threshold is used because:

- Physical Impact: It represents the point at which physical environmental impacts begin to manifest on shoreline habitats.

- Net Environmental Benefit: Shoreline loading at and above this threshold suggests that active clean-up efforts will typically provide a net benefit to the environment, outweighing the potential disturbance caused by the response activities themselves.¹
- Time till impact: The RPS Modelling Report MAQ1186J predicts for a Loss of Well Control (LOWC) Condensate release, the following shoreline impact timeframes:
 - Minimum time to shoreline impact at a low threshold of 10 g/m²: 3 days.
 - Time to shoreline impact at a medium threshold of 100 g/m²: 6 days.

1.2.3 Methodology & Process

The EGRRP was created through a structured analysis of the RPS modelling data, involving the following steps:

- Analysis of Stochastic Modelling: Evaluation of cumulative probabilities for shoreline contact. The East Gippsland region was identified as having the highest cumulative probability (18%) of shoreline loading >100 g/m² specifically through a Condensate spill occurring in winter conditions.
- Sectorisation: While modelling typically divides shorelines into Local Government Areas (LGA), the analysed modelling utilized a broader "regional" sectorisation for East Gippsland. RPS confirmed that while the regional cumulative probability is 18%, individual LGA sectors within the region show dispersed impacts below the 10% probability threshold usually required for a standalone Tactical Response Plan. As an alternative to developing numerous individual Tactical Response Plans with a low probability of impact, this Regional Response Plan was developed as a broad scale support document which captures all the identified sensitivity areas in the East Gippsland region. The document is intended to provide key information to support response efforts which have potential impact anywhere across the region.
- Sensitivity Mapping: Detailed identification and categorization of environmental, socioeconomic, and cultural sensitivities within the region.
- Resource Assessment: Determining the minimum equipment and personnel required to execute an effective initial response at the identified areas of sensitivity.

1.2.4 Geographic Region

The East Gippsland Region serves as the primary operational area for this plan. It spans approximately 220 km of southeastern Victorian coastline.

- Southwest Boundary: -38.003525, 147.697292
- Northeast Boundary: -37.505601, 149.976048

The region is characterized by its high environmental and socio-economic value, encompassing the Gippsland Lakes, extensive national parks, and pristine coastal ecosystems.

¹ NOPSEMA Oil Pollution Risk Management N-04750-GN-1488 A382148 March 31, 2026

1.2.5 Supporting Documentation

This plan should be utilised in conjunction with the following documents to ensure a coordinated response:

- Deterministic Oil Spill Modelling Reports (Incident Specific)
- Emperor Energy Oil Pollution Emergency Plan (OPEP)
- State Emergency Response Plans
 - Victoria: State Maritime Emergencies (non-search and rescue) Plan – Vic DTP
 - New South Wales: Coastal Waters Marine Pollution Plan – NSW Maritime
 - Tasmania: TasPlan – EPA Tasmania
- Oiled Wildlife Response Plans
 - *Victoria*: Emergency Animal Welfare Plan - DEECA
 - *New South Wales*: NSW Wildlife in Emergencies Sub Plan – NSW NPWS
 - *Tasmania*: WildPlan – EPA Tasmania

Note on Exclusions: Regions such as Bega Valley (5% probability) and Montague Island (1% probability) have been excluded from the scope of this specific regional plan due to the low probability of hydrocarbon loading exceeding the 100 g/m² threshold and the distance of these locations away from the East Gippsland Region.

Note on Inclusions: Gabo Island (3% probability) has been included in the scope of this regional plan due to its location directly alongside the East Gippsland Region and its high ecological importance for pinnipeds and little penguins.

1.3 Prioritisation

The identified sensitivity areas within the East Gippsland region have been prioritised as Primary, Secondary and Tertiary. Prioritisation is a critical component of response planning to ensure timely and appropriate distribution of response resources. By ranking sites, the IMT can ensure that Net Environmental Benefit is maximized - directing resources where they are most effective and where the potential for ecological or socio-economic loss is greatest.

The approach utilised for area prioritisation within the EGRRP classified locations with an elevated priority as those with high ecological value and/or near townships with a higher socio-economic value and/or water courses leading to larger sized water bodies. Areas which are categorised as a lower priority are generally locations with lower socio-economic value or smaller access/egress points leading to smaller water bodies and less sensitivities. These criteria are further detailed in Table 1 below.

Table 1: Criteria used for prioritisation of areas of sensitivity within East Gippsland Region

Priority	Ecological & Socio-Economic Criteria	Physical & Logistical Criteria
Primary	• Areas of high sensitivity including RAMSAR wetlands, National Parks and critical habitat • Areas with high socio-economic value (commercial hubs or tourism sites)	• Large watercourse openings (approximately >150m) which are likely open to the ocean. • Potential access available.

Priority	Ecological & Socio-Economic Criteria	Physical & Logistical Criteria
Secondary	- Regional environmental significance. - Moderate socio-economic or cultural value.	- Mid-sized watercourse openings (approximately <150m). - Restricted or challenging access
Tertiary	- Localised environmental value - Lower immediate socio-economic impact	- Small watercourse openings or ephemeral streams. - Remote location with limited or no access.

Critical note: The presence of areas of cultural significance may become known through direct stakeholder engagement with Traditional Owners, First Peoples – State Relations Victoria or other groups. Any additional sensitivities identified should be included into the Net Environmental Benefit Analysis (NEBA) / Spill Impact Mitigation Assessment (SIMA) process and will likely result in adjustments to the prioritisation as it is currently presented within the EGRRP.

Due to the low probability of significant impact to the Victorian coastline any identified areas which fall within a modelled area of shoreline loading (>5% probability of >100g/m²) have received an elevated priority based on Emperor Energy's modelled worst-case spill scenarios. The areas with probability >5% are the ones within the region which have the greatest probability of impact. These elevated probabilities across the region cumulate to form the 18% probability for the East Gippsland to be impacted over time. It is reasonable to assume that these are the areas where it is more possible to see a result of shoreline loading of >100g/m² over time.

1.4 Categorisation

The identified sensitivities within the East Gippsland region have been assessed and categorised into four distinct groupings. Grouping these areas by category allows for a more efficient approach to implement recommended response strategies and the associated resource requirements. Sensitivity areas of the same category within the EGRRP are likely to have consistent initial response actions and resource requirements to execute the actions. The categories used here are based on substrate type and geographic size/scale of openings to waterways.

Category 1:

Estuarine – Man Made Structures: An estuarine habitat which has been augmented by man-made structures such as concrete or rock walls.

Category 2:

Estuarine – Sand – Large: A naturally occurring estuarine habitat which may shift tidally or seasonally to be an outfall or inflow with an opening area of greater than approximately 150m.

Category 3:

Estuarine – Sand – Small: A naturally occurring estuarine habitat which may shift tidally or seasonally to be an outfall or inflow with an opening area of less than approximately 150m.

Category 4:

Natural Rock: A naturally occurring rock formation or outcrop, typically exposed to the elements and open oceanographic conditions.

1.5 Traditional Owners

In accordance with the Australian Institute of Aboriginal and Torres Strait Islander Studies (AIATSIS) the Traditional Owner groups within the East Gippsland region include the Kurnai (*var.* Gunai / Kurnai, Gunnai, Ganai / Gaanay / Kurnay) and the Bidwell (*var.* Bidhawal, Birdhawal, Birtowall, Bidwill, Bidwelli, Biduelli, Beddiwell, Bida:wal) Peoples. Traditional Owners play a critical role in shoreline response operations, as shorelines often contain culturally significant sites, sensitive ecosystems, and important resources. Traditional Owners may support shoreline operations through:

- Identification of culturally significant sites and sensitive areas
- Provision of local environmental and cultural knowledge
- Guidance on site access permissions and culturally appropriate access
- Advice on impacts from ground disturbances and clean-up activities

It is important to note that the ownership of Country in reference to Traditional Owner groups in Australia is often not well documented with defined boundaries. The Kurnai and Bidwell groups may not account for all Traditional Owner groups with connection to Country in this region. Other groups with significant connections include, but may not be limited to, the Ngarigo (*var.* Nindi-Ngujarn Ngarigo Monero) and the Yuin (*var.* Djuwin, Juwin, or South Coast people) Peoples.

First Peoples – State Relations Victoria should be contacted for further clarification and information.

1.6 Resourcing Overview

To support a protracted response across multiple locations, consideration should be made for the identification and secured access to Forward Operating Base (FOB) locations as well as adequately accessible/sized lay down areas for equipment. Subject to the different areas of response and their proximity to one another, the number of FOBs and additional personnel and equipment resourcing requirements (i.e. FOB Lead, Site Logistics coordinator(s), safety and security officers, site/facility equipment) will need to be considered.

Note that Section 5 of the OPEP presents the equipment required for the response strategies based on the spill modelling results, which predicts a small volume of MDO or gas condensate accumulating over a short section of the East Gippsland shoreline.

1.6.1 Resourcing Descriptions

Table 2 and Table 3 provide role descriptions and availability for the personnel and equipment resourcing listed within the Minimum Resource Requirements ([2.1.2](#), [2.2.8](#), [2.3.12](#), [2.4.3](#)) for each respective category.

Table 2: Personnel resourcing descriptions for requirements identified in the EGRRP

ROLE	AVAILABILITY	DESCRIPTION
Site Supervisors	AMOSC staff, AMOSC Core Group, State Response Team or other qualified individuals.	Experienced Subject Matter Expert (SME) with responsibility for oversight of all operational activities within their designated response area.
Activity Leads (shoreline response)	AMOSC staff, AMOSC Core Group, State Response Team or other qualified individuals.	SME or trained responder responsible for the execution and leadership of a team completing response actions.

ROLE	AVAILABILITY	DESCRIPTION
team leader)		
General Responders	AMOSC staff, AMOSC Core Group, State Response Team, unskilled labour hire, or other competent and physically capable personnel.	Team members who are competent (via just-in-time training) and physically capable of completing delegated response actions.
SCAT Team	AMOSC staff, AMOSC Core Group, State Response Team or other qualified individuals.	A team comprised of a minimum of 3x personnel, including 1x Team Lead and 2x Team Responders
Coxswain	AMOSC, AMOSC Core Group, State Response Team or other qualified marine contractors.	Minimum licencing requirement of Coxswain Near Coastal Grade 1.
Vessel Crew	AMOSC, AMOSC Core Group, State Response Team or other qualified marine contractors.	Insured, competent and physically capable personnel to support marine vessel response activities.

Table 3: Equipment resourcing descriptions for requirements identified in the EGRRP

EQUIPMENT	AVAILABILITY	DESCRIPTION
Shore Sealing Boom	State, AMOSC, National Plan	Used for protection and deflection activities in low current nearshore waters. Unsuitable for abrasive environments.
Nearshore Boom	State, AMOSC, National Plan	Nearshore boom used for protection and deflection activities. Different types include; Self-Inflating, General Purpose, and Solid Flotation.
Nearshore Anchor Kit	AMOSC	Ancillaries needed for the deployment of nearshore booming systems. Including tow bridles, anchors, rope lengths and floats.
Shoreline Anchor Kit	AMOSC	Ancillaries needed for the deployment of shore sealing boom. Including all equipment needed for anchoring and inflation.
Sorbent Boom	AMOSC	Lengths of textile boom filled with oleophilic absorbent material.
Temporary Waste Storage	AMOSC, Local Suppliers	Self-contained temporary storage for waste. For planning purposes one unit of temporary waste storage equals 1m ³ .
Site Set-Up Kit	AMOSC, Local Suppliers	Dedicated site setup kit intended to support up to 30 personnel in the initial stages of a response.
Decontamination Kit	AMOSC, Local Suppliers	Dedicated decontamination kit intended to support up to 30 personnel in the initial stages of a response.
VHF Radio Communications	AMOSC	Inter-team radio communication. For planning purposes 1 VHF Radio Communications equals 1 handheld radio.
Satellite Phone	Suppliers	Used for communications when operating in areas with remote access and unreliable cellular services.
PPE Kit	AMOSC, Local Suppliers	AMOSC PPE Container with contents to support 50 responders for 5 days.

EQUIPMENT	AVAILABILITY	DESCRIPTION
Shoreline Pre-clean Hand Tools and Ancillaries	Local suppliers	Hand tools (rakes, shovels) and ancillaries (buckets, wheelbarrows) to support pre-clean and response operations.

1.7 Regional Contact Information

The directory below (Table 43) identifies the primary authorities, land managers, and stakeholders within the East Gippsland region. These contacts are essential for response personnel to facilitate timely notifications, mobilise local support and coordinate response efforts.

Table 4: Contact information for key stakeholders within the East Gippsland Region

ORGANISATION	DETAILS	ORGANISATION	DETAILS
Police, Fire, Ambulance	Emergency: 000	State Emergency Services	13 25 00
First Peoples – State Relations	1800 762 003	Gippsland Ports (Marine Pollution Reporting Line)	(03) 5150 0500
EPA Victoria	1300 372 842	East Gippsland Shire Council	(03) 5153 9500
DEECA (Victoria) Vic Emergency Hotline	1800 226 226	East Gippsland Catchment Management Authority	(03) 5152 1184
Parks Victoria	13 19 63		

Note: local information regarding relevant contacts is available within each sensitivity summary.

1.8 Region Overview Map

Figure 1 provides an overview map of the identified sensitivities within the East Gippsland Region. Included within is the location of the region as indicated in the statewide map and each sensitivity listed with the inclusion of prioritisation and category as detailed in the legend.

A summary table of key locations captured within the EGRRP can be found at (Attachment 1 - Location Coordinates Summary).

Section 1.5 of the OPEP illustrates the sections of the East Gippsland shoreline predicted by the spill modelling to be contacted by MDO and gas condensate during the summer and winter metocean seasons (at the actionable threshold of 100 g/m²), with each map noting the predicted probability of contact, times to shoreline accumulation, volume on shoreline and length of shoreline impacted.

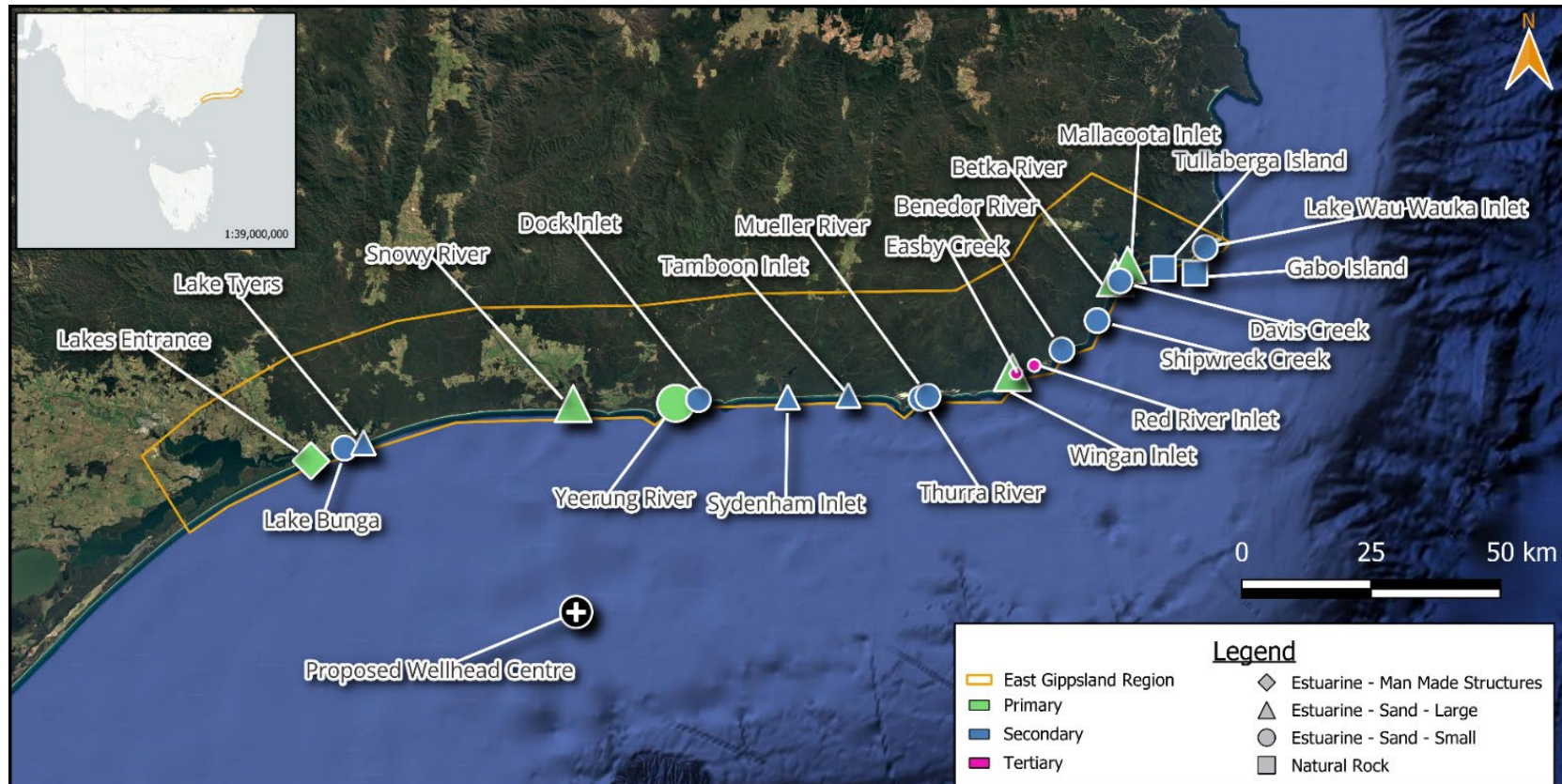


Figure 1: Overview map of the identified sensitivities within the East Gippsland Region

Primary		Secondary		Tertiary	
◆	Lakes Entrance	●	Lake Bunga	●	Easby Creek
▲	Snowy River	▲	Lake Tyers	●	Red River Inlet
●	Yeerung River	●	Dock Inlet		
▲	Wingan Inlet	▲	Sydenham Inlet		
▲	Betka River	▲	Tamboon Inlet		
▲	Mallacoota Inlet	●	Thurra River		
		●	Mueller River		

2 IDENTIFIED AREAS OF SENSITIVITY

2.1 Category 1: Estuarine – Man Made Structures ♦

The following section is the area which has been categorised in the East Gippsland Region as Estuarine – Man Made Structures. The area summary includes details of the location, local contact information, the main sensitivities in the area and initial response actions.

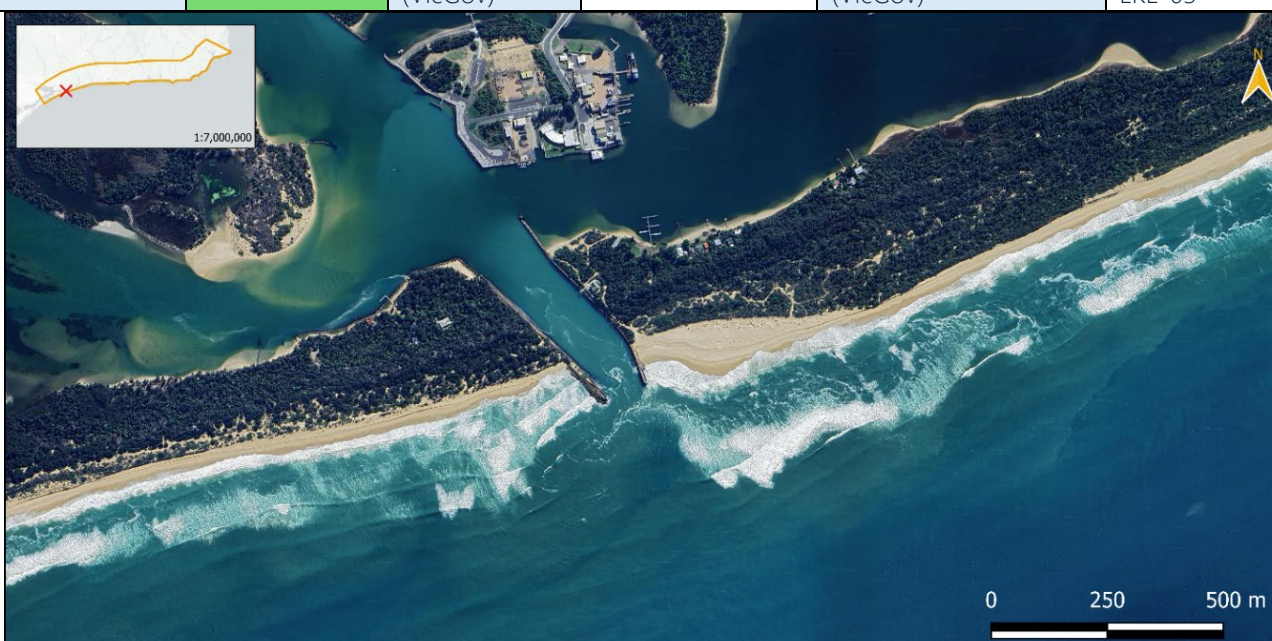
- Location details are to be utilised to coordinate where response efforts are being undertaken.
- Local contacts are for reference as and when necessary for support to response efforts.
- Main sensitivities are the listed known sensitivities at the time of plan development which require protection. Additional sensitivities may possibly be identified through response efforts and should be included in operational NEBA / SIMA planning processes.
- Initial response actions are those which should be undertaken if it has been determined that receptors in this region are likely to be significantly impacted through deterministic oil spill trajectory modelling.

Identified areas within this section include:

- Lakes Entrance

Equipment and personnel resourcing requirements to respond to the areas in this category can be found within Category 1: Minimum Resource Requirements.

2.1.1 Lakes Entrance

Location Detail					
Priority	Primary	Sector: (VicGov)	Lakes Entrance	Segment_ID: (VicGov)	LKE-02 – LKE-03
					
Coordinates:		<u>-37.890604, 147.973082</u>			
Local Contacts					
DEECA Bairnsdale	(03) 5152 0400	Community Health Gippsland Lakes	(03) 5155 8300		
Police Lakes Entrance Police	(03) 5155 1206	Regional Health Bairnsdale	(03) 5150 3333		
Main Sensitivities					
Ecological:	Recognised RAMSAR site, marine flora and fauna, marshes, wetlands, estuarine marine habitats, shorebird/seabird colonies.				
Socio-Economic:	Amenity beaches, Surf club, commercial fishing, tourism, dive sites, recreational aquatic activities, waterway amenity access.				
Cultural:	The Gunaikurnai People identify Lakes Entrance as a part of their Traditional Country. First Peoples-State Relations Victoria should be consulted prior to engaging in any operational tasks.				
Initial Response Actions					
First Task	Conduct aerial overflight to determine: - the presence of the above sensitivities and the need for shoreline response. - if pre-cleaning of shoreline will improve spill response efforts by minimising waste volumes. Capture images, locations, and determine width / depth of opening(s).				
Second Task	Pre-clean of shoreline through manual removal of debris to above the high tide area.				
Third Task	Establish protection, deflection, or sorbent booms using vessels to position booming systems if deemed appropriate.				
Fourth Task	Conduct assessment of impacted shoreline utilising guidance from Shoreline Treatment Recommendations for further shoreline response actions.				
Oiled Wildlife Response	The presence of negatively affected wildlife or wildlife with high potential of being impacted across all response efforts triggers the initiation of the Victorian Emergency Animal Welfare Plan (DEECA).				

2.1.2 Category 1: Minimum Resource Requirements

The resources in the tables below are the minimum resources required to complete the initial response actions for the sensitivity categorized as 'Estuarine – Man Made Structures'. In the event of a spill, deterministic modelling is to be acquired by the IMT to support situational awareness and response planning. If deterministic modelling indicates direct impact with the Lakes Entrance Estuary area, the below resources should be considered at a minimum to support a response in this area.

Direct response interventions are typically required in areas where shoreline loading of hydrocarbons are expected to exceed 100 g/m² (NOPSEMA Oil Pollution Risk Management Guidance Note, March 31, 2026 – Environment Bulletin, 2019²).

Resourcing requirements will need to be scaled proportionately to the number of receptors and area of shoreline impacted. Additional shoreline clean-up equipment may be required to support selected shoreline clean-up techniques. These resources should be identified during the development of the IAP-subplan for shoreline response operations and sourced accordingly.

Table 5: Minimum resource requirements for response at the area identified within Category 1: Estuarine – Man Made Structures.

Personnel Resources	
Site Supervisors	1
Activity Leads	3
General Responders	15
SCAT Team	1
Coxswain	2
Vessel Crew	2
Vehicle / Vessel Resources	
Vessel of opportunity – workboat, <u>shallow draft</u>	1
Vessel of opportunity – workboat	1*
Utility Task Vehicle (UTV)	2*
Response Equipment Resources	
Near Shore Boom	10 x 25m lengths*
Near Shore Anchor Kit	6*
Shoreline Anchor Kit	2*
Sorbent Boom	250 m*
Temporary Waste Storage	4*
Site Set-Up Kit	2*
Standard Decontamination Kit	2*
VHF Radio Communications	6*
Satellite Phone	1
PPE Kit	1*
Shoreline Pre-clean Hand Tools and Ancillaries	1

*Denotes equipment availability via AMOSC.

² NOPSEMA Oil Pollution Risk Management N-04750-GN-1488 A382148 March 31, 2026

2.1.3 Category 1: Resource Logistics

The resources provided above can be mobilised in part with support from AMOSC. The table below includes the indicative timings for equipment movements from AMOSC Geelong warehouse to the location captured within Category 1: Estuarine – Man Made Structures.

Table 6: Indicative timings for logistics movements of equipment for Category 1: Estuarine - Man Made Structures.

LOCATION	CLOSEST TOWN	DISTANCE	TRAVEL TIME	TOTAL TIME
Lakes Entrance	Lakes Entrance	386 km	< 6 hours	< 12 hours

Assumptions made for the indicative timings include:

- AMOSC has been activated with a signed contract note.
- Road transport timings are +/-10% due to road works, increased/decreased traffic, etc.
- Emperor Energy or other supporting agencies are responsible to organise staging area locations and forklift for unloading at delivery site.
- Timings represented below include initial timing for organising trucks to AMOSC Geelong warehouse (+4 hours), loading time (+1.5 hours), and transport time from AMOSC warehouse to the nearest town to the location but not specifically at the shoreline area that may be impacted.
- Additional time will need to be considered for unloading and transport time to FOBs.
- All equipment listed will fit on a semi-trailer or a B-Double, depending on quantities required.

2.2 Category 2: Estuarine – Sand – Large ▲

The following sections are the areas which have been categorised in the East Gippsland Region as Estuarine – Sand – Large. The area summaries include details of the location, local contact information, the main sensitivities in each of the areas and initial response actions.

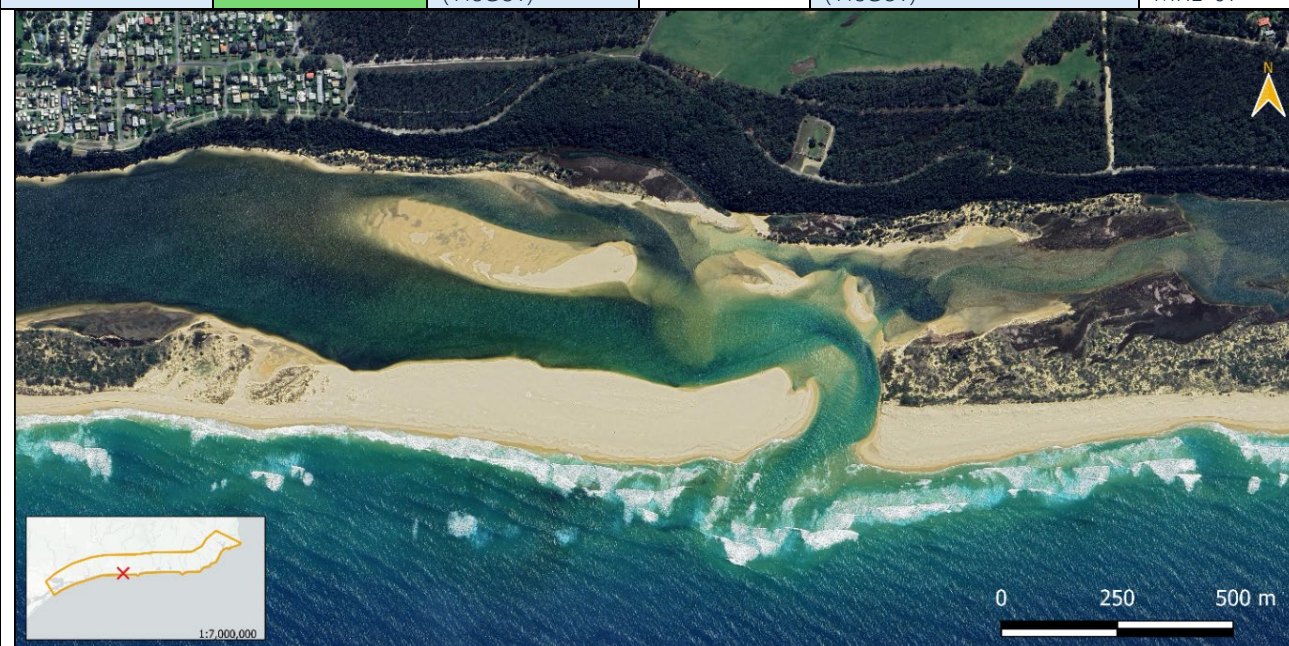
- Location details are to be utilised to coordinate where response efforts are being undertaken.
- Local contacts are for reference as and when necessary for support to response efforts.
- Main sensitivities are the listed known sensitivities at the time of plan development which require protection. Additional sensitivities may possibly be identified through response efforts and should be included in operational NEBA / SIMA planning processes.
- Initial response actions are those which should be undertaken if it has been determined that receptors in this region are likely to be significantly impacted through deterministic oil spill trajectory modelling.

Identified areas within this section include:

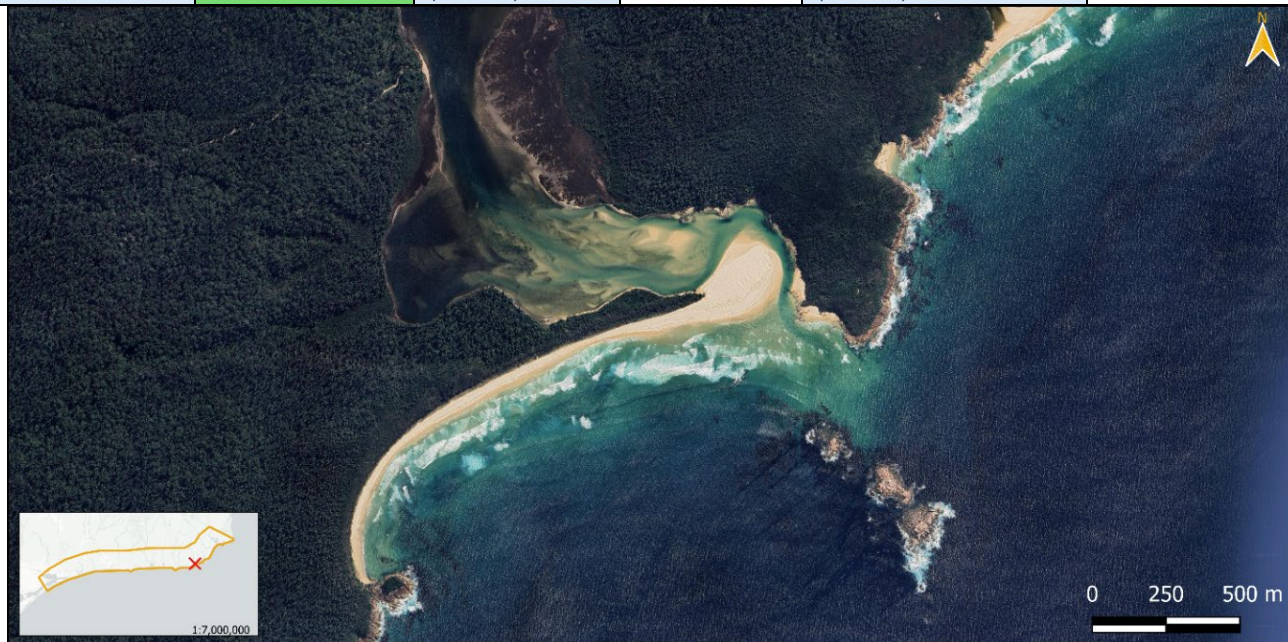
- [Snowy River](#)
- [Wingan Inlet](#)
- [Betka River](#)
- [Mallacoota Inlet](#)
- [Lake Tyers](#)
- [Sydenham Inlet](#)
- [Tamboon Inlet](#)

Equipment and personnel resourcing requirements to respond to **one** of the areas in this category can be found within [Category 2: Minimum Resource Requirements](#). In the event more than one location is at the risk of being impacted concurrently, the necessary type and number of resources must be calculated based on real-time incident information and the area(s) of response that have been prioritised.

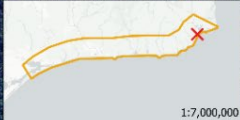
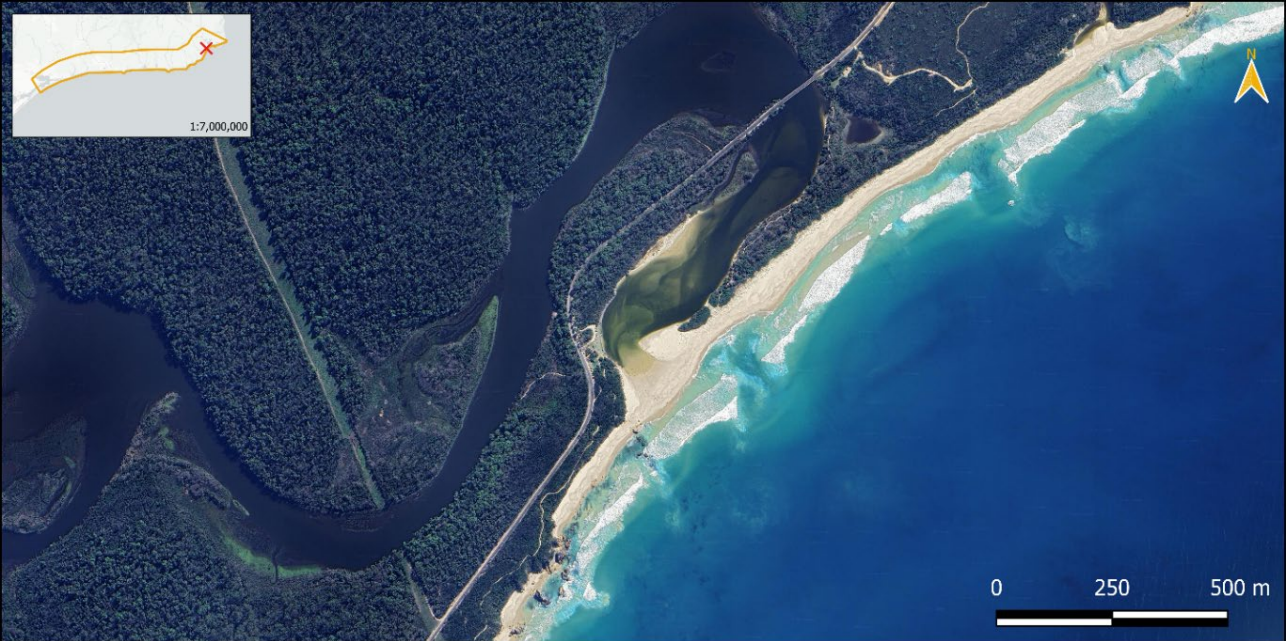
2.2.1 Snowy River

Location Detail					
Priority	Primary	Sector: (VicGov)	Marlo	Segment_ID: (VicGov)	MRL-06 – MRL-07
					
Coordinates:	<u>-37.803403, 148.549061</u>				
Local Contacts					
DEECA Orbost	(03) 5161 1222	Community Health	Not available		
Police Orbost Police	(03) 5154 1073	Regional Health Orbost	(03) 5154 6666		
Main Sensitivities					
Ecological:	Dunes, marshes, wetlands, shorebird/seabird colonies, estuarine marine habitats, site of geological significance.				
Socio-Economic:	Amenity beach, commercial and recreational fishing/boating, tourism.				
Cultural:	The Gunaikurnai People identify Snowy River as a part of their Traditional Country. First Peoples-State Relations Victoria should be consulted prior to engaging in any operational tasks.				
Initial Response Actions					
First Task	Conduct aerial overflight to determine • if watercourse is open or closed to ingress from open ocean. • the presence of the above sensitivities and the need for shoreline response. • if pre-cleaning of shoreline will improve spill response efforts by minimizing waste volumes. Capture images, locations, and determine width / depth of opening(s).				
Second Task	Pre-clean of shoreline through manual removal of debris to above the high tide area if deemed necessary.				
Third Task	Physically close the waterway through protection, deflection, or sorbent booms using vessels or equipment to position barrier systems if deemed appropriate.				
Fourth Task	Conduct assessment of impacted shoreline utilising guidance from Shoreline Treatment Recommendations for further shoreline response actions.				
Oiled Wildlife Response	The presence of negatively affected wildlife or wildlife with high potential of being impacted across all response efforts triggers the initiation of the Victorian Emergency Animal Welfare Plan (DEECA).				

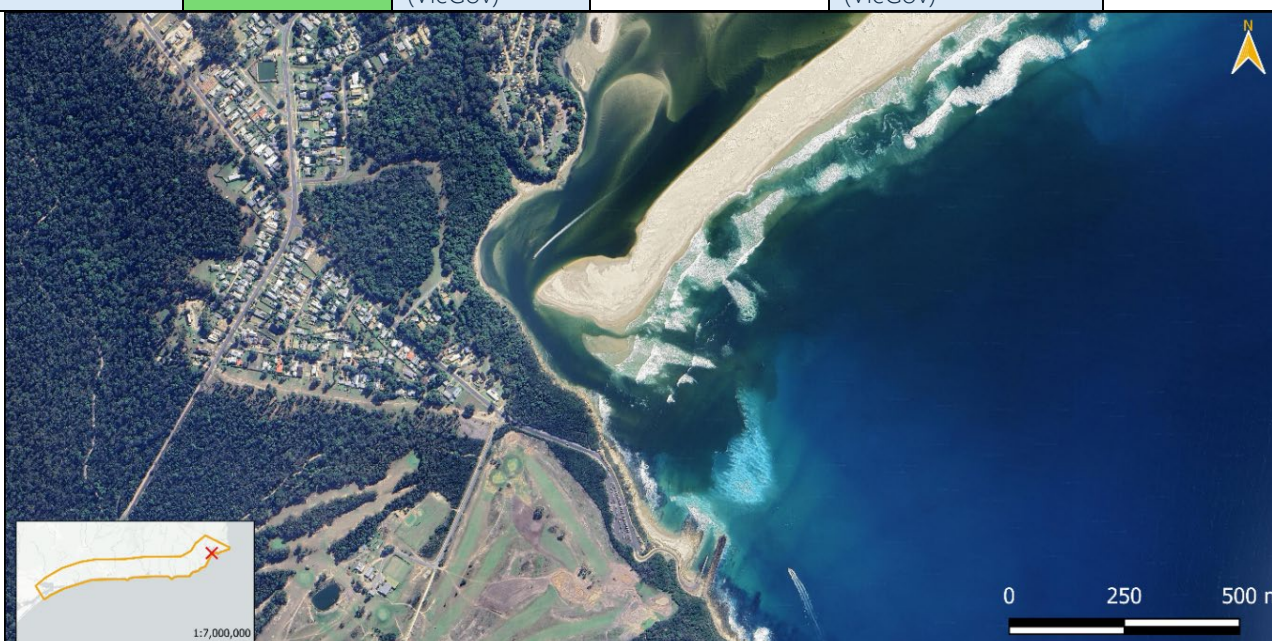
2.2.2 Wingan Inlet

Location Detail					
Priority	Primary	Sector: (VicGov)	Point Hicks	Segment_ID: (VicGov)	WGP-01 – WGP-03
					
Coordinates:		-37.749159, 149.513391			
Local Contacts					
DEECA Cann River	(03) 5161 1222	Community Health Cann River Nursing	(03) 5168 6210		
Police Cann River Police	(03) 5158 6202	Regional Health Orbost	(03) 5154 6666		
Main Sensitivities					
Ecological:	Dunes, marshes, wetlands, shorebird/seabird colonies, estuarine marine habitats, intertidal rocky shores, emergent vegetation.				
Socio-Economic:	Camping, recreational fishing, tourism.				
Cultural:	The Bidwell People and other Traditional Owner groups identify the Croajingolong National Park as their traditional country. First Peoples-State Relations Victoria should be consulted prior to engaging in any operational tasks.				
Initial Response Actions					
First Task	Conduct aerial overflight to determine - if watercourse is open or closed to ingress from open ocean. - the presence of the above sensitivities and the need for shoreline response. - if pre-cleaning of shoreline will improve spill response efforts by minimizing waste volumes. Capture images, locations, and determine width / depth of opening(s).				
Second Task	Pre-clean of shoreline through manual removal of debris to above the high tide area if deemed necessary.				
Third Task	Physically close the waterway through protection, deflection, or sorbent booms using vessels or equipment to position barrier systems if deemed appropriate.				
Fourth Task	Conduct assessment of impacted shoreline utilising guidance from Shoreline Treatment Recommendations for further shoreline response actions.				
Oiled Wildlife Response	The presence of negatively affected wildlife or wildlife with high potential of being impacted across all response efforts triggers the initiation of the Victorian Emergency Animal Welfare Plan (DEECA).				

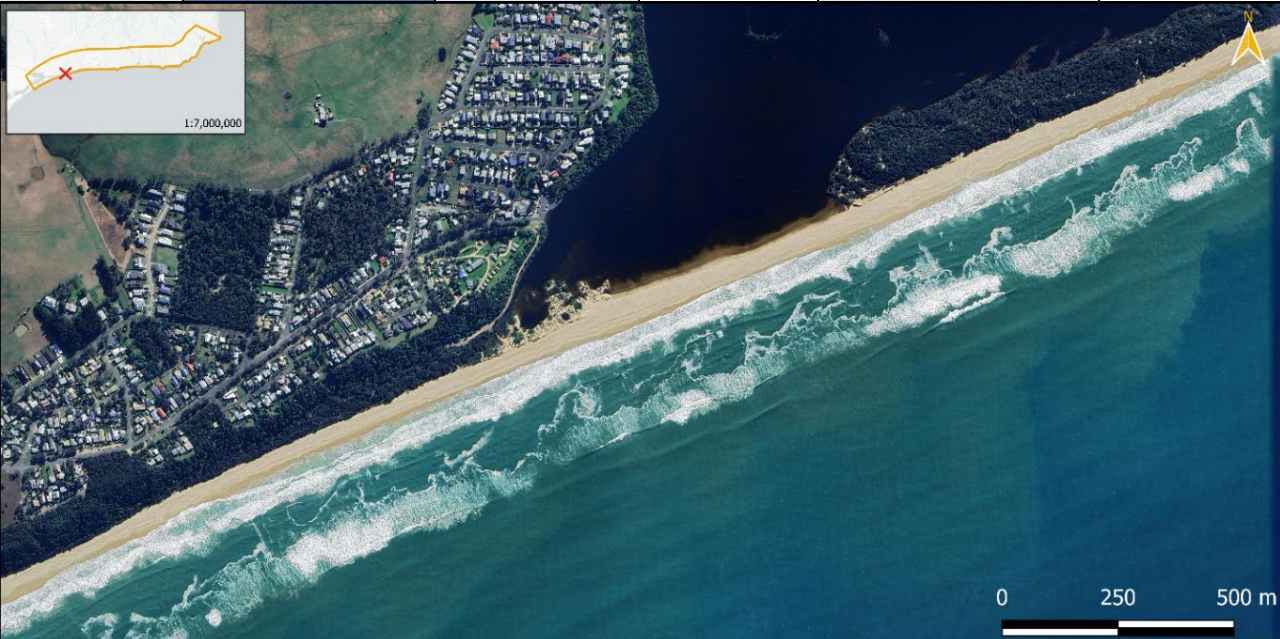
2.2.3 Betka River

Location Detail					
Priority	Primary	Sector: (VicGov)	Mallacoota	Segment_ID: (VicGov)	MCT-06
 					
Coordinates:		<u>-37.585089, 149.739328</u>			
Local Contacts					
DEECA Cann River	(03) 5161 1222	Community Health Mallacoota Medical	(03) 5158 0777		
Police Mallacoota Police	(03) 5158 0280	Regional Health Orbost	(03) 5154 6666		
Main Sensitivities					
Ecological:	Estuarine marine habitat, mud flats and sand, mangroves				
Socio-Economic:	Amenity beach, recreational fishing				
Cultural:	The Bidwell People and other Traditional Owner groups identify the Mallacoota region as their traditional country. First Peoples-State Relations Victoria should be consulted prior to engaging in any operational tasks.				
Initial Response Actions					
First Task	Conduct aerial overflight to determine • if watercourse is open or closed to ingress from open ocean. • the presence of the above sensitivities and the need for shoreline response. • if pre-cleaning of shoreline will improve spill response efforts by minimizing waste volumes. Capture images, locations, and determine width / depth of opening(s).				
Second Task	Pre-clean of shoreline through manual removal of debris to above the high tide area if deemed necessary.				
Third Task	Physically close the waterway through protection, deflection, or sorbent booms using vessels or equipment to position barrier systems if deemed appropriate.				
Fourth Task	Conduct assessment of impacted shoreline utilising guidance from Shoreline Treatment Recommendations for further shoreline response actions.				
Oiled Wildlife Response	The presence of negatively affected wildlife or wildlife with high potential of being impacted across all response efforts triggers the initiation of the Victorian Emergency Animal Welfare Plan (DEECA).				

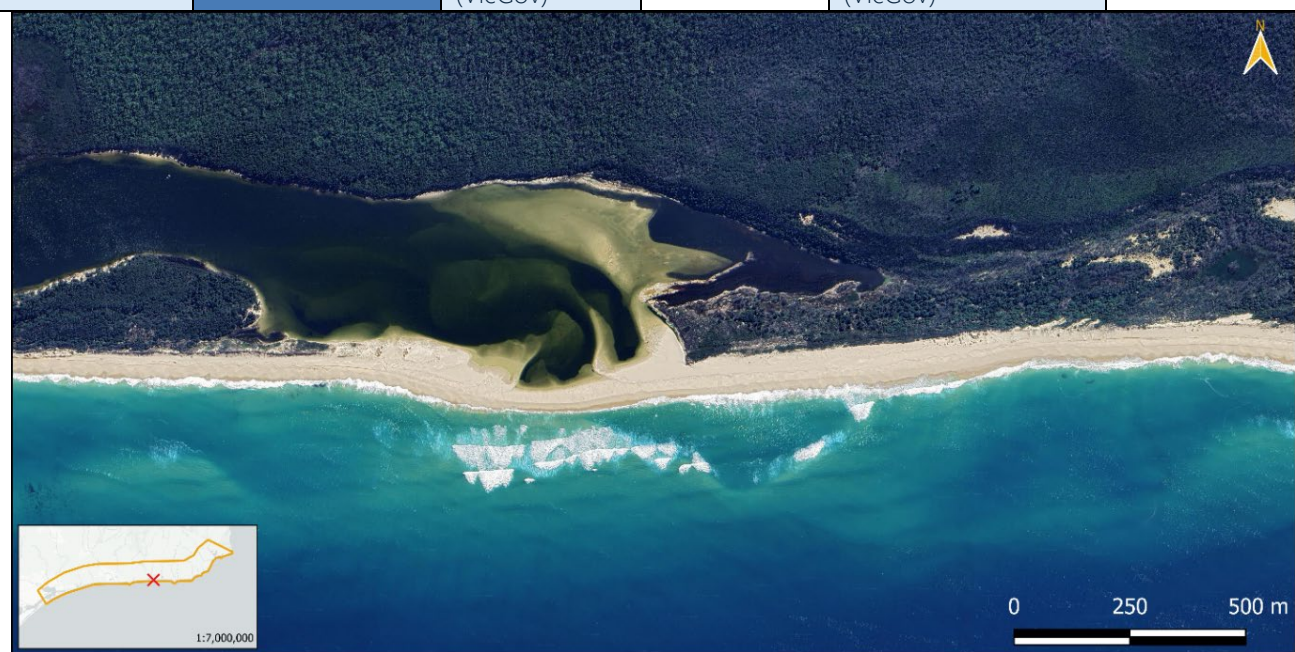
2.2.4 Mallacoota Inlet

Location Detail					
Priority	Primary	Sector: (VicGov)	Mallacoota	Segment_ID: (VicGov)	MCT-08
					
Coordinates:		-37.563159, 149.766552			
Local Contacts					
DEECA Cann River	(03) 5161 1222	Community Health Mallacoota Medical	(03) 5158 0777		
Police Mallacoota Police	(03) 5158 0280	Regional Health Orbost	(03) 5154 6666		
Main Sensitivities					
Ecological:	Dunes, marshes, wetlands, shorebird/seabird colonies, estuarine marine habitats, intertidal marshes and mudflats, mangroves.				
Socio-Economic:	Recreational & commercial vessel operations, shipwrecks, tourism, recreational fishing, amenity beaches.				
Cultural:	The Bidwell People and other Traditional Owner groups identify Mallacoota Inlet as their traditional country. First Peoples-State Relations Victoria should be consulted prior to engaging in any operational tasks.				
Initial Response Actions					
First Task	Conduct aerial overflight to determine • if watercourse is open or closed to ingress from open ocean. • the presence of the above sensitivities and the need for shoreline response. • if pre-cleaning of shoreline will improve spill response efforts by minimizing waste volumes. Capture images, locations, and determine width / depth of opening(s).				
Second Task	Pre-clean of shoreline through manual removal of debris to above the high tide area if deemed necessary.				
Third Task	Physically close the waterway through protection, deflection, or sorbent booms using vessels or equipment to position barrier systems if deemed appropriate.				
Fourth Task	Conduct assessment of impacted shoreline utilising guidance from Shoreline Treatment Recommendations for further shoreline response actions.				
Oiled Wildlife Response	The presence of negatively affected wildlife or wildlife with high potential of being impacted across all response efforts triggers the initiation of the Victorian Emergency Animal Welfare Plan (DEECA).				

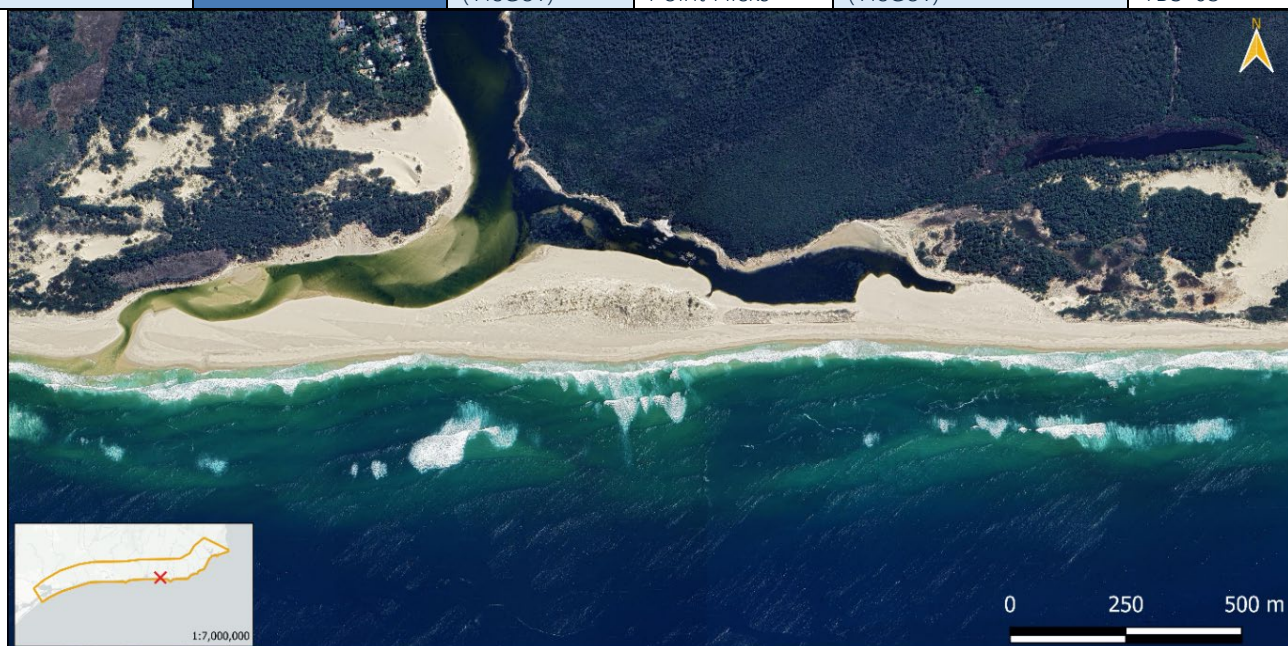
2.2.5 Lake Tyers

Location Detail					
Priority	Secondary	Sector: (VicGov)	Lake Tyers	Segment_ID: (VicGov)	LTY-03
					
Coordinates:		<u>-37.859384, 148.088484</u>			
Local Contacts					
DEECA Bairnsdale	(03) 5152 0400		Community Health Gippsland Lakes	(03) 5155 8300	
Police Lakes Entrance Police	(03) 5155 1206		Regional Health Bairnsdale	(03) 5150 3333	
Main Sensitivities					
Ecological:	Estuarine marine habitats, bird life.				
Socio-Economic:	Fishing, amenity beach, tourism, areas of cultural significance to the traditional owners.				
Cultural:	The Gunaikurnai People identify Lake Tyers as a part of their Traditional Country. First Peoples-State Relations Victoria should be consulted prior to engaging in any operational tasks.				
Initial Response Actions					
First Task	Conduct aerial overflight to determine - if watercourse is open or closed to ingress from open ocean. - the presence of the above sensitivities and the need for shoreline response. - if pre-cleaning of shoreline will improve spill response efforts by minimizing waste volumes. Capture images, locations, and determine width / depth of opening(s).				
Second Task	Pre-clean of shoreline through manual removal of debris to above the high tide area if deemed necessary.				
Third Task	Physically close the waterway through protection, deflection, or sorbent booms using vessels or equipment to position barrier systems if deemed appropriate.				
Fourth Task	Conduct assessment of impacted shoreline utilising guidance from Shoreline Treatment Recommendations for further shoreline response actions.				
Oiled Wildlife Response	The presence of negatively affected wildlife or wildlife with high potential of being impacted across all response efforts triggers the initiation of the Victorian Emergency Animal Welfare Plan (DEECA).				

2.2.6 Sydenham Inlet

Location Detail					
Priority	Secondary	Sector: (VicGov)	Bemm River	Segment_ID: (VicGov)	BMR-06
					
Coordinates:	<u>-37.780447, 149.019796</u>				
Local Contacts					
DEECA Cann River	(03) 5161 1222	Community Health Cann River Nursing	(03) 5168 6210		
Police Mallacoota Police	(03) 5158 0280	Regional Health Orbost	(03) 5154 6666		
Main Sensitivities					
Ecological:	Mud flats and marshes; wetlands; seagrass and aquatic water flora/fauna; coastal site of significance; estuarine marine habitats.				
Socio-Economic:	Popular tourist spot, cultural significance to the Aboriginal Traditional Owners of the land.				
Cultural:	The Gunaikurnai People identify Bemm River as a part of their Traditional Country. First Peoples-State Relations Victoria should be consulted prior to engaging in any operational tasks.				
Initial Response Actions					
First Task	Conduct aerial overflight to determine • if watercourse is open or closed to ingress from open ocean. • the presence of the above sensitivities and the need for shoreline response. • if pre-cleaning of shoreline will improve spill response efforts by minimizing waste volumes. Capture images, locations, and determine width / depth of opening(s).				
Second Task	Pre-clean of shoreline through manual removal of debris to above the high tide area if deemed necessary.				
Third Task	Physically close the waterway through protection, deflection, or sorbent booms using vessels or equipment to position barrier systems if deemed appropriate.				
Fourth Task	Conduct assessment of impacted shoreline utilising guidance from Shoreline Treatment Recommendations for further shoreline response actions.				
Oiled Wildlife Response	The presence of negatively affected wildlife or wildlife with high potential of being impacted across all response efforts triggers the initiation of the Victorian Emergency Animal Welfare Plan (DEECA).				

2.2.7 Tamboon Inlet

Location Detail					
Priority	Secondary	Sector: (VicGov)	Bemm River, Point Hicks	Segment_ID: (VicGov)	TBS-02 – TBS-03
					
Coordinates:	<u>-37.777586, 149.153086</u>				
Local Contacts					
DEECA Cann River	(03) 5161 1222	Community Health Cann River Nursing	(03) 5168 6210		
Police Mallacoota Police	(03) 5158 0280	Regional Health Orbost	(03) 5154 6666		
Main Sensitivities					
Ecological:	Mud flats and marshes; wetlands; seagrass and aquatic water flora/fauna; coastal site of significance; estuarine marine habitats.				
Socio-Economic:	Tourism, recreational fishing, areas of cultural significance to Traditional Owners.				
Cultural:	The Gunaikurnai, Bidwell and other Traditional Owner groups identify Tamboon Inlet as a part of their Traditional Country. First Peoples-State Relations Victoria should be consulted prior to engaging in any operational tasks.				
Initial Response Actions					
First Task	Conduct aerial overflight to determine • if watercourse is open or closed to ingress from open ocean. • the presence of the above sensitivities and the need for shoreline response. • if pre-cleaning of shoreline will improve spill response efforts by minimizing waste volumes. Capture images, locations, and determine width / depth of opening(s).				
Second Task	Pre-clean of shoreline through manual removal of debris to above the high tide area if deemed necessary.				
Third Task	Physically close the waterway through protection, deflection, or sorbent booms using vessels or equipment to position barrier systems if deemed appropriate.				
Fourth Task	Conduct assessment of impacted shoreline utilising guidance from Shoreline Treatment Recommendations for further shoreline response actions.				
Oiled Wildlife Response	The presence of negatively affected wildlife or wildlife with high potential of being impacted across all response efforts triggers the initiation of the Victorian Emergency Animal Welfare Plan (DEECA).				

2.2.8 Category 2: Minimum Resource Requirements

The resources in the tables below are the minimum resources required to complete the initial response actions for the sensitivity categorized as 'Estuarine – Sand – Large'. In the event of a spill, deterministic modelling is to be acquired by the IMT to support situational awareness and response planning. If deterministic modelling indicates direct impact with the sensitivity areas listed in [Category 2: Estuarine – Sand – Large ▲](#), the below resources should be considered at a minimum to support a response in one of these sensitivity areas.

Direct response interventions are typically required in areas where shoreline loading of hydrocarbons are expected to exceed 100 g/m² (NOPSEMA Oil Pollution Risk Management Guidance Note, March 31, 2026 – Environment Bulletin, 2019³).

Resourcing requirements will need to be scaled proportionately to the number of receptors and area of shoreline impacted. Additional shoreline clean-up equipment may be required to support selected shoreline clean-up techniques. These resources should be identified during the development of the IAP-subplan for shoreline response operations and sourced accordingly.

Table 7: Minimum resource requirements for response in one of the areas identified within Category 2: Estuarine - Sand – Large.

Personnel Resources	
Site Supervisors	1
Activity Leads	2
General Responders	14
SCAT Team	1
Coxswain	2
Vessel Crew	2
Vehicle / Vessel Resources	
Vessel of opportunity – workboat, <u>shallow draft</u>	2
Utility Task Vehicle (UTV)	2*
Response Equipment Resources	
Shore Sealing Boom	4 x 25m*
Near Shore Boom	8 x 25m*
Near Shore Anchor Kit	4*
Shoreline Anchor Kit	2*
Sorbent Boom	200m*
Temporary Waste Storage	2*
Site Set-Up Kit	1*
Standard Decontamination Kit	1*
VHF Radio Communications	2*
Satellite Phone	1
PPE Kit	1*
Shoreline Pre-clean Hand Tools and Ancillaries	1

*Denotes equipment availability via AMOSC

³ NOPSEMA Oil Pollution Risk Management N-04750-GN-1488 A382148 March 31, 2026

2.2.9 Category 2: Resource Logistics

The resources provided above can be mobilised in part with support from AMOSC. The table below includes the indicative timings for equipment movements from AMOSC Geelong warehouse to the location captured within Category 2: Estuarine – Sand – Large.

Table 8: Indicative timings for logistics movements of equipment for Category 2: Estuarine - Sand - Large.

LOCATION	CLOSEST TOWN	DISTANCE	TRAVEL TIME	TOTAL TIME
Snowy River	Marlo	452 km	< 6 hours	< 12 hours
Wingan Inlet	Cann River	512 km	< 6 hours	< 12 hours
Note: An additional 52 kilometres to the inlet from Cann River.				
Betka River	Mallacoota	589 km	< 8 hours	< 14 hours
Mallacoota Inlet	Mallacoota	589 km	< 8 hours	< 14 hours
Lake Tyers	Lake Tyers Beach	422 km	< 6 hours	< 12 hours
Sydenham Inlet	Bemm River	495 km	< 6 hours	< 12 hours
Tamboon Inlet	Cann River	512 km	< 6 hours	< 12 hours
Note: An additional 28 kilometres to the inlet from Cann River.				

Assumptions made for the indicative timings include:

- AMOSC has been activated with a signed contract note.
- Road transport timings are +/-10% due to road works, increased/decreased traffic, etc.
- Emperor Energy or other supporting agencies are responsible to organise staging area locations and forklift for unloading at delivery site.
- Timings represented below include initial timing for organising trucks to AMOSC Geelong warehouse (+4 hours), loading time (+1.5 hours), and transport time from AMOSC warehouse to the nearest town to the location but not specifically at the shoreline area that may be impacted.
- Where nearby town locations are not directly proximal to shoreline receptors additional notes are provided.
- Additional time will need to be considered for unloading and transport time to forward operating base(s).
- All equipment listed will fit on a semi-trailer or a B-Double, depending on quantities required.

2.3 Category 3: Estuarine – Sand – Small •

The following sections are the areas which have been categorised in the East Gippsland Region as Estuarine – Sand – Small. The area summaries include details of the location, local contact information, the main sensitivities in each of the areas and initial response actions.

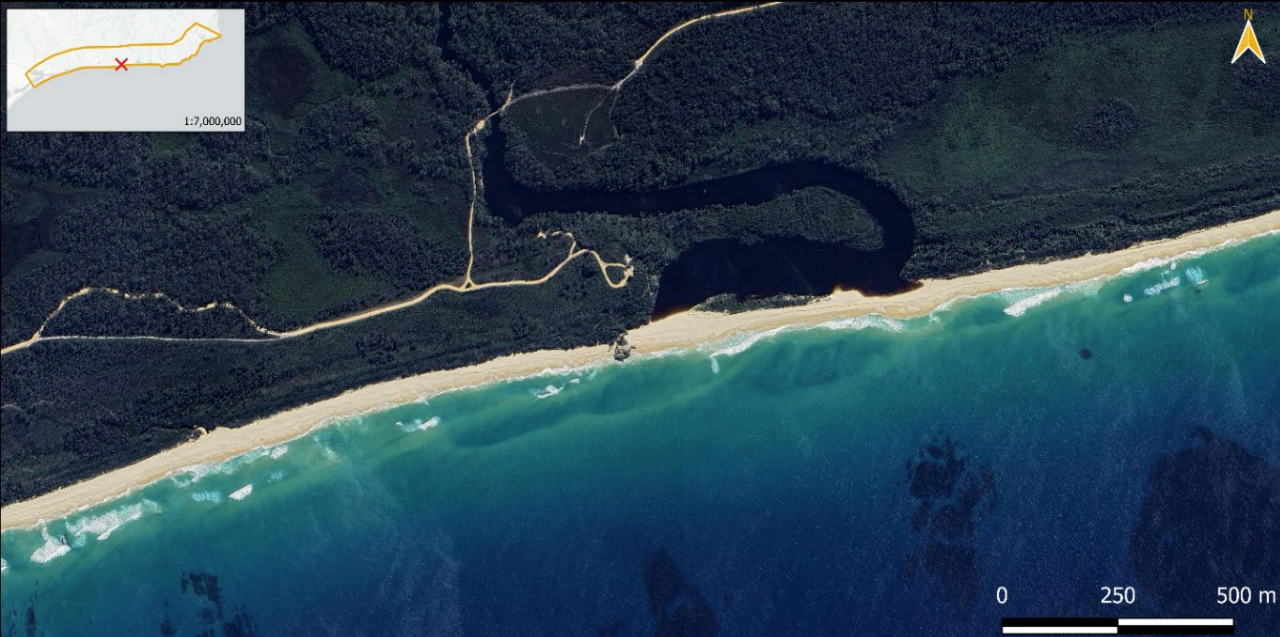
- Location details are to be utilised to coordinate where response efforts are being undertaken.
- Local contacts are for reference as and when necessary for support to response efforts.
- Main sensitivities are the listed known sensitivities at the time of plan development which require protection. Additional sensitivities may possibly be identified through response efforts and should be included in operational NEBA / SIMA planning processes.
- Initial response actions are those which should be undertaken if it has been determined that receptors in this region are likely to be significantly impacted through deterministic oil spill trajectory modelling.

Identified areas within this section include:

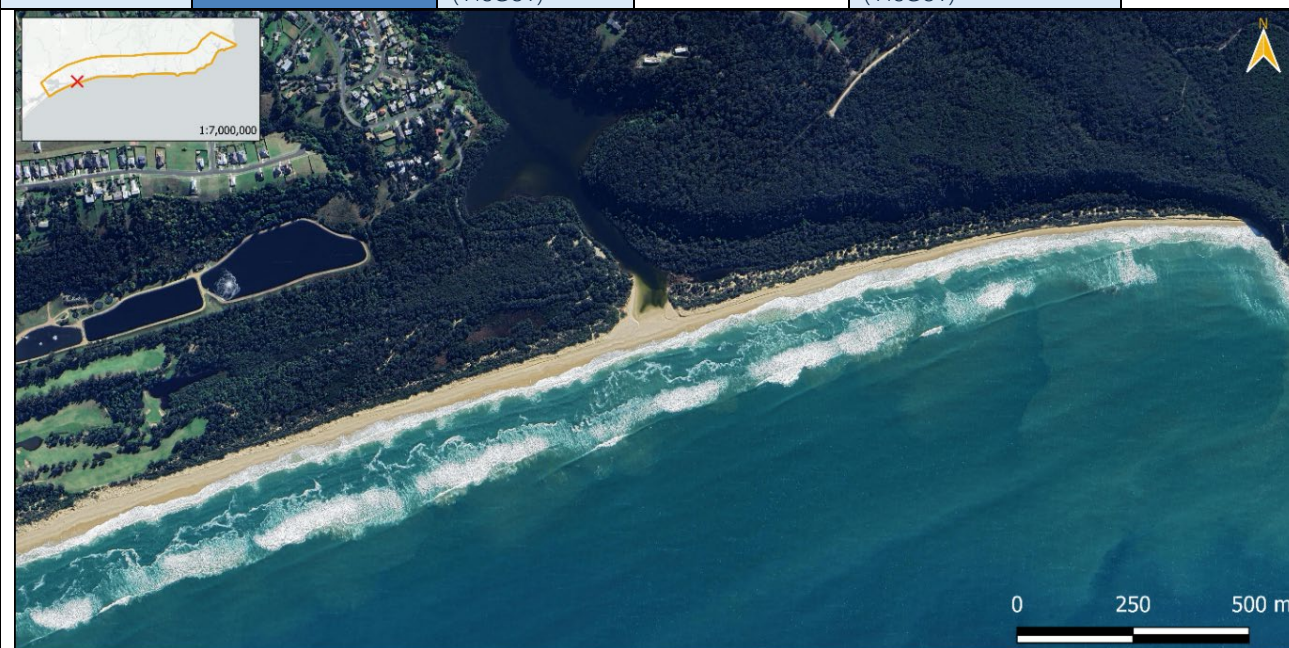
- [Yeerung River](#)
- [Lake Bunga](#)
- [Thurra River](#)
- [Mueller River](#)
- [Shipwreck Creek](#)
- [Davis Creek](#)
- [Dock Inlet](#)
- [Benedor River](#)
- [Lake Wau Wauka Inlet](#)
- [Easby Creek](#)
- [Red River Inlet](#)

Equipment and personnel resourcing requirements to respond to one of the areas in this category can be found within [Category 3: Minimum Resource Requirements](#). In the event more than one location is at the risk of being impacted concurrently, the necessary type and number of resources must be calculated based on real-time incident information and the area(s) of response that have been prioritised.

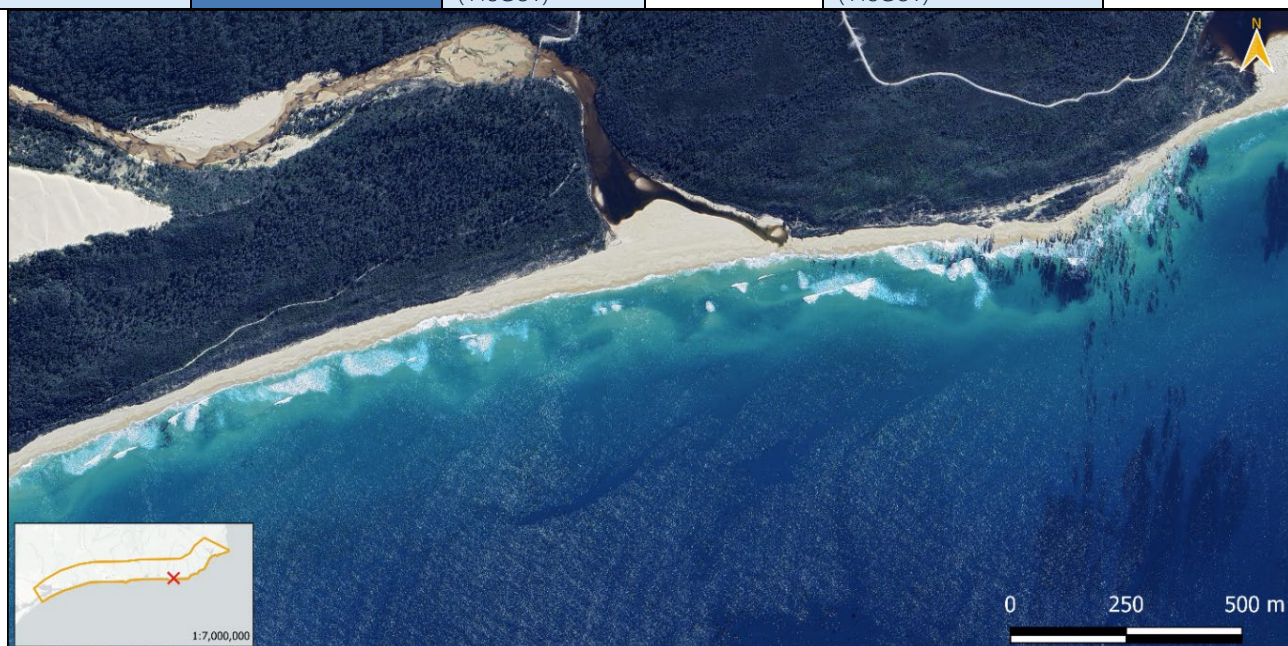
2.3.1 Yeerung River

Location Detail					
Priority	Primary	Sector: (VicGov)	Cape Conran	Segment_ID: (VicGov)	CCR-05
					
Coordinates:		<u>-37.791117, 148.774077</u>			
Local Contacts					
DEECA Cann River	(03) 5161 1222		Community Health	Not available	
Police Mallacoota Police	(03) 5158 0280		Regional Health Orbost	(03) 5154 6666	
Main Sensitivities					
Ecological:	Mud flats and marshes; wetlands; seagrass and aquatic water flora/fauna; coastal site of significance; estuarine marine habitats.				
Socio-Economic:	Popular tourist spot, areas of cultural significance to Traditional Owners.				
Cultural:	The Gunaikurnai, Bidwell and other Traditional Owner groups identify Yeerung River as a part of their Traditional Country. First Peoples-State Relations Victoria should be consulted prior to engaging in any operational tasks.				
Initial Response Actions					
First Task	Conduct aerial overflight to determine - if watercourse is open or closed to ingress from open ocean. - the presence of the above sensitivities and the need for shoreline response. - if pre-cleaning of shoreline will improve spill response efforts by minimizing waste volumes. Capture images, locations, and determine width / depth of opening(s).				
Second Task	Pre-clean of shoreline through manual removal of debris to above the high tide area if deemed necessary.				
Third Task	Physically close the waterway through protection, deflection, or sorbent booms using vessels or equipment to position barrier systems if deemed appropriate.				
Fourth Task	Conduct assessment of impacted shoreline utilising guidance from Shoreline Treatment Recommendations for further shoreline response actions.				
Oiled Wildlife Response	The presence of negatively affected wildlife or wildlife with high potential of being impacted across all response efforts triggers the initiation of the Victorian Emergency Animal Welfare Plan (DEECA).				

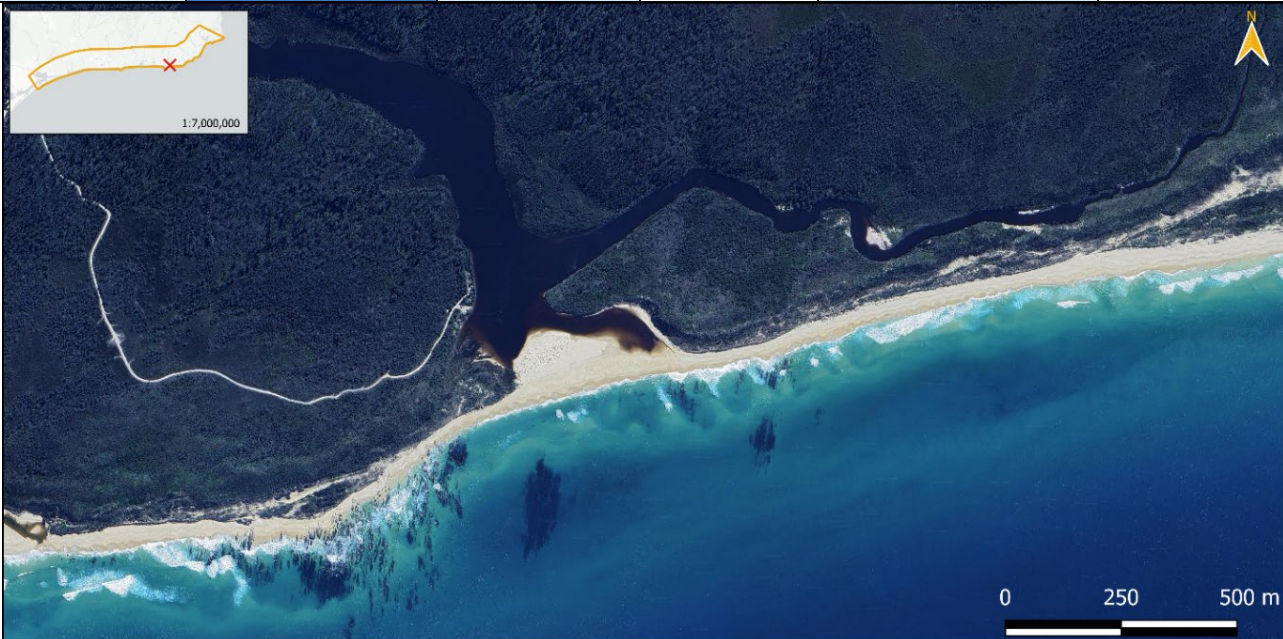
2.3.2 Lake Bunga

Location Detail					
Priority	Secondary	Sector: (VicGov)	Lakes Entrance	Segment_ID: (VicGov)	LKE-06
					
Coordinates:		<u>-37.868722, 148.046637</u>			
Local Contacts					
DEECA Bairnsdale	(03) 5152 0400	Community Health Gippsland Lakes	(03) 5155 8300		
Police Lakes Entrance Police	(03) 5155 1206	Regional Health Bairnsdale	(03) 5150 3333		
Main Sensitivities					
Ecological:	Estuarine marine habitats; bird life.				
Socio-Economic:	Popular tourist location, cultural significance to the traditional owners of the land.				
Cultural:	The Gunaikurnai People identify Lake Bunga as a part of their Traditional Country. First Peoples-State Relations Victoria should be consulted prior to engaging in any operational tasks.				
Initial Response Actions					
First Task	Conduct aerial overflight to determine • if watercourse is open or closed to ingress from open ocean. • the presence of the above sensitivities and the need for shoreline response. • if pre-cleaning of shoreline will improve spill response efforts by minimizing waste volumes. Capture images, locations, and determine width / depth of opening(s).				
Second Task	Pre-clean of shoreline through manual removal of debris to above the high tide area if deemed necessary.				
Third Task	Physically close the waterway through protection, deflection, or sorbent booms using vessels or equipment to position barrier systems if deemed appropriate.				
Fourth Task	Conduct assessment of impacted shoreline utilising guidance from Shoreline Treatment Recommendations for further shoreline response actions.				
Oiled Wildlife Response	The presence of negatively affected wildlife or wildlife with high potential of being impacted across all response efforts triggers the initiation of the Victorian Emergency Animal Welfare Plan (DEECA).				

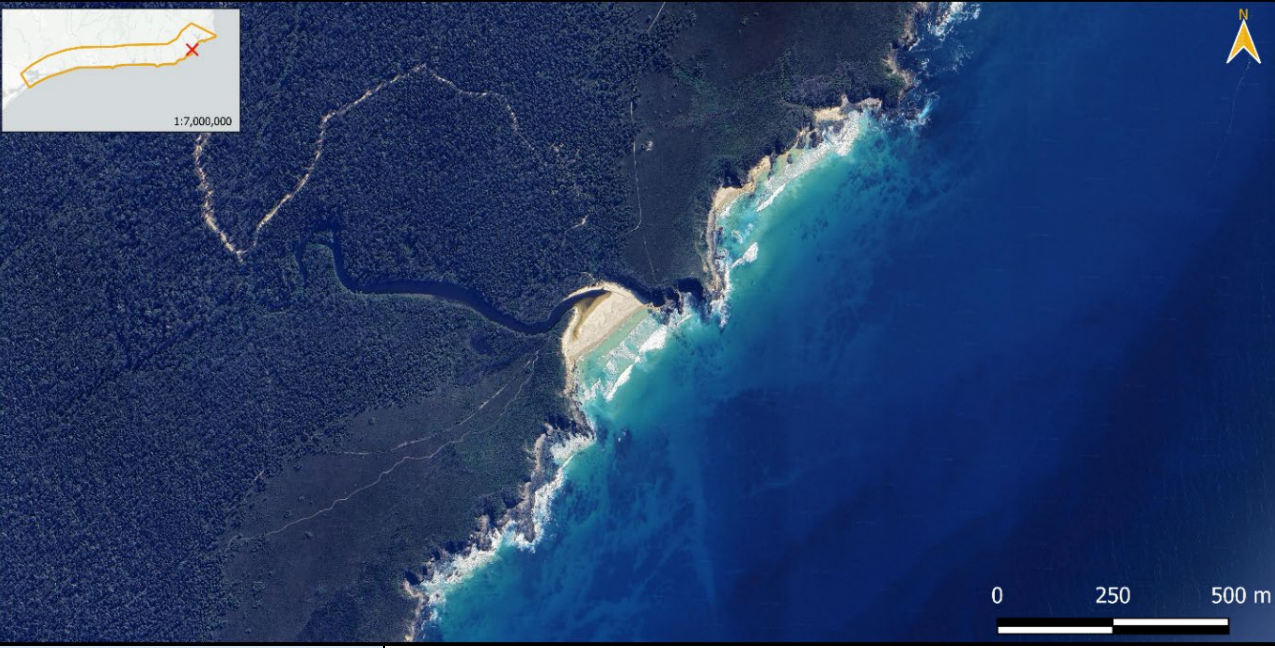
2.3.3 Thurra River

Location Detail					
Priority	Secondary	Sector: (VicGov)	Point Hicks	Segment_ID: (VicGov)	PTH-08
					
Coordinates:		<u>-37.782408, 149.312761</u>			
Local Contacts					
DEECA Cann River		(03) 5161 1222	Community Health Cann River Nursing		(03) 5168 6210
Police Mallacoota Police		(03) 5158 0280	Regional Health Orbost		(03) 5154 6666
Main Sensitivities					
Ecological:		Mud flats and marshes; wetlands; seagrass and aquatic water flora/fauna; coastal site of significance; estuarine marine habitats.			
Socio-Economic:		Tourism, recreational fishing, areas of cultural significance to Traditional Owners.			
Cultural:		The Gunaikurnai, Bidwell and other Traditional Owner groups identify Thurra River as a part of their Traditional Country. First Peoples-State Relations Victoria should be consulted prior to engaging in any operational tasks.			
Initial Response Actions					
First Task		Conduct aerial overflight to determine • if watercourse is open or closed to ingress from open ocean. • the presence of the above sensitivities and the need for shoreline response. • if pre-cleaning of shoreline will improve spill response efforts by minimizing waste volumes. Capture images, locations, and determine width / depth of opening(s).			
Second Task		Pre-clean of shoreline through manual removal of debris to above the high tide area if deemed necessary.			
Third Task		Physically close the waterway through protection, deflection, or sorbent booms using vessels or equipment to position barrier systems if deemed appropriate.			
Fourth Task		Conduct assessment of impacted shoreline utilising guidance from Shoreline Treatment Recommendations for further shoreline response actions.			
Oiled Wildlife Response		The presence of negatively affected wildlife or wildlife with high potential of being impacted across all response efforts triggers the initiation of the Victorian Emergency Animal Welfare Plan (DEECA).			

2.3.4 Mueller River

Location Detail					
Priority	Secondary	Sector: (VicGov)	Point Hicks	Segment_ID: (VicGov)	PTH-09
					
Coordinates:		<u>-37.779031, 149.328135</u>			
Local Contacts					
DEECA Cann River	(03) 5161 1222	Community Health Cann River Nursing	(03) 5168 6210		
Police Mallacoota Police	(03) 5158 0280	Regional Health Orbost	(03) 5154 6666		
Main Sensitivities					
Ecological:	Mud flats and marshes; wetlands; seagrass and aquatic water flora/fauna; coastal site of significance; estuarine marine habitats.				
Socio-Economic:	Tourism, amenity beach, recreational fishing, areas of cultural significance to Traditional Owners.				
Cultural:	The Gunaikurnai, Bidwell and other Traditional Owner groups identify Mueller River as a part of their Traditional Country. First Peoples-State Relations Victoria should be consulted prior to engaging in any operational tasks.				
Initial Response Actions					
First Task	Conduct aerial overflight to determine • if watercourse is open or closed to ingress from open ocean. • the presence of the above sensitivities and the need for shoreline response. • if pre-cleaning of shoreline will improve spill response efforts by minimizing waste volumes. Capture images, locations, and determine width / depth of opening(s).				
Second Task	Pre-clean of shoreline through manual removal of debris to above the high tide area if deemed necessary.				
Third Task	Physically close the waterway through protection, deflection, or sorbent booms using vessels or equipment to position barrier systems if deemed appropriate.				
Fourth Task	Conduct assessment of impacted shoreline utilising guidance from Shoreline Treatment Recommendations for further shoreline response actions.				
Oiled Wildlife Response	The presence of negatively affected wildlife or wildlife with high potential of being impacted across all response efforts triggers the initiation of the Victorian Emergency Animal Welfare Plan (DEECA).				

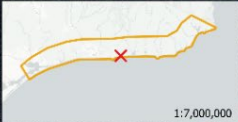
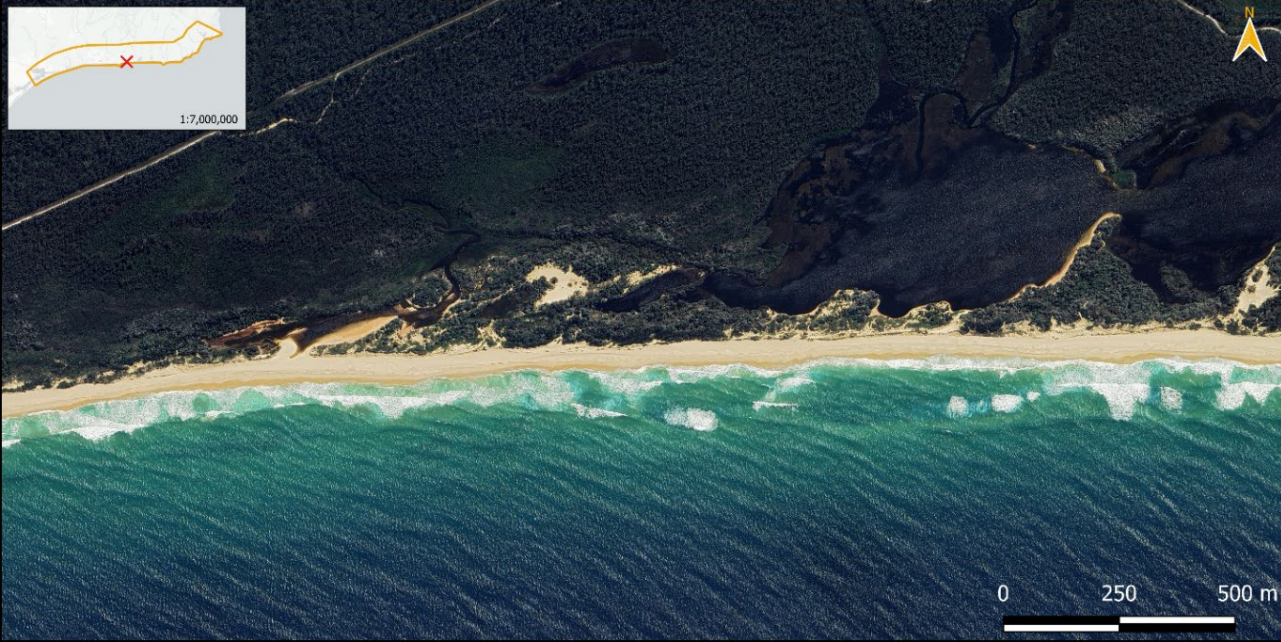
2.3.5 Shipwreck Creek

Location Detail					
Priority	Secondary	Sector: (VicGov)	Mallacoota	Segment_ID: (VicGov)	LRH-06
 					
Coordinates:		<u>-37.647626, 149.699456</u>			
Local Contacts					
DEECA Cann River	(03) 5161 1222	Community Health Mallacoota Medical	(03) 5158 0777		
Police Mallacoota Police	(03) 5158 0280	Regional Health Orbost	(03) 5154 6666		
Main Sensitivities					
Ecological:	Estuarine, estuarine marine habitats, birdlife.				
Socio-Economic:	Shipwrecks, tourist attraction & camping grounds, areas of cultural significance to Traditional Owners.				
Cultural:	The Bidwell People and other Traditional Owner groups identify the Mallacoota region as their traditional country. First Peoples-State Relations Victoria should be consulted prior to engaging in any operational tasks.				
Initial Response Actions					
First Task	Conduct aerial overflight to determine • if watercourse is open or closed to ingress from open ocean. • the presence of the above sensitivities and the need for shoreline response. • if pre-cleaning of shoreline will improve spill response efforts by minimizing waste volumes. Capture images, locations, and determine width / depth of opening(s).				
Second Task	Pre-clean of shoreline through manual removal of debris to above the high tide area if deemed necessary.				
Third Task	Physically close the waterway through protection, deflection, or sorbent booms using vessels or equipment to position barrier systems if deemed appropriate.				
Fourth Task	Conduct assessment of impacted shoreline utilising guidance from Shoreline Treatment Recommendations for further shoreline response actions.				
Oiled Wildlife Response	The presence of negatively affected wildlife or wildlife with high potential of being impacted across all response efforts triggers the initiation of the Victorian Emergency Animal Welfare Plan (DEECA).				

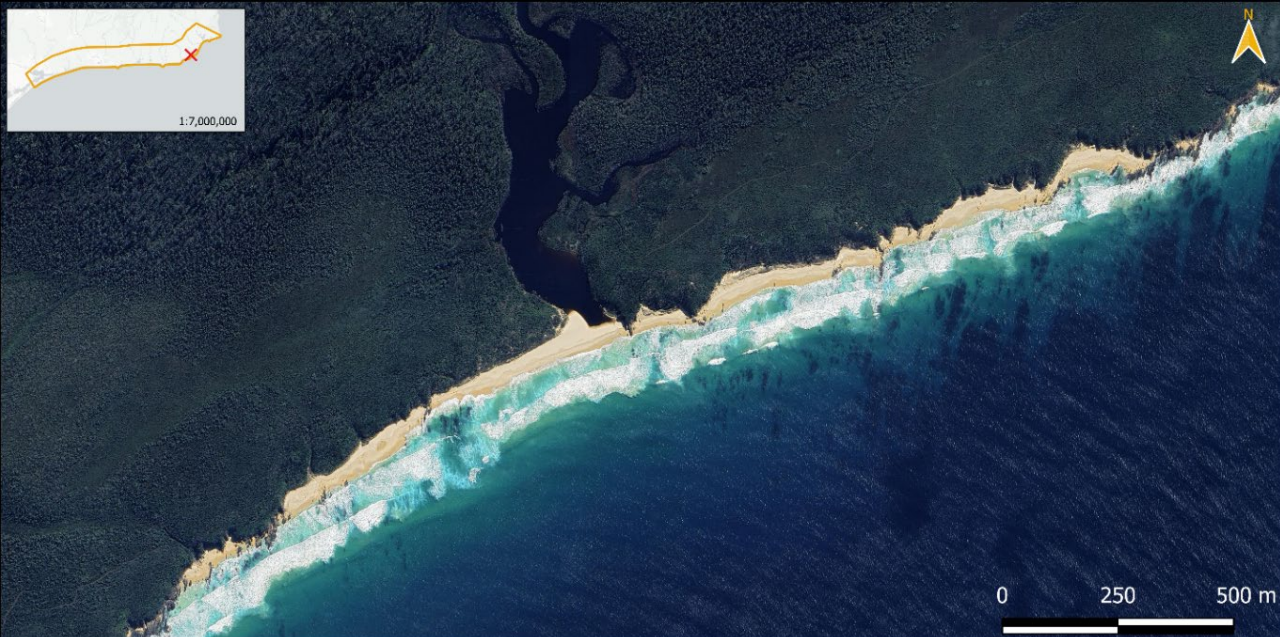
2.3.6 Davis Creek

Location Detail					
Priority	Secondary	Sector: (VicGov)	Mallacoota	Segment_ID: (VicGov)	MCT-06
					
Coordinates:		<u>-37.578739, 149.749761</u>			
Local Contacts					
DEECA Cann River	(03) 5161 1222	Community Health Mallacoota Medical	(03) 5158 0777		
Police Mallacoota Police	(03) 5158 0280	Regional Health Orbost	(03) 5154 6666		
Main Sensitivities					
Ecological:	Estuarine, estuarine marine habitats, drainage for the western side of the Mallacoota.				
Socio-Economic:	Areas of cultural significance to Traditional Owners.				
Cultural:	The Bidwell People and other Traditional Owner groups identify Mallacoota Inlet as their traditional country. First Peoples-State Relations Victoria should be consulted prior to engaging in any operational tasks.				
Initial Response Actions					
First Task	Conduct aerial overflight to determine • if watercourse is open or closed to ingress from open ocean. • the presence of the above sensitivities and the need for shoreline response. • if pre-cleaning of shoreline will improve spill response efforts by minimizing waste volumes. Capture images, locations, and determine width / depth of opening(s).				
Second Task	Pre-clean of shoreline through manual removal of debris to above the high tide area if deemed necessary.				
Third Task	Physically close the waterway through protection, deflection, or sorbent booms using vessels or equipment to position barrier systems if deemed appropriate.				
Fourth Task	Conduct assessment of impacted shoreline utilising guidance from Shoreline Treatment Recommendations for further shoreline response actions.				
Oiled Wildlife Response	The presence of negatively affected wildlife or wildlife with high potential of being impacted across all response efforts triggers the initiation of the Victorian Emergency Animal Welfare Plan (DEECA).				

2.3.7 Dock Inlet

Location Detail					
Priority	Secondary	Sector: (VicGov)	Cape Conran	Segment_ID: (VicGov)	CCR-08
 					
Coordinates:	<u>-37.784649, 148.823719</u>				
Local Contacts					
DEECA Cann River	(03) 5161 1222	Community Health	Not available		
Police Mallacoota Police	(03) 5158 0280	Regional Health Orbost	(03) 5154 6666		
Main Sensitivities					
Ecological:	Mud flats and marshes; wetlands; seagrass and aquatic water flora/fauna; coastal site of significance; estuarine marine habitats.				
Socio-Economic:	Tourism, recreational fishing, areas of cultural significance to Traditional Owners.				
Cultural:	The Gunaikurnai, Bidwell and other Traditional Owner groups identify the Dock Inlet region as a part of their Traditional Country. First Peoples-State Relations Victoria should be consulted prior to engaging in any operational tasks.				
Initial Response Actions					
First Task	Conduct aerial overflight to determine - if watercourse is open or closed to ingress from open ocean. - the presence of the above sensitivities and the need for shoreline response. - if pre-cleaning of shoreline will improve spill response efforts by minimizing waste volumes. Capture images, locations, and determine width / depth of opening(s).				
Second Task	Pre-clean of shoreline through manual removal of debris to above the high tide area if deemed necessary.				
Third Task	Physically close the waterway through protection, deflection, or sorbent booms using vessels or equipment to position barrier systems if deemed appropriate.				
Fourth Task	Conduct assessment of impacted shoreline utilising guidance from Shoreline Treatment Recommendations for further shoreline response actions.				
Oiled Wildlife Response	The presence of negatively affected wildlife or wildlife with high potential of being impacted across all response efforts triggers the initiation of the Victorian Emergency Animal Welfare Plan (DEECA).				

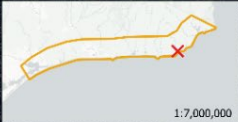
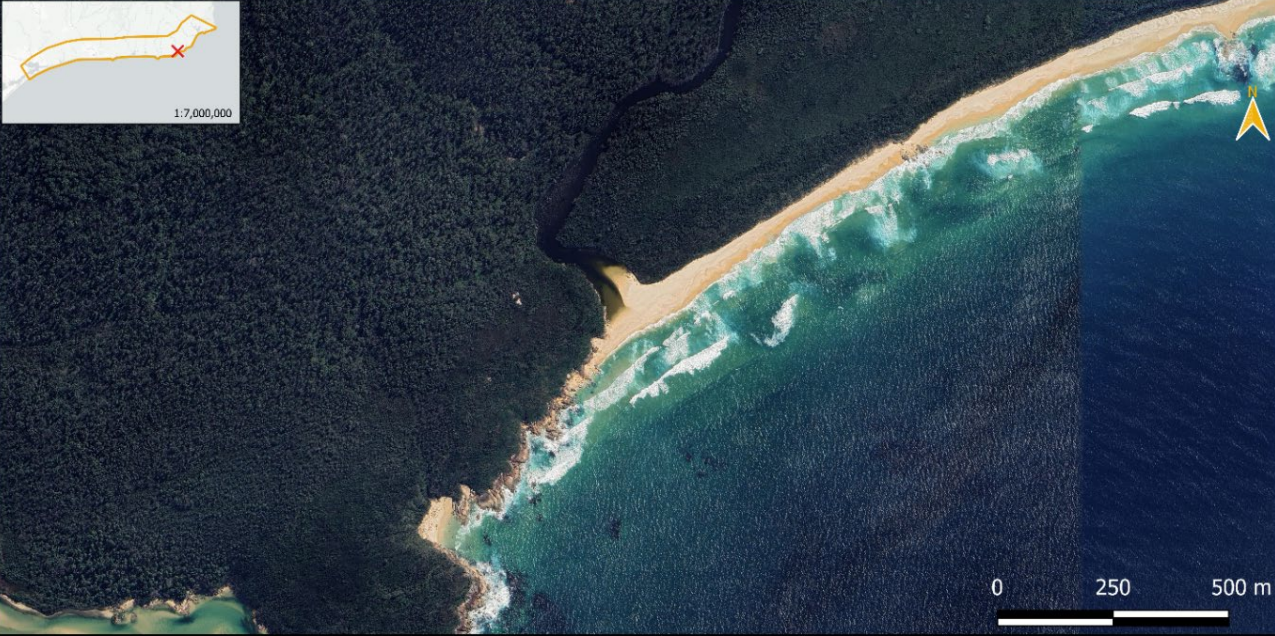
2.3.8 Benedor River

Location Detail					
Priority	Secondary	Sector: (VicGov)	Mallacoota	Segment_ID: (VicGov)	SPP-03 – SPP-04
					
Coordinates:		<u>-37.698689, 149.622367</u>			
Local Contacts					
DEECA Cann River	(03) 5161 1222	Community Health Cann River Nursing	(03) 5168 6210		
Police Cann River Police	(03) 5158 6202	Regional Health Orbost	(03) 5154 6666		
Main Sensitivities					
Ecological:	Dunes, marshes, wetlands, shorebird/seabird colonies, estuarine marine habitats, emergent vegetation.				
Socio-Economic:	Camping, recreational fishing, tourism.				
Cultural:	The Bidwell People and other Traditional Owner groups identify the Croajingolong National Park as their traditional country. First Peoples-State Relations Victoria should be consulted prior to engaging in any operational tasks.				
Initial Response Actions					
First Task	Conduct aerial overflight to determine • if watercourse is open or closed to ingress from open ocean. • the presence of the above sensitivities and the need for shoreline response. • if pre-cleaning of shoreline will improve spill response efforts by minimizing waste volumes. Capture images, locations, and determine width / depth of opening(s).				
Second Task	Pre-clean of shoreline through manual removal of debris to above the high tide area if deemed necessary.				
Third Task	Physically close the waterway through protection, deflection, or sorbent booms using vessels or equipment to position barrier systems if deemed appropriate.				
Fourth Task	Conduct assessment of impacted shoreline utilising guidance from Shoreline Treatment Recommendations for further shoreline response actions.				
Oiled Wildlife Response	The presence of negatively affected wildlife or wildlife with high potential of being impacted across all response efforts triggers the initiation of the Victorian Emergency Animal Welfare Plan (DEECA).				

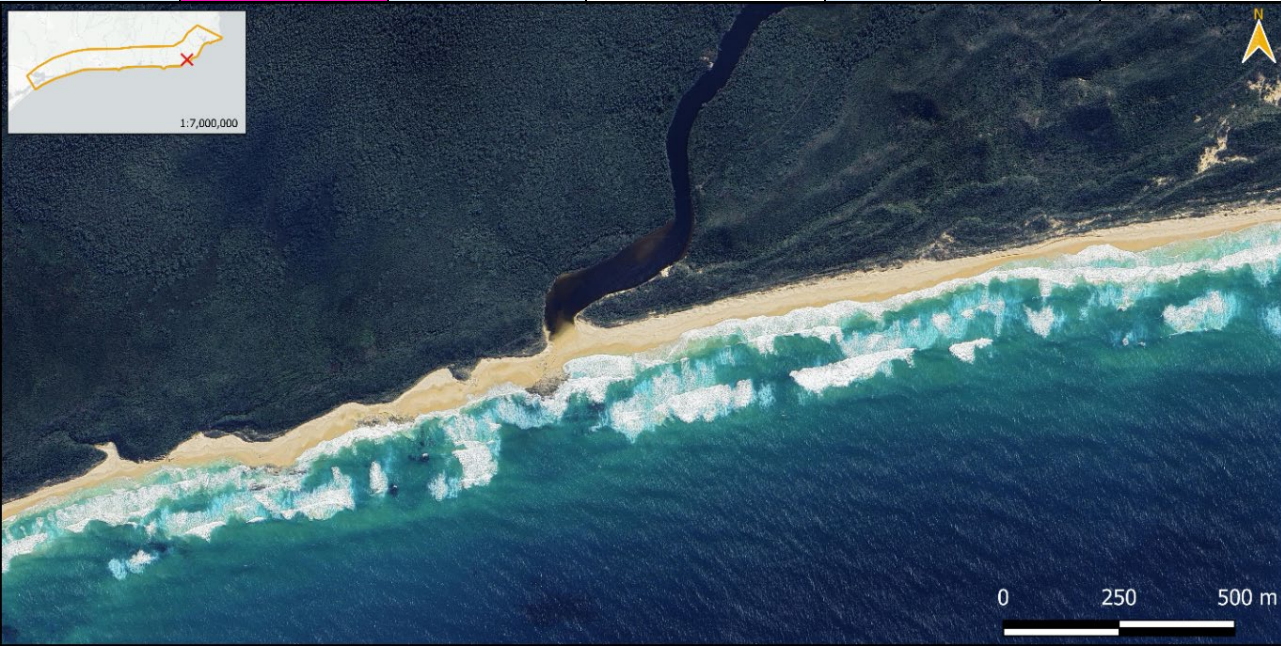
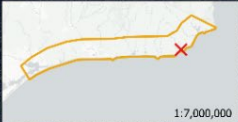
2.3.9 Lake Wau Wauka Inlet

Location Detail					
Priority	Secondary	Sector: (VicGov)	Mallacoota	Segment_ID: (VicGov)	CHW-10
 					
Coordinates:		<u>-37.520974, 149.937139</u>			
Local Contacts					
DEECA Cann River	(03) 5161 1222	Community Health Mallacoota Medical	(03) 5158 0777		
Police Mallacoota Police	(03) 5158 0280	Regional Health Orbost	(03) 5154 6666		
Main Sensitivities					
Ecological:	Dunes, wetlands, shorebird/seabird colonies, estuarine marine habitats.				
Socio-Economic:	Recreational vessel operations, shipwrecks, tourism, recreational fishing, amenity beaches.				
Cultural:	The Bidwell People and other Traditional Owner groups identify the Mallacoota region as their traditional country. First Peoples-State Relations Victoria should be consulted prior to engaging in any operational tasks.				
Initial Response Actions					
First Task	Conduct aerial overflight to determine - if watercourse is open or closed to ingress from open ocean. - the presence of the above sensitivities and the need for shoreline response. - if pre-cleaning of shoreline will improve spill response efforts by minimizing waste volumes. Capture images, locations, and determine width / depth of opening(s).				
Second Task	Pre-clean of shoreline through manual removal of debris to above the high tide area if deemed necessary.				
Third Task	Physically close the waterway through protection, deflection, or sorbent booms using vessels or equipment to position barrier systems if deemed appropriate.				
Fourth Task	Conduct assessment of impacted shoreline utilising guidance from Shoreline Treatment Recommendations for further shoreline response actions.				
Oiled Wildlife Response	The presence of negatively affected wildlife or wildlife with high potential of being impacted across all response efforts triggers the initiation of the Victorian Emergency Animal Welfare Plan (DEECA).				

2.3.10 Easby Creek

Location Detail					
Priority	Tertiary	Sector: (VicGov)	Point Hicks	Segment_ID: (VicGov)	WGP-03 – WGP-04
 					
Coordinates:	<u>-37.739481, 149.521428</u>				
Local Contacts					
DEECA Cann River	(03) 5161 1222	Community Health Cann River Nursing	(03) 5168 6210		
Police Cann River Police	(03) 5158 6202	Regional Health Orbost	(03) 5154 6666		
Main Sensitivities					
Ecological:	Dunes, wetlands, shorebird/seabird colonies, estuarine marine habitats, intertidal rocky shores, emergent vegetation.				
Socio-Economic:	Nil, remote access site.				
Cultural:	The Bidwell People and other Traditional Owner groups identify the Croajingolong National Park as their traditional country. First Peoples-State Relations Victoria should be consulted prior to engaging in any operational tasks.				
Initial Response Actions					
First Task	Conduct aerial overflight to determine - if watercourse is open or closed to ingress from open ocean. - the presence of the above sensitivities and the need for shoreline response. - if pre-cleaning of shoreline will improve spill response efforts by minimizing waste volumes. Capture images, locations, and determine width / depth of opening(s).				
Second Task	Pre-clean of shoreline through manual removal of debris to above the high tide area if deemed necessary.				
Third Task	Physically close the waterway through protection, deflection, or sorbent booms using vessels or equipment to position barrier systems if deemed appropriate.				
Fourth Task	Conduct assessment of impacted shoreline utilising guidance from Shoreline Treatment Recommendations for further shoreline response actions.				
Oiled Wildlife Response	The presence of negatively affected wildlife or wildlife with high potential of being impacted across all response efforts triggers the initiation of the Victorian Emergency Animal Welfare Plan (DEECA).				

2.3.11 Red River Inlet

Location Detail					
Priority	Tertiary	Sector: (VicGov)	Mallacoota	Segment_ID: (VicGov)	TSR-02 – TSR-04
					
Coordinates:		<u>-37.725483, 149.561294</u>			
Local Contacts					
DEECA Cann River	(03) 5161 1222	Community Health Cann River Nursing	(03) 5168 6210		
Police Cann River Police	(03) 5158 6202	Regional Health Orbost	(03) 5154 6666		
Main Sensitivities					
Ecological:	Dunes, wetlands, shorebird/seabird colonies, estuarine marine habitats, intertidal rocky shores, emergent vegetation.				
Socio-Economic:	Nil, remote access site.				
Cultural:	The Bidwell People and other Traditional Owner groups identify the Croajingolong National Park as their traditional country. First Peoples-State Relations Victoria should be consulted prior to engaging in any operational tasks.				
Initial Response Actions					
First Task	Conduct aerial overflight to determine - if watercourse is open or closed to ingress from open ocean. - the presence of the above sensitivities and the need for shoreline response. - if pre-cleaning of shoreline will improve spill response efforts by minimizing waste volumes. Capture images, locations, and determine width / depth of opening(s).				
Second Task	Pre-clean of shoreline through manual removal of debris to above the high tide area if deemed necessary.				
Third Task	Physically close the waterway through protection, deflection, or sorbent booms using vessels or equipment to position barrier systems if deemed appropriate.				
Fourth Task	Conduct assessment of impacted shoreline utilising guidance from Shoreline Treatment Recommendations for further shoreline response actions.				
Oiled Wildlife Response	The presence of negatively affected wildlife or wildlife with high potential of being impacted across all response efforts triggers the initiation of the Victorian Emergency Animal Welfare Plan (DEECA).				

2.3.12 Category 3: Minimum Resource Requirements

The resources in the tables below are the minimum resources required to complete the initial response actions for the sensitivity categorized as 'Estuarine – Sand – Small'. In the event of a spill, deterministic modelling is to be acquired by the IMT to support situational awareness and response planning. If deterministic modelling indicates direct impact with the sensitivity areas listed in [Category 3: Estuarine – Sand – Small](#), the below resources should be considered at a minimum to support a response in one of these sensitivity areas.

Direct response interventions are typically required in areas where shoreline loading of hydrocarbons are expected to exceed 100 g/m² (NOPSEMA Oil Pollution Risk Management Guidance Note March 31, 2026 – Environment Bulletin, 2019⁴).

Resourcing requirements will need to be scaled proportionately to the number of receptors and area of shoreline impacted. Additional shoreline clean-up equipment may be required to support selected shoreline clean-up techniques. These resources should be identified during the development of the IAP-subplan for shoreline response operations and sourced accordingly.

Table 9: Minimum resource requirements for response at one of the areas identified within Category 3: Estuarine - Sand - Small.

Personnel Resources	
Site Supervisors	1
Activity Leads	2
General Responders	10
SCAT Team	1
Coxswain	1
Vessel Crew	1
Vehicle / Vessel Resources	
Vessel of opportunity – workboat, <u>shallow draft</u>	1
Utility Task Vehicle (UTV)	2*
Response Equipment Resources	
Shore Sealing Boom	2 x 25m*
Near Shore Boom	4 x 25m*
Near Shore Anchor Kit	2*
Shoreline Anchor Kit	2*
Sorbent Boom	100m*
Temporary Waste Storage	1*
Site Set-Up Kit	1*
Standard Decontamination Kit	1*
VHF Radio Communications	2*
Satellite Phone	1
PPE Kit	1*
Shoreline Pre-clean Hand Tools and Ancillaries	1

*Denotes equipment availability from AMOSC

⁴ NOPSEMA Oil Pollution Risk Management N-04750-GN-1488 A382148 March 31, 2026

2.3.13 Category 3: Resource Logistics

The resources provided above can be mobilised in part with support from AMOSC. The table below includes the indicative timings for equipment movements from AMOSC Geelong warehouse to the location captured within Category 3: Estuarine – Sand – Small.

Table 10: Indicative timings for logistics movements of equipment for Category 3: Estuarine - Sand - Small.

LOCATION	CLOSEST TOWN	DISTANCE	TRAVEL TIME	TOTAL TIME
Yeerung River	Cape Conran	474 km	< 6 hours	< 12 hours
Lake Bunga	Lakes Entrance	386 km	< 6 hours	< 12 hours
Thurra River	Cann River	512 km	< 6 hours	< 12 hours
Note: An additional 28 kilometres to the inlet from Cann River.				
Mueller River	Cann River	512 km	< 6 hours	< 12 hours
Note: An additional 42 kilometres to the inlet from Cann River.				
Shipwreck Creek	Mallacoota	589 km	< 8 hours	< 14 hours
Note: An additional 16 kilometres to the inlet from Mallacoota.				
Davis Creek	Mallacoota	589 km	< 8 hours	< 14 hours
Dock Inlet	Bemm River	495 km	< 6 hours	< 12 hours
Note: An additional 12 kilometres to the inlet from Bemm River.				
Benedor River	Cann River	512 km	< 6 hours	< 12 hours
Note: An additional 66 kilometres to the inlet from Cann River.				
Lake Wau Wauka Inlet	Mallacoota	589 km	< 8 hours	< 14 hours
Note: No direct road access to get to Lake Wau Wauka Inlet. Equipment would need to be air lifted or transited via vessel from Mallacoota.				
Easby Creek	Cann River	512 km	< 6 hours	< 12 hours
Note: An additional 66 kilometres to the inlet from Cann River.				
Red River Inlet	Cann River	512 km	< 6 hours	< 12 hours
Note: An additional 64 kilometres to the inlet from Cann River.				

Assumptions made for the indicative timings include:

- AMOSC has been activated with a signed contract note.
- Road transport timings are +/-10% due to road works, increased/decreased traffic, etc.
- Emperor Energy or other supporting agencies are responsible to organise staging area locations and forklift for unloading at delivery site.
- Timings represented below include initial timing for organising trucks to AMOSC Geelong warehouse (+4 hours), loading time (+1.5 hours), and transport time from AMOSC warehouse to the nearest town to the location but not specifically at the shoreline area that may be impacted.
- Where nearby town locations are not directly proximal to shoreline receptors additional notes are provided.

- Additional time will need to be considered for unloading and transport time to forward operating base(s).
- All equipment listed will fit on a semi-trailer or a B-Double, depending on quantities required.

2.4 Category 4: Natural Rock ■

The following sections are the areas which have been categorised in the East Gippsland Region as Natural Rock. The area summaries include details of the location, local contact information, the main sensitivities in each of the areas and initial response actions.

- Location details are to be utilised to coordinate where response efforts are being undertaken.
- Local contacts are for reference as and when necessary for support to response efforts.
- Main sensitivities are the listed known sensitivities at the time of plan development which require protection. Additional sensitivities may possibly be identified through response efforts and should be included in operational NEBA / SIMA planning processes.
- Initial response actions are those which should be undertaken if it has been determined that receptors in this region are likely to be significantly impacted through deterministic oil spill trajectory modelling.

Identified areas within this section include:

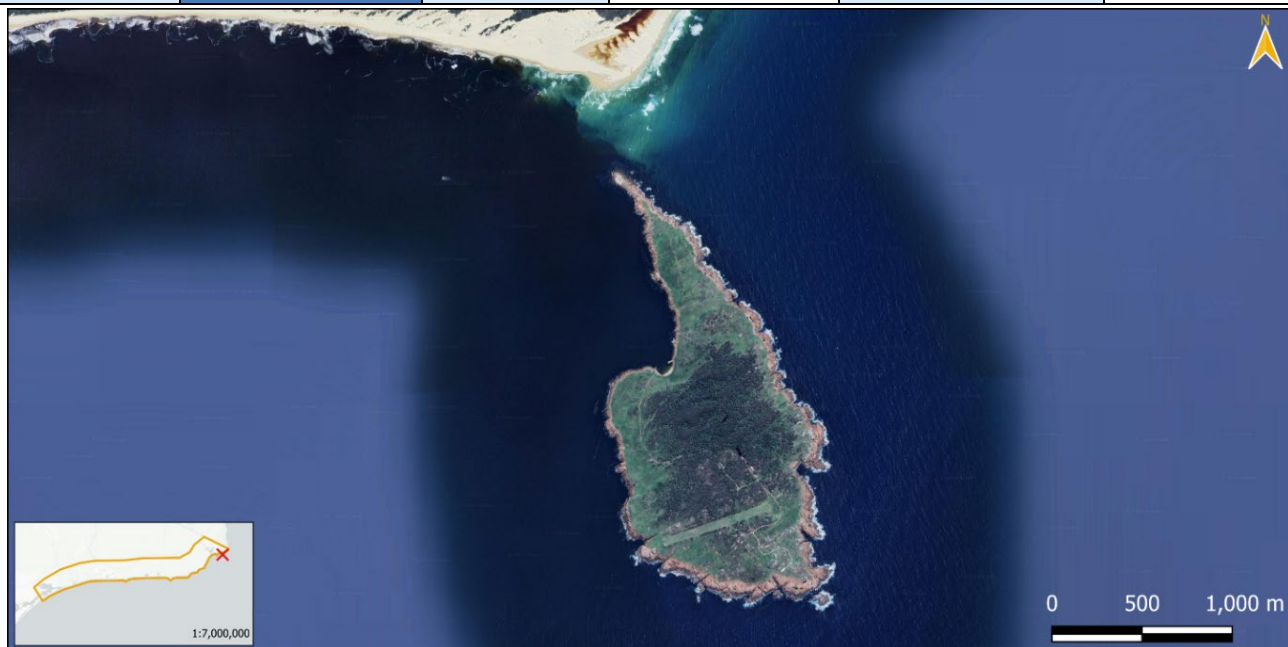
- [Tullaberga Island](#)
- [Gabo Island](#)

Equipment and personnel resourcing requirements to respond to one of the areas in this category can be found within [Category 4: Minimum Resource Requirements](#). In the event more than one location is at the risk of being impacted concurrently, the necessary type and number of resources must be calculated based on real-time incident information and the area(s) of response that have been prioritised.

2.4.1 Tullaberga Island

Location Detail					
Priority	Secondary	Sector: (VicGov)	Mallacoota	Segment_ID: (VicGov)	CHW-01
					
Coordinates:		<u>-37.557259, 149.845018</u>			
Local Contacts					
DEECA Cann River	(03) 5161 1222	Community Health Mallacoota Medical	(03) 5158 0777		
Police Mallacoota Police	(03) 5158 0280	Regional Health Orbost	(03) 5154 6666		
Main Sensitivities					
Ecological:	Exposed rocky coastline, pinniped haul out sites, and shorebird/seabird colonies.				
Socio-Economic:	Recreational vessel operations, shipwrecks, tourism, recreational fishing.				
Cultural:	The Bidwell People and other Traditional Owner groups identify the Mallacoota region as their traditional country. First Peoples-State Relations Victoria should be consulted prior to engaging in any operational tasks.				
Initial Response Actions					
First Task	Conduct aerial overflight to determine - the presence of the above sensitivities and the need for shoreline response. - if pre-cleaning of shoreline will improve spill response efforts by minimizing waste volumes. Capture images, locations, and confirm presence of sensitivities.				
Second Task	Pre-clean of shoreline through manual removal of debris to above the high tide area if deemed necessary.				
Third Task	Conduct assessment of impacted shoreline utilising guidance from Shoreline Treatment Recommendations for further shoreline response actions.				
Oiled Wildlife Response	The presence of negatively affected wildlife or wildlife with high potential of being impacted across all response efforts triggers the initiation of the Victorian Emergency Animal Welfare Plan (DEECA).				

2.4.2 Gabo Island

Location Detail					
Priority	Secondary	Sector: (VicGov)	Mallacoota	Segment_ID: (VicGov)	CHW-06 – CHW-08
					
Coordinates:		<u>-37.565176, 149.91441</u>			
Local Contacts					
DEECA Cann River	(03) 5161 1222	Community Health Mallacoota Medical	(03) 5158 0777		
Police Mallacoota Police	(03) 5158 0280	Regional Health Orbost	(03) 5154 6666		
Main Sensitivities					
Ecological:	Exposed rocky coastline, pinniped haul out sites, and shorebird/seabird colonies.				
Socio-Economic:	Recreational vessel operations, shipwrecks, tourism, recreational fishing.				
Cultural:	The Bidwell People and other Traditional Owner groups identify the Mallacoota region as their traditional country. First Peoples-State Relations Victoria should be consulted prior to engaging in any operational tasks.				
Initial Response Actions					
First Task	Conduct aerial overflight to determine - the presence of the above sensitivities and the need for shoreline response. - if pre-cleaning of shoreline will improve spill response efforts by minimizing waste volumes. Capture images, locations, and confirm presence of sensitivities.				
Second Task	Pre-clean of shoreline through manual removal of debris to above the high tide area if deemed necessary.				
Third Task	Conduct assessment of impacted shoreline utilising guidance from Shoreline Treatment Recommendations for further shoreline response actions.				
Oiled Wildlife Response	The presence of negatively affected wildlife or wildlife with high potential of being impacted across all response efforts triggers the initiation of the Victorian Emergency Animal Welfare Plan (DEECA).				

2.4.3 Category 4: Minimum Resource Requirements

The resources in the tables below are the minimum resources required to complete the initial response actions for the sensitivity categorized as 'Natural Rock'. In the event of a spill, deterministic modelling is to be acquired by the IMT to support situational awareness and response planning. If deterministic modelling indicates direct impact with the sensitivity areas listed in [Category 4: Natural Rock](#), the below resources should be considered at a minimum to support a response in one of these sensitivity areas.

Direct response interventions are typically required in areas where shoreline loading of hydrocarbons are expected to exceed 100 g/m² (NOPSEMA Oil Pollution Risk Management Guidance Note, March 31, 2026 – Environment Bulletin, 2019⁵).

Resourcing requirements will need to be scaled proportionately to the number of receptors and area of shoreline impacted. Additional shoreline clean-up equipment may be required to support selected shoreline clean-up techniques. These resources should be identified during the development of the IAP-subplan for shoreline response operations and sourced accordingly.

Table 11: Minimum resource requirements for response at one of the areas identified within Category 4: Natural Rock.

Personnel Resources	
Site Supervisors	1
Activity Leads	2
General Responders	10**
SCAT Team	1
Coxswain	3
Vessel Crew	3
Vehicle / Vessel Resources	
Vessel of opportunity – workboat, <u>shallow draft</u>	2
Vessel of opportunity – workboat	1*
Utility Task Vehicle (UTV)	-
Response Equipment Resources	
Near Shore Boom	-
Near Shore Anchor Kit	-
Shoreline Anchor Kit	-
Sorbent Boom	-
Temporary Waste Storage	2*
Site Set-Up Kit	2*
Standard Decontamination Kit	-
VHF Radio Communications	2*
Satellite Phone	1
PPE Kit	1*
Shoreline Pre-clean Hand Tools and Ancillaries	1

*Denotes equipment availability from AMOSC

**Quantity required if extensive pre-cleaning is deemed necessary

⁵ NOPSEMA Oil Pollution Risk Management N-04750-GN-1488 A382148 March 31, 2026

2.4.4 Category 4: Resource Logistics

The resources provided above can be mobilised in part with support from AMOSC. The table below includes the indicative timings for equipment movements from AMOSC Geelong warehouse to the location captured within Category 4: Natural Rock.

Table 12: Indicative timings for logistics movements of equipment for Category 4: Natural Rock.

LOCATION	CLOSEST TOWN	DISTANCE	TRAVEL TIME	TOTAL TIME
Tullaberga Island	Mallacoota	589 km	< 8 hours	< 14 hours
Note: No direct road access to Tullaberga Island. Equipment would need to be air lifted or transited via vessel from Mallacoota. Approximately 1 kilometre offshore.				
Gabo Island	Mallacoota	589 km	< 8 hours	< 14 hours
Note: No direct road access to Gabo Island. Equipment would need to be air lifted or transited via vessel from Mallacoota. Approximately 500 metres offshore.				

Assumptions made for the indicative timings include:

- AMOSC has been activated with a signed contract note.
- Road transport timings are +/-10% due to road works, increased/decreased traffic, etc.
- Emperor Energy or other supporting agencies are responsible to organise staging area locations and forklift for unloading at delivery site.
- Timings represented below include initial timing for organising trucks to AMOSC Geelong warehouse (+4 hours), loading time (+1.5 hours), and transport time from AMOSC warehouse to the nearest town to the location but not specifically at the shoreline area that may be impacted.
- Where nearby town locations are not directly proximal to shoreline receptors additional notes are provided.
- Additional time will need to be considered for unloading and transport time to forward operating base(s).
- All equipment listed will fit on a semi-trailer or a B-Double, depending on quantities required.

3 SHORELINE TREATMENT RECOMMENDATIONS

Shoreline Treatment Recommendations (STRs) offer operational guidance for clean-up techniques recommended for different shoreline types encountered during an oil spill response. It offers operational guidance on preferred techniques and outlines the constraints associated with their implementation. STRs are relevant for any shoreline that is, or has the potential to be, impacted by oil.

The primary objective of any shoreline clean-up is to restore the shoreline back to its pre-impacted state, or to the agreed treatment endpoint criteria at the time of response, by removing oil where possible and/or enhancing the natural recovery of shoreline habitats.

Shoreline treatment is usually carried out in three stages:

Stage 1: Collection of floating oil and heavily contaminated beach material.

Stage 2: Removal of stranded oil and moderately oiled beach materials.

Stage 3: Final clean-up of lightly contaminated shorelines and removal of oily stains.

Shoreline clean-up operations should be carried out in accordance with a clear strategy that takes account of the characteristics of the oil, level of contamination, accessibility of site, safety of clean-up operations and people, and the relative environmental, economic and amenity sensitivities of the different locations.

Figure 2 outlines the process to follow when using the Shoreline Treatment Recommendation Guide.

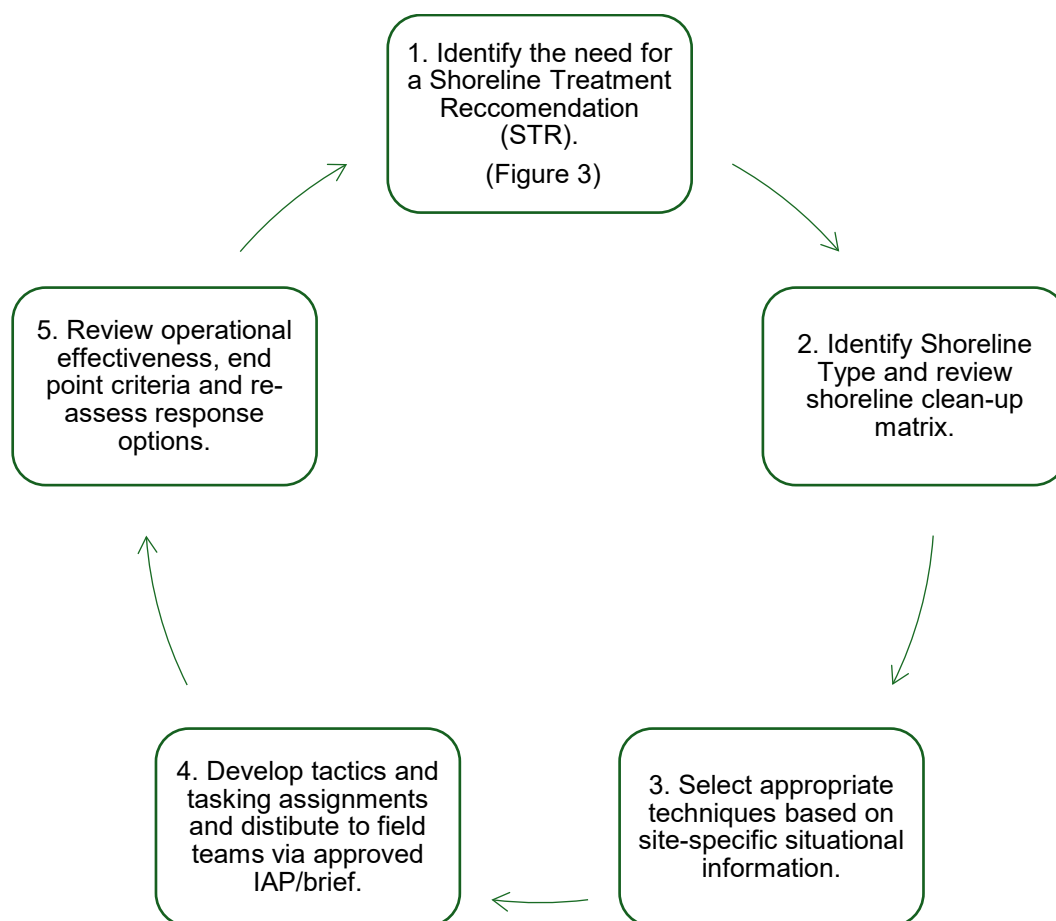


Figure 2: STR process for Shoreline Response

The STR process is used to support the overarching Shoreline Response and is typically developed by the Environmental Unit (EU) as part of the Planning Section within the relevant State Control Agency during the response. It must be used alongside the Shoreline Treatment Plan recommendation flowchart (Figure 3) which elaborates Step 1 of the STR process.

Step 1: Identify the need for STR.

Figure 3 outlines the decision-making process to follow before initiating the development phase of the response-specific STRs. The process should be conducted in conjunction with the relevant State Control Agencies completed Shoreline Assessment Form.

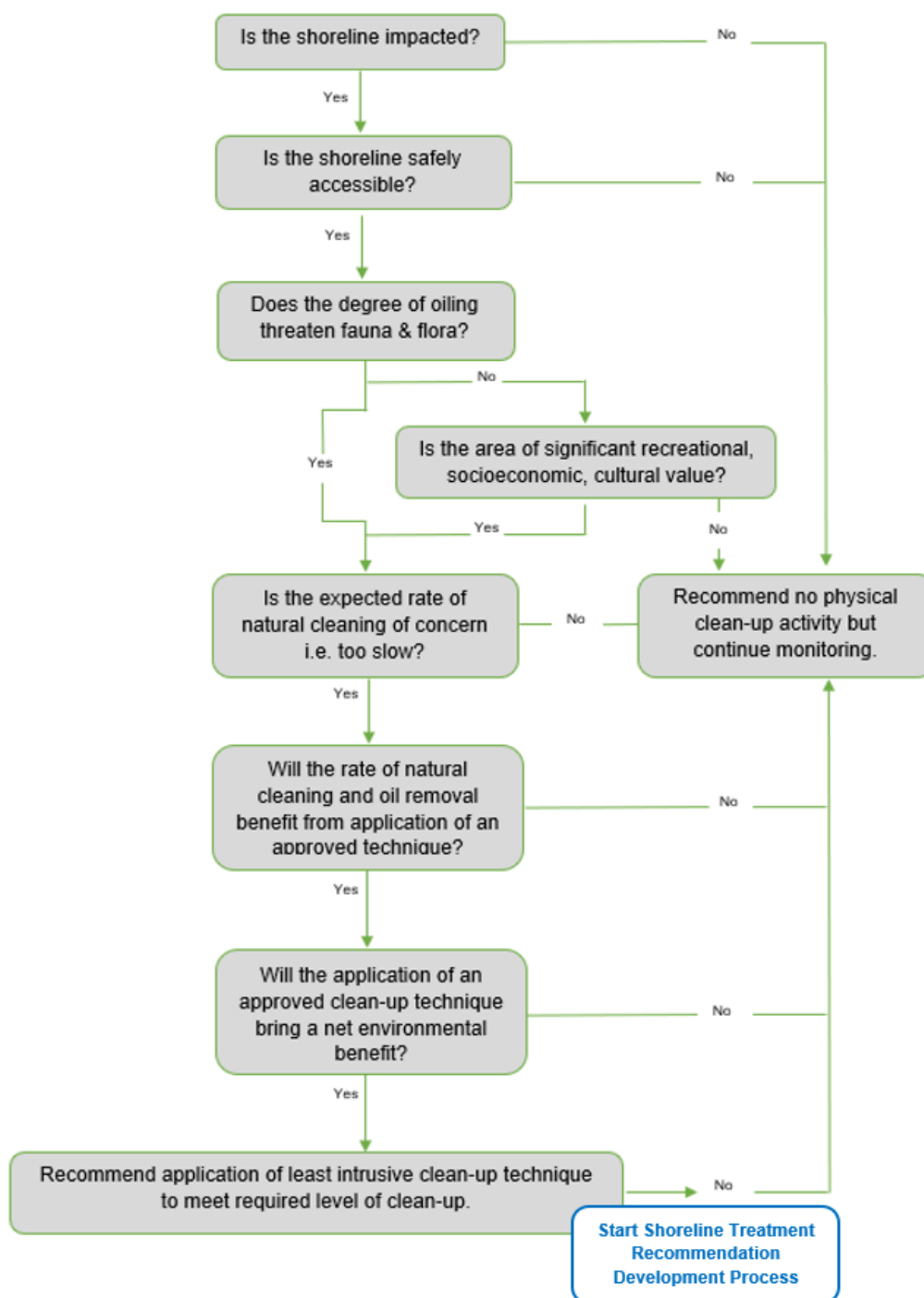


Figure 3: Shoreline Treatment Plan recommendation flowchart

Step 2: Identify the shoreline types that may or have got impacted.

The following matrix outlines the shoreline types present and the shoreline clean-up techniques available for shoreline response.

The below three-tiered criteria have been used to identify proposed and viable techniques and those that are not recommended to minimise secondary damage to the shoreline or due to safety concerns.

Table 13: Shoreline Clean-up Matrix

	Proposed	The tactics will be deployed where safe to do so and where the NEBA indicates that it will result in net environmental benefit, and if the response or the spill is likely to impact State waters, the response will be approved by the State Control Agency.
	Viable	Tactic can be undertaken but deployment may not be warranted because of the size of spill, conditions, and other factors at the time of the spill.
	Not Recommended	The tactic is not recommended either due to safety considerations or limited/negative impacts of the strategy on sensitive receptors on that shoreline type.
Note: the above key definitions of proposed, viable and not recommended are <u>not</u> to be confused to the definitions applied in the strategic NEBA.		

Shoreline Clean-up Techniques (Refer to Table 14 for Descriptions of techniques)	STRs												
	Artificial structures	Cliff - Rocky	Cliff- Soft	Rocky Shore / Platform	Beach – Boulders	Beach – Cobble / Pebble / Granule	Beach – Sand (Sand and Shell)	Tidal Flats – Mud / Silt / Clay	Salt Marsh - Vegetative	Shallow seagrass	Inter-tidal Reef (rocky/coral)	Dunes - Sand with vegetation	Mangroves
Natural Recovery													
Bioremediation													
Sorbents													
Particulate Sorbents													
Recovery of Floating Oil													
Trenching													
Manual Oil Removal													
Mechanical Oil Removal													
Surf Washing													
Low-Pressure, Ambient-Water Flushing													
High-Pressure Washing													

Shoreline Clean-up Techniques (Refer to Table 14 for Descriptions of techniques)	STRs												
	Artificial structures	Cliff - Rocky	Cliff- Soft	Rocky Shore / Platform	Beach – Boulders	Beach – Cobble / Pebble / Granule	Beach – Sand (Sand and Shell)	Tidal Flats – Mud / Silt / Clay	Salt Marsh - Vegetative	Shallow seagrass	Inter-tidal Reef (rocky/coral)	Dunes - Sand with vegetation	Mangroves
In Situ-Washing	●	●	●	●	●	●	●	●	●	●	●	●	●
Sieving	●	●	●	●	●	●	●	●	●	●	●	●	●
Beach Cleaning Machinery	●	●	●	●	●	●	●	●	●	●	●	●	●
Sediment Tilling (Harrowing/Ploughing)	●	●	●	●	●	●	●	●	●	●	●	●	●
Vegetation Removal	●	●	●	●	●	●	●	●	●	●	●	●	●
Chemical – Surface Cleaning Agents	●	●	●	●	●	●	●	●	●	●	●	●	●

Step 3: Select appropriate techniques based on site-specific situational information.

Select the appropriate response techniques required for the identified shoreline types. Table 4 below provides more information about each response technique.

Table 14: Descriptions of Shoreline Techniques

TECHNIQUE	DESCRIPTION	APPLICABLE HABITATS
Natural Recovery (Passive Cleaning)	Allow tidal action to flush stranded oil. Oil will continue to weather, degrading and gradually reducing in volume and toxicity.	Manmade structures
	Natural recovery is appropriate in situations where alternative clean up techniques would cause more harm than benefit, or where access is restricted. Passive cleaning is most often selected after stage 1, bulk removal of oil has been completed or with light, less persistent products. Heavier, more persistent products may leave dark staining that may last for many years, slowly becoming less visible and reducing the ability to transfer to other surfaces.	Rocky shore
		Sandy beach
		Tidal Flats
		Shallow seagrass
		Reef
		Mangroves
Trenching	Trenches can be dug parallel to the beach by excavator or other heavy machinery. these trenches are used to collect strand oil at low tide. Oil can be moved into the trench with the use of hand tools or by way of flushing. Oil collected in the trench can be recover by skimmer, pump or vacuum truck. Trenches will often be required to be dug again after each tidal cycle.	Sandy beaches Tidal flats
Manual Oil Removal	The removal of bulk oil and oiled sediment by manual methods including shovels and buckets. Only suitable where there is safe access/egress for personnel and support facilities to manually recover oil. Manual removal can be undertaken at all stages of the clean-up, from bulk removal through to final polish. Manual removal if undertaken correctly can be highly	Sandy beaches Rocky shore Tidal flats

TECHNIQUE	DESCRIPTION	APPLICABLE HABITATS
	effective and targeted, often removing less non contaminated substrate than other methods such as mechanical removal.	Mangroves
Mechanical Oil Removal	Use of heavy vehicles (front-end loaders, road graders and excavators) to collect and remove large volumes of oil and contaminated material. Typically used where oil is heavily stranded on a sand or shingle shoreline, and the shoreline is readily accessible by heavy equipment. The oil needs to be non-fluid to ensure that it can be collected easily when scraped together in piles.	Sandy beaches
Surf Washing	Pebble, and cobble shorelines can be cleaned by pushing light to medium contaminated material into the surf zone where wave energy can assist with the cleaning process. Separated oil should be contained and collected in many situations. Heavy machinery such as front-end loaders are required to move sedimentation.	Cobble/pebble beaches
Recovery of Floating Oil (Booming and Skimming incl. Vacuum Systems)	Oil stranded on shorelines can become mobile and re-float with changing tides and weather conditions. As such, oil can be contained and removed from the water surface using a combination of booming and skimming techniques. Methods for the recovery of boomed oil can include pumping, skimming, scooping, or vacuuming. This technique can be used in a variety of different shoreline types.	Manmade structures Sandy beaches Tidal flats Shallow seagrass Mangroves
Low-Pressure, Ambient-Water Flushing	Typically conducted after the bulk oil has been removed. Flooding or low-pressure, ambient-temperature flushing can be used to flush trapped oil out to open water for collection using booms and recovery systems. Considerations should be given to tidal currents (flush on a falling tide) and wind (an onshore wind will push any released oil back onto the shoreline). Re-mobilised oil should be recovered to avoid contamination of other areas.	Sandy beaches Manmade structures Rocky shore Tidal flats Shallow seagrass
High-Pressure Washing	High pressure washing is typically conducted during stage 3, final polish. either hot or cold water can be used but steam should be avoided as it is less effective. Consideration to the amount of natural growth and organisms found on the areas to be cleaned as, high pressure, hot or fresh water as often used with typical equipment can cause long term damage to such organisms. High pressure washing can be used in conjunction with flooding/flushing to direct removed product to collection points.	Manmade structures
In Situ-Washing	Used for the cleaning of various substrate types from pebbles through to boulders. Substrate can be cleaned by hand or with the use of machinery into a cement mixer or open tank where the substrate can be cleaned with kerosene or surface cleaners, washed and then returned to original location. This can be especially effective where the shoreline has limited energy or low tidal range.	Cobble/pebble/boulder beaches Low tidal areas
Sieving	Typically used on fine sediment, or smaller substrate types, where they are contaminated with tar balls or small particulates. Sieving is most often conducted during stages 2 and 3 after the bulk oil has been removed.	Sandy beaches

TECHNIQUE	DESCRIPTION	APPLICABLE HABITATS
	Sieving can be conducted either by hand or through sand processing machines that can be temporarily erected depending on volumes.	
Beach Cleaning Machinery	Beach-cleaning machines are primarily used for the collection of debris by beach users on recreational beaches. Typically used on sand amenity beaches contaminated with tar balls or the residue from manual clean-up, or pellets of weathered oil and sand. The technique requires that shorelines are accessible by vehicles including tractors and trailers.	Sandy beaches
Sediment Tilling (Harrowing/Ploughing)	Beach cleaning machines may be utilised, purpose-built machines which remove the top surface of the beach to a pre-set depth and pass the sand through a series of vibrating/rotating screens. It can also be the use of agricultural equipment, (ploughs or harrows), to turn over and aerate the beach material which usually leads to the rapid removal of residual levels of contamination. The use of this equipment is equivalent to surf washing but without the movement of substrate into the surf zone. It brings the oiled beach material to the surface, promoting biodegradation and the dispersion of oil.	Sandy beaches Sedimentary substrate that can support mechanical equipment or foot traffic and hand tiling.
Vegetation Removal	Cutting of oiled vegetation may be considered to reduce impact of oil on surrounding wildlife and to gain access to oil trapped by vegetation on the marsh surface. Vegetation cutting can be detrimental to the marsh ecosystem. Careful consideration needs to be given to the trade-offs, including exposure pathways from an oiled marsh to wildlife, the reduction of that exposure/risk over time, and methods of determining this risk in the field.	Tidal Flats Mangroves
Sorbents	Sorbent material (boom, pads, snares) may be placed on the floating oil or water surface, allowing it to absorb oil or used to wipe or dab stranded oil. Recovery of all sorbent material is mandatory. Sorbent materials must be placed and removed carefully to minimise disturbance to the surrounding area. Likewise, they must be carefully monitored to prevent stranding, entanglement and burial in the sediment. Sorbents must be replaced when they become saturated with oil.	Rocky shore Tidal Flats Shallow Seagrass Mangroves
Particulate Sorbents (masking)	Typically used to protect wildlife from secondary contamination by fixing sorbent to the oil. Organic materials such as peat, bark, straw, etc. can be applied to shorelines with limited access.	Subject to shoreline type and material available – consult OWR specialist
Bio-remediation	Nutrients may be added to the location to encourage microbial growth and thus enhance the naturally occurring bioremediation process (biodegradation of oil). This process may cause adverse impacts to the ecosystem, as the addition of nutrients can cause a shift to the functioning, and should be very carefully considered prior to use.	Sandy beaches

During the development/decision process for the tactical clean-up methods, response-specific information must be considered such as those mentioned in Table 15 below.

Table 15: Additional Considerations

CONSIDERATIONS	DESCRIPTION
Safety concerns	Risk assessments should be conducted for each individual site with site safety plans and a Job Safety Analysis undertaken prior to commencement of response operations.
Baseline environmental data	Baseline environmental data and existing site-specific flora, fauna and habitat information – consultation with EU and SMEs required.
Shoreline Assessment Data	Data such as but not limited to, oil properties, location, weathering effects, behaviour, constraints, hazards and resources at risk.
Endpoint Criteria	Treatment Endpoints to be agreed with the relevant stakeholder and SMEs once the tactical clean-up techniques have been chosen.
Logistics and staging area constraints	- Access to some beaches will require permission from the relevant LGA or Land Manager - Mobile Phone coverage may be limited in remote areas, a contingency with a Satellite Phone should be scoped prior to deployment to site. - Manual and debris removal will generate waste and have decontamination requirements. Manual removal will require personal and support facilities.
Ecological interests	A NEBA should be undertaken to ensure the most appropriate response options and any sensitivities are identified. Ensure the shoreline clean up teams consult with the EU.
Cultural and Historical concerns	Site specific consultation with Traditional Owner Groups and relevant government departments should be sought prior to mounting a response to cover any cultural or historical concerns.

Step 4: Develop tactics and tasking assignments and distribute to field teams via approved IAP/brief.

Based on the selected STRs, develop team specific tasking assignments for the in-field operational staff which are location and task specific. Tasking assignments should typically include the following information:

- Site coordinates,
- Operational period,
- Team supervisor and members,
- Weather conditions,
- Objective of the task,
- Technique recommended to be implemented,
- Equipment available,
- Staging area location,
- Waste management, and
- Reporting hours, communications details.

Step 5: Review operational effectiveness, end point criteria and re-assess response options.

In-field teams are to report feedback to the IMT on the effectiveness of the response technique and/or other response options that should be considered. Continuous assessment of the response techniques and its effectiveness is required. The IMT must advise in-field teams to collect photographic evidence of the before and after of clean-up operations for response records. The agreed endpoint criteria with relevant stakeholders must be reached unless otherwise agreed. It is good practice to get 2 x daily updates from the FOBs on the progress of operations and if any safety issues have been raised.

4 ATTACHMENT 1 - LOCATION COORDINATES SUMMARY

The table below is a summary of key locations captured within the EGRRP. The listed features from 1 to 21 are listed from West to East. The column S# indicates the priority of each location corresponding with the coloured key provided below.

Locations (West to East)		
Site#	Location Name	Coordinates (Google Maps Link)
1	Lakes Entrance	-37.890604, 147.973082
2	Lake Bunga	-37.868722, 148.046637
3	Lake Tyers	-37.859384, 148.088484
4	Snowy River	-37.803403, 148.549061
5	Yeerung River	-37.791117, 148.774077
6	Dock Inlet	-37.784649, 148.823719
7	Sydenham Inlet	-37.780447, 149.019796
8	Tamboon Inlet	-37.777586, 149.153086
9	Thurra River	-37.782408, 149.312761
10	Mueller River	-37.779031, 149.328135
11	Wingan Inlet	-37.749159, 149.513391
12	Easby Creek	-37.739481, 149.521428
13	Red River Inlet	-37.725483, 149.561294
14	Benedor River	-37.698689, 149.622367
15	Shipwreck Creek	-37.647626, 149.699456
16	Betka River	-37.585089, 149.739328
17	Davis Creek	-37.578739, 149.749761
18	Mallacoota Inlet	-37.563159, 149.766552
19	Tullaberga Island	-37.557259, 149.845018
20	Gabo Island	-37.565176, 149.91441
21	Lake Wau Wau Inlet	-37.520974, 149.937139
Other		
22	Proposed Wellhead Centre	-38.151879, 148.555464
23	East Gippsland Region Boundary SW	-38.003525, 147.697292
24	East Gippsland Region Boundary NE	-37.505601, 149.976048

Key	
	Primary
	Secondary
	Tertiary
	No Priority

APPENDIX F: KSAT EMERGENCY ORDER FORM



Emergency Order Form

Call +4777661300 **AND** email this form to: emergency@ksat.no

Customer Info

Client Name AMOSC	Project Name AMOSC	Contract Ref. Con-19-215	TEOS Procedure AMOSC 2019
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Order form date (DD/MM/YYYY)

Client point of contact #1 	Email 	Phone
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Client point of contact #2 	Email 	Phone
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Area of Interest (AOI)

Shape file / kml file 	OR	Center position – Lat / Lon 	Coordinate format
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Image acquisition time

☐ Order first possible image* **OR/AND** ☐ Generate feasibility study for approval – specify start /stop dates (max 5 days)

Additional comments on time, frequency, etc.

/

*NB: Order first possible image constitutes a purchase order. Emergency orders carry additional fees as detailed in the contract # UI164285

Preferred satellites and modes to cover current emergency (select 1 per satellite)

1.Radarsat-2

- ☐ ScanSAR Narrow
☐ Wide
☐ Wide Fine
☐ Standard
☐ Fine
☐ Spotlight

2.TerraSAR-X/PAZ

- ☐ ScanSAR Wide
☐ ScanSAR
☐ Stripmap
☐ Spotlight (SL)
☐ HR Spotlight (HR)

3.Cosmo-SkyMED*

- ☐ ScanSAR - Huge Region
☐ ScanSAR – Wide Region
☐ StripMap - HIMAGE
☐ Spotlight – 2 (10x10)
☐ Spotlight – 2 (7x7)

Oil Season Services

- ☒ Oil Spill detection report

4.GAOFEN-3

- ☐ NSC
☐ SS
☐ FS-2
☐ FS-1
☐ UFS-1
☐ SL

5.SENTINEL 1A/B**

- ☐ Check short term availability

*2/3 DTO's are recommended per ordering of Cosmo-SkyMED
 **Sentinel-1A/B cannot be tasked

Any other comments

Order Approval

Date

Place

Order Approved by:

APPENDIX G: ENVIRONMENTAL PERFORMANCE STANDARD AND MEASUREMENT CRITERIA

SOURCE CONTROL PERFORMANCE STANDARDS

The EPO for Source Control is to prevent or limit the amount of hydrocarbon being released into the marine environment. The control measure, EPS and measurement criteria for each relevant source control tactic is presented in Table G - 1.

Table G - 1: Source Control - Environmental Performance Standards

CONTROL MEASURE	ENVIRONMENTAL PERFORMANCE STANDARD	MEASUREMENT CRITERIA
OPEP CM01: Source Control Planning and Implementation	OPEP EPS01.1: The AGR Project Drilling Manager will ensure that the SCERP is developed in accordance with the latest IOGP–IPIECA Source Control Emergency Planning Guide (superseding IOGP Report 594), at least three months prior to spud.	OPEP MC01.1.1: The SCERP is issued at least three months prior to spud.
	OPEP EPS01.2: A Source Control Personnel Resourcing Plan addressing all SCERP roles, with named primary and secondary nominees, is issued at least three months prior to spud and confirmed monthly thereafter.	OPEP MC01.2.1: The SCERP includes a Personnel Resourcing Plan that demonstrates resourcing capability to meet source control personnel requirements for well containment activities.
	OPEP EPS01.3: From three months prior to spud until well-kill capability is no longer required, a relief MODU availability and Safety Case status register shall be reviewed and re-issued at least monthly. The register shall identify at least one technically suitable MODU that can be mobilised and commence relief-well operations in a timeframe consistent with achieving well kill within 67 days of a LOWC event.	OPEP MC01.3.1: Emails verify that the relief MODU availability and Safety Case status register is issued monthly. OPEP MC01.3.2: The Relief MODU availability and Safety Case status register identifies at least one technically suitable MODU with indicative mobilisation timeline demonstrating compatibility with the 67-day well-kill objective.
	OPEP EPS01.4: Where verification activities identify that: - no technically suitable MODU is available; or - no technically suitable MODU can reasonably support achievement of well kill within 67 days of LOWC; or	OPEP MC01.4.1: Email or incident report verifies that escalation to the CMT was undertaken within 24 hours. OPEP MC01.4.2: Email approval or report sign off verifies that a risk assessment is completed and approved by the CMT Leader within 72 hours.

CONTROL MEASURE	ENVIRONMENTAL PERFORMANCE STANDARD	MEASUREMENT CRITERIA
	no identified technically suitable MODU has a current and valid Safety Case or a demonstrated pathway to obtain the required approval within project response timeframes, the issue shall be escalated to the CMT within 24 hours of becoming aware of this. A documented risk assessment and corrective action plan shall be prepared and approved by the CMT within 72 hours of the original issue escalation.	OPEP MC01.4.3: The corrective action plan is in place with document control verifying that it is approved by the CMT.
	OPEP EPS01.5: An IMS risk assessment shall be completed and documented for all designated source control response vessels prior to spud of relief well.	OPEP MC01.5.1: IMS risk assessment completed for defined vessels as per the EPSs under EPO5 in the EP (IMS Biofouling Risk Assessment Process)
	OPEP EPS01.6: The AGR Project Drilling Manager will ensure that an exercise is conducted to test the SCERP three (3) months prior to spud, that the exercise report clearly lists the objectives and that any learnings are fed back into the SCERP and any associated sub-plans.	OPEP MC01.6.1: The SCERP Exercise report verifies that the exercise was undertaken at least three months prior to spud and lists the exercise's objectives. OPEP MC01.6.2: Learnings captured in the Project Action Tracker Register and incorporated into this OPEP and/or EP as required. OPEP MC01.6.3: Learnings captured in the Project Action Tracker Register and incorporated into this OPEP and/or EP as required.
	OPEP EPS01.7: Emperor Energy shall ensure that an executed contract with a qualified well control provider is in place up to 30 days prior to spud and remains active throughout the Activity, covering as a minimum: 24/7 mobilisation of suitably qualified well control specialists; well intervention and source control engineering support; and - relief-well planning and technical support, including kill design and execution advisory services.	OPEP MC01.7.1: Emperor Energy executed contract with well control provider (WWC) is available and verifies it was signed at least 30 days prior to spud.

CONTROL MEASURE	ENVIRONMENTAL PERFORMANCE STANDARD	MEASUREMENT CRITERIA
	OPEP EPS01.8: Source control capability shall be maintained throughout operations to achieve the following milestones from LOWC notification: • Source Control Branch activated within two (2) hours • WWC activated within four (4) hours. • Suitable relief MODU identified and AEP MoU activated within 48 hours. • Safety Case Revision lodged with NOPSEMA within four (4) weeks. • Relief well materials on site within 50 days. • Relief well spud within 55 days. • Intersection and well kill within 67 days.	OPEP MC01.8.1: Incident logs verify that the milestones listed here were achieved. OPEP MC01.8.2: Reports on monthly verification of supply chain lead times verify that the milestone schedule in the SCERP and RWP remains current. OPEP MC01.9.1: Monthly verification records demonstrate at least one suitable MODU is identified that meet requirements outlined in the SCERP. OPEP MC01.9.2: Where a technically suitable relief well MODU cannot be identified, a capability assessment has been prepared and assessed using the MoC process. OPEP MC01.9.3: Daily Drilling Reports (DDR) demonstrate drilling activities were either not commenced, or they were suspended, where the EPS could not be met.
OPEP CM02: Relief well critical equipment and personnel availability	OPEP EPS02.1: Where required for relief-well intersection operations, equipment and specialist support for intersection preparation shall be contractually available in accordance with the relief-well execution schedule defined in the SCERP and Well Kill Plan, with mobilisation lead times that support achievement of well kill within 67 days of LOWC notification.	OPEP MC02.1.1: Monthly verification records demonstrate the critical equipment within 67 days from : • Conductors – NOV • Casing and liner – Boma Australia • Wellhead – TFM • drilling fluids - Haliburton or SLB.

CONTROL MEASURE	ENVIRONMENTAL PERFORMANCE STANDARD	MEASUREMENT CRITERIA
OPEP CM03: Relief Well drilling	OPEP EPS03.1: A current AEP Mutual Aid Agreement (MoU) shall be maintained throughout the activity in order to provide access to MODUs suitable for drilling a relief well.	OPEP MC03.1.1: A signed copy of the AEP MoU is available and current.
	OPEP EPS03.2: IC initiates SCERP within 3 hours of LOWC notification.	OPEP MC03.2.1: Incident logs verify that the IC initiated the SCERP within 3 hours of notification of the LOWC.
	OPEP EPS03.3: Relief well is drilled in accordance with the Relief Well Plan (RWP) section of the SCERP.	OPEP MC03.3.1: DDRs verify the relief well is drilled in accordance with the RWP section of the SCERP.
OPEP CM04: Vessel source control activities	OPEP EPS04.1: Vessel Master initiates first strike SOPEP actions immediately upon detection of fuel-tank rupture and notifies AMSA within two (2) hours.	OPEP MC04.1.1: Incident logs verify that notification to AMSA was undertaken within 2 hours.
	OPEP EPS04.2: Spill exercises/drills on vessels are conducted as per each vessel's SOPEP/SMPEP training schedule.	OPEP MC04.2.1: Vessel spill exercise/drill records verify that the SOPEP/SMPEP exercises were undertaken to that vessel's schedule .
OPEP CM05: Source Control Termination	OPEP EPS05.1: Source control response shall only be terminated once: • The well control contractor (WWC) confirms in writing that hydrocarbon flow has permanently ceased; • Wellbore integrity has been verified by negative pressure test and sustained zero-flow demonstration over a minimum 24-hour observation period; • The well has been suspended or plugged and abandoned (P&A) in accordance with the WOMP; and • Termination is endorsed in writing by the SCB Lead and the IC.	OPEP MC05.1.1: Written confirmation from WWC of permanent flow cessation is available.
		OPEP MC05.1.2: Well integrity test reports and 24-hour observation logs is available and verifies negative pressure test and sustained zero-flow is achieved.
		OPEP MC05.1.3: Termination authorisation signed by SCB Lead and IC is available and verifies the well has been suspended or P&A.

SURVEILLANCE, MODELLING AND VISUALISATION ENVIRONMENTAL PERFORMANCE STANDARDS

The EPO for SMV is to gain situational awareness of the spill and assess the effectiveness of response strategies being deployed throughout the spill response, to inform CMT and IMT decision making to minimise impacts and facilitate recovery to an acceptable level. The control measure, EPS and measurement criteria for each relevant SMV tactic is outlined in Table G - 2.

Table G - 2: Surveillance, Modelling and Visualisation - Environmental Performance Standards

CONTROL MEASURE	ENVIRONMENTAL PERFORMANCE STANDARD	MEASUREMENT CRITERIA
OPEP CM06: OSTM	OPEP EPS06.1: Real-time OSTM is commissioned within 2 hours of notification of the incident, with results available within 4 hours.	OPEP MC06.1.1: Incident records verify that OSTM was requested within 2 hours of notification of the incident.
	OPEP EPS06.2: OSTM shall be produced and provided to the IMT as requested. OSTM may continue at a frequency decided by the Environment Unit Lead until: • Source control has been achieved; and • The IC has approved cessation of OSTM activities.	OPEP MC06.2.1: Incident logs will confirm real-time OSTM reports are available within 4 hours of request.
OPEP CM07: Tracking Buoys	OPEP EPS07.1: Each of the vessels involved in the activity (geophysical, geotechnical and the drilling support vessels) will carry one oil spill tracking buoy for deployment in the event of a Level 2 or 3 spill.	OPEP MC07.1.1: Pre activity Vessel inspection records verify that tracking buoys are on board.
	OPEP EPS07.2: At the time of a spill, the monitoring buoys will be activated and deployed overboard at the leading edge of the slick (if able to be identified), within one hours of the spill (if safe to do so), to allow for real-time satellite tracking of the spill.	OPEP MC07.2.1: Incident logs verify that the monitoring buoy(s) was deployed overboard and KSAT records verify that they are recording data.
OPEP CM08: Vessel Surveillance	OPEP EPS08.1: Surveillance with the vessel(s) undertaking the activity (i.e. geophysical, geotechnical or drilling support vessels) is undertaken immediately upon becoming aware of the spill.	OPEP MC08.1.1: Incident logs verify that surveillance commenced immediately.
	OPEP EPS08.2: Vessel surveillance SITREPs shall be provided to the IMT at least once every operational period (maximum 12-hour interval) and continue until SMV termination criteria specified in OPEP EPS10.1 and OPEP EPS10.2 are achieved.	OPEP MC08.2.1: Completed SITREPs verify that vessel-based SMV is undertaken (Appendix A).

CONTROL MEASURE	ENVIRONMENTAL PERFORMANCE STANDARD	MEASUREMENT CRITERIA
OPEP CM09: Aerial Surveillance	OPEP EPS09.1: ADA Gold (fixed wing aviation contractor) is activated by the IMT within 2 hours of the IMT being notified of the spill to commence aerial surveillance.	OPEP MC09.1.1: Incident logs verify that ADA Gold was activated by the IMT within 2 hours.
	OPEP EPS09.2: Commence first aerial flight upon request from the IMT in order to undertake a reconnaissance survey. The first run may be without a trained aerial observer.	OPEP MC09.2.1: Incident logs verify that the first flight was of a reconnaissance nature, with or without a trained observer.
	OPEP EPS09.3: The IMT will mobilise the trained aerial observer(s) via AMOSC as soon as practicable to ADA Gold to then undertake surveillance from the next flight.	OPEP MC09.3.1: Incident logs verify that a trained aerial observer was deployed on all flights after the initial reconnaissance flight.
	OPEP EPS09.4: Aerial surveillance observations are made available to the IMT within 1 hour of completion of the flight to provide the IMT Operations Team with rapid intelligence on the spill trajectory to inform planning.	OPEP MC09.4.1: Completed OMS-1 aerial observation data sheets (Appendix D) and email communications verify that the observation sheets were supplied to the IMT within an hour of the completion of the flight.
OPEP CM10: SMV Termination	OPEP EPS10.1: Termination of SMV when a minimum of two consecutive aerial or vessel surveillance surveys spaced 24 hours apart confirm no surface hydrocarbons detectable at or above the Bonn Agreement Oil Appearance Code Category 1 threshold, and OSTM confirms no further plume transport risk to priority receptors.	OPEP MC10.1.1: Evidence Required for SMV termination based on surveillance and OSTM: • Completed aerial or vessel surveillance logs with date and time stamps • Surveillance reports documenting observations of Bonn Agreement oil appearance • Survey maps with transects and observation zones and GIS tracks showing survey coverage • Latest OSTM model outputs with technical interpretation memo • Updated Operational NEBA • SMV termination recommendation report and Incident Controller endorsement record.

CONTROL MEASURE	ENVIRONMENTAL PERFORMANCE STANDARD	MEASUREMENT CRITERIA
	OPEP EPS10.2: SMV activities shall not be terminated until: • All applicable OSM termination criteria have been achieved; • Consultation has occurred with nominated subject matter experts; • The IC approved cessation; and • The decision is documented in the incident records.	OPEP MC10.2.1: Evidence required for SMV termination based on OSM criteria: • OSM assessment report cross referencing OSM termination criteria to SMV • Supporting operational and environmental data and subject matter expert consultation • Signed concurrence statements or endorsed decision note • Regulator notification records, where required • Stakeholder communications log • Signed SMV termination authorisation.
	OPEP EPS10.3: Following the termination of source control, the IMT shall ensure documented hand-over of SMV outputs to the OSM Implementation Lead, for the purpose of informing post-spill and post-response scientific monitoring development and implementation.	OPEP MC10.3.1: Hand-over record signed by IMT Planning Officer and OSM Implementation Lead retained in incident file. OPEP MC10.3.2: OSM-BIP records confirm receipt of SMV data products.

SHORELINE PROTECTION AND DEFLECTION ENVIRONMENTAL PERFORMANCE STANDARDS

The EPO for Shoreline Protection and Deflection is to prevent and reduce limit hydrocarbon contact with coastal protection priorities. The control measure, EPS and measurement criteria for each relevant tactic is outlined in Table G - 3.

Table G - 3: Shoreline Protection and Deflection – Environmental Performance Standards

CONTROL MEASURE	ENVIRONMENTAL PERFORMANCE STANDARD	MEASUREMENT CRITERIA
OPEP CM11: Shoreline Protection and Deflection	OPEP EPS11.1: Vessels are available via Clarkson's Brokerage through Emperor Energy's contract with AGR.	OPEP MC11.1.1: List of vessels is available electronically through Clarkson's vessel brokerage.
	OPEP EPS11.2: The IMT Planning Officer prepares the operational NEBA using the inputs of the OSTM to determine if shoreline protection and deflection activities are likely to result in a net environmental benefit.	OPEP MC11.2.1: Operational NEBA is available and considers shoreline protection and deflection activities.
	OPEP EPS11.3: A Shoreline Protection IAP is developed and approved by the CMT Leader. The Shoreline IAP outlines the priority areas for shoreline protection based on the results of the operational NEBA.	OPEP MC11.3.1: Shoreline Response IAP is available and identifies priority areas for protection.
	OPEP EPS11.4: The IMT shall mobilise sufficient resources to achieve the minimum operational capability specified in Table 5-11 of this OPEP, unless directed otherwise by the State Control Agency.	OPEP MC11.4.1: Resources meet the minimum operational capability for shoreline protection as identified in Table 5-11 .
	OPEP EPS11.5: Where Emperor Energy is not the Control agency, the CMT and IMT will work to ensure first-strike protection/deflection assets (boom, deployment vessel, trained crew) are on-station at agreed Control Agency tasking point within 14 hours of predicted shoreline contact.	OPEP MC11.5.1: Incident logs verify that deployment occurs within 14 hours of predicted shoreline contact.
OPEP CM12: Shoreline Protection and Deflection – State Control Agency Handover	OPEP EPS12.1: Where a shoreline impact is confirmed within State waters and the relevant State Control Agency assumes the Control Agency role, the IMT and CMT shall:	OPEP MC12.1.1: Incident logs verify the handover request .
	initiate a formal handover request to the State Control Agency;	OPEP MC12.1.2: Signed handover record is available.

CONTROL MEASURE	ENVIRONMENTAL PERFORMANCE STANDARD	MEASUREMENT CRITERIA
	- maintain incident response activities in collaboration as directed by State Control Agency; and - provide continuing resource support (personnel, equipment, logistics) to the State Control Agency for the duration of the response.	OPEP MC12.1.3: IAPs for subsequent operational periods document IMT/CMT ongoing resource provision to the State Control Agency.

SHORELINE CLEAN-UP ENVIRONMENTAL PERFORMANCE STANDARDS

The EPO for Shoreline Clean-up is to remove accumulated hydrocarbons from shorelines in order to limit impact on coastal protection priorities and facilitate habitat recovery. The control measure, EPS and measurement criteria for each relevant Shoreline Clean-up tactics is outlined in Table G - 4.

Table G - 4: Shoreline Clean-up - Environmental Performance Standards

CONTROL MEASURE	ENVIRONMENTAL PERFORMANCE STANDARD	MEASUREMENT CRITERIA
OPEP CM13: Shoreline clean-up arrangements	OPEP EPS13.1: Vessels are available via Clarkson's Brokerage through Emperor Energy's contract with AGR.	OPEP MC13.1.1: List of vessels is available electronically through Clarkson's vessel brokerage.
	OPEP EPS13.2: A list of labour hire companies available to assist with shoreline clean-up activities is created prior to the drilling campaign and maintained throughout the activity.	OPEP MC13.2.1: The list of labour hire companies is available.
OPEP CM14: Shoreline Clean-Up Plan	OPEP EPS14.1: A Shoreline Clean-up IAP is developed by the IMT and approved by the CMT Leader if actionable loadings of hydrocarbons are predicted based on the SMV work. The Shoreline Clean-up IAP outlines the priority areas for shoreline clean-up based on the results of the operational NEBA.	OPEP MC14.1.1: Shoreline Clean-up IAP is available, if required.
	OPEP EPS14.2: The IMT shall mobilise sufficient shoreline clean-up resources to achieve the minimum operational capability specified in Table 5-15 of this OPEP, unless directed otherwise by the State Control Agency.	OPEP MC14.2.1: Resources meet the minimum operational capability for shoreline clean-up as identified in Table 5-15.
OPEP CM15: Shoreline Clean-Up Response	OPEP EPS15.1: During each Operational Period, prepare, assess and/or update the Operational NEBA to determine if shoreline clean-up activities are likely and continue to result in a net environmental benefit.	OPEP MC15.1.1: Incident logs confirm that the Operational NEBA is in place and reviewed for each Operational Period.
	OPEP EPS15.2: Clean-up strategies shall be selected, documented and implemented within the first Operational Period following shoreline impact confirmation and reviewed during each subsequent IAP Operational Period in consultation with the relevant State Control Agency.	OPEP MC15.2.1: IAPs verify that shoreline clean-up strategies are documented and incident logs verify that shoreline clean-up has been undertaken in accordance with the IAPs.
	OPEP EPS15.3: The IMT will formally request personnel mobilisation from the AMOSC Core Group within two hours of identifying a requirement for shoreline response support.	OPEP MC15.3.1: Incident logs demonstrate mobilisation request issued within two hours of identified requirement.

CONTROL MEASURE	ENVIRONMENTAL PERFORMANCE STANDARD	MEASUREMENT CRITERIA
	OPEP EPS15.4: Emperor Energy will make available to the Control Agency equipment from AMOSC stockpiles, as requested.	OPEP MC15.4.1: Incident logs verify that equipment from AMOSC stockpiles was deployed within agreed mobilisation timeframe upon request by the Control Agency.
	OPEP EPS15.5: Unless directed otherwise by the relevant State Control Agency, shoreline access planning will prioritise use of existing roads and tracks so that new ground disturbance and habitat damage within the Shoreline Response Area is avoided or minimised.	OPEP MC15.5.1: Shoreline Clean-up IAP section on access planning is reviewed and signed off by the IMT and CMT.
	OPEP EPS15.6: Where spill response activities overlap with areas of potential cultural significance, the IMT and SCAT will engage an appropriately qualified Heritage Adviser to ensure that identified cultural heritage features are not damaged or disturbed by shoreline response activities.	OPEP MC15.6.1: Incident logs verify that the Heritage Adviser was appointed upon identification of overlap with culturally significant areas. OPEP MC15.6.2: Adviser details, advice and recommendations documented in IAP and incident log.
	OPEP EPS15.7: The establishment of FOBs at shoreline areas is undertaken under direction or in consultation with the Control Agency to ensure FOB locations do not result in unnecessary environmental disturbance or conflict with shoreline sensitivities.	OPEP MC15.7.1: IAPs and incident logs include details of FOB location(s) and confirmation of Control Agency involvement.
	OPEP EPS15.8: Vehicles used for shoreline operations will be assessed and selected based on suitability for environmental and operational condition to minimise erosion, compaction, and damage to shoreline habitats.	OPEP MC15.8.1: Vehicle suitability assessment is documented in the IAP for each operational period.
	OPEP EPS15.9: Ensure demarcation zones are mapped out in sensitive habitat areas, unless directed otherwise by the relevant State Control Agency, to prevent inadvertent access and damage during shoreline clean-up operations.	OPEP MC15.9.1: Maps showing demarcation zones are included in the IAP for each operational period. OPEP MC15.9.2: State Control Agency authorisations and/or instructions are documented in IAPs and/or incident logs.
	OPEP EPS15.10: Vehicle and personnel movements in sensitive shoreline areas will be restricted to limit erosion, sediment disturbance, and soil compaction.	OPEP MC15.10.1: Approved routes and movement restrictions are documented in the IAPs.

CONTROL MEASURE	ENVIRONMENTAL PERFORMANCE STANDARD	MEASUREMENT CRITERIA
	OPEP EPS15.11: Shoreline clean-up is terminated only once the relevant Control Agency has confirmed that clean-up objectives have been met.	OPEP MC15.11.1: Incident logs verify Control Agency endorsement of endpoint achievement is obtained and recorded prior to demobilisation of resources from each segment.

OILED WILDLIFE RESPONSE ENVIRONMENTAL PERFORMANCE STANDARDS

The EPO for OWR is to prevent and mitigate impacts to wildlife by limiting exposure to hydrocarbons, capturing and rehabilitating affected animals, and managing carcasses to reduce secondary environmental effects. The control measure, EPS and measurement criteria for each relevant OWR tactic is outlined in Table G - 5.

Table G - 5: OWR - Environmental Performance Standards

CONTROL MEASURE	ENVIRONMENTAL PERFORMANCE STANDARD	MEASUREMENT CRITERIA
OPEP CM16: OWR Planning	OPEP EPS16.1: Emperor Energy has in place a Master Service Contract with AMOSC prior to spud to ensure that appropriate OWR equipment and personnel can be provided.	OPEP MC11.1.1: AMOSC Master Service Contract is in place, dated prior to spud, and maintained for the duration of activities
OPEP CM17: OWR Strategy Development	OPEP EPS17.1: OWR IAP development is initiated after SMV activities indicate potential for or confirmed oiled wildlife observations in consultation with State Control Agency and OWR agencies.	OPEP MC17.1.1: OWR IAP is available, if required.
OPEP CM18: OWR Equipment Mobilisation	OPEP EPS18.1: AMOSC-supplied OWR equipment shall be mobilised to the nominated staging area within 24 hours of being activated.	OPEP MC18.1.1: Incident logs verify OWR equipment reached the staging area within 24 hours of activation.
OPEP CM19: OWR Interface arrangements	OPEP EPS19.1: OWR interface arrangements with DEECA will be reviewed and confirmed prior to the commencement of the drilling campaign.	OPEP MC19.1.1: Communication records relating to confirmation of OWR interface arrangements with DEECA are available.
OPEP CM20: OWR Personnel Deployment	OPEP EPS20.1: Trained oiled wildlife responders are on site within 24 hours of their activation to undertake OWR activities.	OPEP MC20.1.1: Incident logs verify that Trained oiled wildlife responders are on site within 24 hours of their activation to undertake OWR activities.
OPEP CM21: OWR	OPEP EPS21.1: Oiled wildlife response techniques as outlined in Section 5.6.2 of this OPEP shall be operational within 72 hours of OWR activation, unless an alternative timeframe is agreed in writing with the relevant State Control Agency and documented in the IAP. The location(s) of OWR containers shall be confirmed with the AMOSC OWR Specialist and the State Control Agency prior to activation where practicable.	OPEP MC21.1.1: Incident logs verify OWR container is operational within 72 hours of OWR activation. OPEP MC21.1.2: Any agreed alternative timeframe documented in IAP with State Control Agency endorsement.

CONTROL MEASURE	ENVIRONMENTAL PERFORMANCE STANDARD	MEASUREMENT CRITERIA
OPEP CM22: OWR Termination	OPEP EPS22.1: OWR activities will be terminated once the following are achieved: - All affected animals have been rescued, rehabilitated, released, or appropriately managed (e.g. euthanised or necropsied). - Impacted habitats and shorelines are clean or recovering, with no further risk to wildlife. - All response objectives are achieved and approved by relevant authorities (e.g. state agencies and AMOSC).	OPEP MC22.1.1: Incident logs verify that OWR is managed in accordance with the OWR IAP.
	OPEP EPS22.2: During active OWR operations, daily wildlife response outcome reports will be prepared by the OWR Coordinator and provided to the IMT for inclusion in the IAP. A final report that documents OWR outcomes is prepared by the OWR Specialist.	OPEP MC22.1.2: Written approval from the relevant State Control Agencies verify OWR objectives are met. OPEP MC22.2.1: Daily Wildlife Outcome Reports are available for the days in which active OWR operations took place. OPEP MC22.2.2: Aggregated final OWR outcome report is prepared post-response termination and available.

WASTE MANAGEMENT ENVIRONMENTAL PERFORMANCE STANDARDS

The EPO for waste management is to ensure that waste treatment, transport and disposal regulations are being adhered to, and any secondary contamination is prevented, limited and mitigated. The control measure, EPS and measurement criteria for each relevant waste management tactic is outlined in Table G - 6.

Table G - 6: Waste Management - Performance Standards

CONTROL MEASURE	ENVIRONMENTAL PERFORMANCE STANDARD	MEASUREMENT CRITERIA
OPEP CM23: Waste Management Planning	OPEP EPS23.1: Waste management equipment, personnel, transport, and disposal facilities will remain available throughout the response through a documented agreement with one or more waste management contractors.	OPEP MC23.1.1: Current agreement with a waste service provider with the capability for response services during an emergency oil spill response is available.
OPEP CM24: Waste Collection and Tracking	OPEP EPS24.1: The IMT will formally request waste contractor mobilisation to the required shoreline locations to collect waste for transfer to a licenced waste facility.	OPEP MC24.1: The relevant IAPs record waste contractor mobilisation and collection.
	OPEP EPS24.2: Hydrocarbon-contaminated waste collected at shoreline sites shall be transferred from temporary on-site storage to a licensed waste reception facility within 72 hours of generation and waste containment integrity will be inspected daily until transfer is completed.	OPEP MC24.2.1: Waste transfer certificates verify the volumes of waste and that transfer destinations are licensed. OPEP MC24.2.2: Incident logs verify daily containment inspection records during any storage period do not exceed 72 hours.
OPEP CM25: Waste Management - decontamination	OPEP EPS25.1: Decontamination arrangements for vessels, vehicles, equipment, and PPE are implemented to prevent secondary contamination during response and demobilisation.	OPEP MC25.1: IAPs and incident logs document decontamination procedures, locations, and completion prior to demobilisation.

OPERATIONAL AND SCIENTIFIC MONITORING ENVIRONMENTAL PERFORMANCE STANDARDS

The EPO for OSM is to evaluate the impact and recovery of environmental receptors from the of the incident and response activities to guide remediation efforts following a Level 2/3 spill. The control measure, EPS and measurement criteria for OSM is outlined in Table G - 7.

Table G - 7: OSM - Environmental Performance Standards

CONTROL MEASURE	ENVIRONMENTAL PERFORMANCE STANDARD	MEASUREMENT CRITERIA
OPEP CM26: OSM-BIP Preparedness	OPEP EPS26.1: The Master Service Contract is in place with the OSM service provider (Stantec) within 30 days of OPEP approval to provide access to suitably qualified and competent personnel and equipment to assist in the implementation of OSM.	OPEP MC26.1.1: Contract with Stantec is dated within 30 days of OPEP approval and maintained for the duration of activities.
	OPEP EPS26.2: Monthly capability reports will be obtained from Stantec commencing from the time they are contracted, which is reviewed by Emperor Energy within seven days of receipt to verify availability of personnel, equipment and vessels necessary to implement the OSM-BIP.	OPEP MC26.2.1: Monthly capability reports from Stantec are available and confirm that nominated personnel and equipment remains available. OPEP MC26.2.2: OSM review log is completed within seven days, identifying any capability gaps and corrective actions.
	OPEP EPS26.3: The Stantec OSM Implementation lead and scientific personnel for each monitoring program shall meet the minimum qualifications and experience criteria specified in Appendix A of the Joint Industry OSM Framework (APPEA, 2021). Competency records will be held by the OSM Provider and made available to Emperor Energy.	OPEP MC26.3.1: Stantec's Competency Register includes named OSM Implementation Lead and program leads, supplied with the monthly capability reports. OPEP MC26.3.2: Stantec-nominated OSM personnel qualifications and experience records are on file.
OPEP CM27: OSM Activation	OPEP EPS27.1: OMP and SMP activation criteria shall be assessed during development of the initial IAP and every subsequent Operational Period. Where activation criteria are met, the relevant OMP or SMP shall be activated within the same operational period.	OPEP MC27.1.1: IAP records demonstrate assessment of activation criteria and activation decision.
		OPEP MC27.1.2: Where activation criteria are met, activation occurs within the same operational period and is recorded in the Incident Log.

CONTROL MEASURE	ENVIRONMENTAL PERFORMANCE STANDARD	MEASUREMENT CRITERIA
	OPEP EPS27.2: The IMT Environment Unit Lead and OSM Implementation Lead will integrate with response decision making through the IAP cycle, to set OSM objectives and first strike mobilisation requirements within 12 hours.	OPEP MC27.2.1: Daily monitoring reports submitted and integrated into IAP Objectives.
	OPEP EPS27.3: Deployment of OSM first-strike monitoring teams within 72 hours of deployment notification.	OPEP MC27.3.1: IAP reports verify OSM mobilisation within 72 hours of notification.
OPEP CM28: OSM-BIP Planning	OPEP EPS28.1: Upon activation, pre-impact baseline conditions for the highest-priority receptors identified in the OSM-BIP shall be characterised using a combination of: - existing published datasets and regional monitoring data - reactive baseline collection arrangements that can be mobilised within agreed timeframes in the event of an OSM activation (see Section 14 of the OSM-BIP).	OPEP MC28.1.1: Incident logs verify that reactive baseline collection arrangements (e.g. third-party services, vessels, sampling equipment) were mobilised by Stantec.
OPEP CM29: OSM Response Scope	OPEP EPS29.1: Where socio-economic or cultural heritage impacts are identified or predicted, monitoring shall be developed in consultation with relevant State agencies, First Nations representatives, and affected industries.	OPEP MC29.1.1: Response monitoring program designs include relevant consultation recorded in the stakeholder consultation database.
OPEP CM30: OSM Implementation	OPEP EPS30.1: Implementation of OSM will comply with the Minimum Standards listed in Appendix A of the Joint Industry OSM Framework (APPEA, 2021).	OPEP MC30.1.1: Daily monitoring reports verify that monitoring is undertaken in accordance with the Joint Industry OSM Framework.
OPEP CM31: OSM Termination	OPEP EPS31.1: Once post-spill SMP monitoring reports are drafted, they will be peer reviewed by an expert panel to be approved by the relevant State and Commonwealth Regulatory Agencies.	OPEP MC31.1.1: Peer review comments, panel credentials, and sign-off is documented in monitoring records.
	OPEP EPS31.2: OMPs and SMPs will be terminated in accordance with the termination criteria provided in Section 9-1 and 9-2 of the Joint Industry OSM Framework (APPEA, 2021).	OPEP MC31.2.1: IAPs and incident logs confirm OMPs and SMPs are terminated in accordance with the termination criteria provided in Tables 9-1 and 9-2 of the Joint Industry OSM Framework (APPEA, 2021).

PREPAREDNESS, REVIEW AND TESTING ENVIRONMENTAL PERFORMANCE STANDARDS

The EPO for preparedness, testing and training is to ensure that trained and competent CMT and IMT, including the SCB, and field personnel are prepared to effectively respond and manage a spill scenario for the duration of the activity with the aim of preventing and/or limiting further environmental impact from response activities. The control measures, EPS and measurement criteria for planning, testing and training are outlined in Table G - 8.

Table G - 8: Planning, Testing and Training - Environmental Performance Standards

CONTROL MEASURE	ENVIRONMENTAL PERFORMANCE STANDARD	MEASUREMENT CRITERIA
OPEP CM32: Response Training	OPEP EPS32.1: All persons rostered to CMT and IMT roles complete the training in Table 7-1 for site survey activities or Table 7-2 for drilling activities prior to activities commencing.	OPEP MC32.1.1: Training records verify that CMT and IMT roles are held in accordance with OPEP Table 7-1 for site survey activities or Table 7-2 for drilling activities
	OPEP EPS32.2: The SCB is available for the duration of the drilling campaign in order to implement the SCERP, with all designated personnel meeting IOGP 664 (Subsea Well Response Capability) and well control competency standards to ensure effective management of high-consequence well control risks.	OPEP MC32.2.1: Source Control Branch role assignments are documented in the IAP and the SCERP for each operational period. OPEP MC32.2.2: Competency records verify that all named Source Control Branch personnel hold current IOGP 664 and/or well control qualifications.
OPEP CM33: Response Testing and Exercises	OPEP EPS33.1: Hydrocarbon spill response exercises will be conducted in accordance with Table 7-4 of this OPEP and OPGGS Regulation 22(13)– (14), including scheduled desktop, functional, and deployment exercises, with performance evaluated and improvement actions implemented, and with a LOWC desktop exercise completed no later than three months prior to spud to confirm response preparedness and effectiveness.	OPEP MC33.1.1: Exercise records demonstrate that desktop, functional, and deployment exercises have been conducted in accordance with Table 7-3 and Regulation 22(13)– (14).
	OPEP EPS33.2: Lessons from exercises and testing are captured, actioned and integrated into the OPEP within one month of each exercise and test, as required.	OPEP MC33.2.1: Exercise and testing report(s) including observations and opportunities for improvement are available. OPEP MC33.2.2: Actions are managed to completion and recorded through the Project Action Tracker.

CONTROL MEASURE	ENVIRONMENTAL PERFORMANCE STANDARD	MEASUREMENT CRITERIA
OPEP CM34: OPEP Compliance Management	OPEP EPS34.1: The Emperor Energy Environment Manager will conduct a monthly documented review confirming: - all pre-activity EPSs remain met. - all oil spill response contracts remain current and active. - the MODU register reflects current Safety Case status for relief rig candidates; and - the EOCD is up to date. All identified breaches identified in the monthly review will result in corrective actions being taken to rectify this and will be captured as a recordable incident.	OPEP MC34.1.1: Monthly Readiness Review records are available.
		OPEP MC34.1.2: Corrective actions based on this monthly review are recorded in the Project Action Tracker.
		OPEP MC34.1.3: Completed incident forms are available for any EPS breaches.
	OPEP EPS34.2: Availability of key AMOSC equipment stockpiles required for the activity will be verified monthly.	OPEP MC34.2.1: Monthly equipment availability verification record is available.
	OPEP EPS34.3: Weekly confirmation, beginning at the start of each campaign, that all IMT and CMT personnel listed in Table 7-1 and Table 7-2 of this OPEP remain available for their designated roles, or that nominated substitutes with equivalent training are identified and available.	OPEP MC34.3.1: Communication records verify that CMT and IMT rosters are issued weekly to Emperor Energy and kept on file.
OPEP CM35: Test CMT/IMT activation timeframe	OPEP EPS35.1: Testing that the IMT is physically/virtually convened within two hours of Level 2 or 3 declaration and the CMT physically/virtually convened within four hours in line with Table 7-4 of the OPEP.	OPEP MC35.1.1: The drill and exercise records verify that the IMT was convened within two hours and the CMT within four hours of a Level 2 or 3 declaration.

ONGOING STAKEHOLDER CONSULTATION ENVIRONMENTAL PERFORMANCE STANDARDS

CONTROL MEASURE	ENVIRONMENTAL PERFORMANCE STANDARD	MEASUREMENT CRITERIA
OPEP CM36: Consultation	OPEP EPS36.1: Annual documented consultation with the Jurisdictional Authorities, State Control Agencies and State wildlife authorities listed in Section 3.4 and Section 3.6 of the OPEP will be conducted by Emperor Energy prior to each anniversary of EP acceptance, with outputs reflected in the relevant persons register, the EOCD, and any required OPEP updates within 30 days of completion.	OPEP MC36.1.1: Annual consultation records are filed in the Emperor Energy consultation database, with the EOCD updated within 30 days and OPEP review record (where required) issued within 30 days. OPEP MC36.1.2: Records of stakeholder consultation undertaken during a response will be captured in the incident logs and IAP for each Operational Period, and a consultation debrief will be conducted with relevant stakeholders within 30 days of response termination.