Plan

VIC 1000 SAF PLN
CDN/ID 18986979

Victorian Offshore Pollution Emergency Plan

Victorian - OPEP

IN THE EVENT OF AN OIL POLLUTION EMERGENCY REFER DIRECTLY TO SECTION 4

Revision	Date	Reason for issue	Reviewer/s	Consolidator	Approver
0	21/10/2021	Issued for use	FGR, GRA	SPA	TFL

Review due	Review frequency
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THE THREE WHATS
What can go wrong?
What could cause it to go wrong?
What can I do to prevent it?

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1 Purpose

The purpose of this Victorian Offshore Oil Pollution Emergency Plan (OPEP or 'the Plan') is to:

- describe the arrangements regarding Beach Energy's access to resources and appropriately trained response personnel in order to effectively respond to and manage an emergency oil spill response in a timely manner;
- provide a timely implementation of the pre-determined response strategies as outlined in this OPEP, based on credible worst-case hydrocarbon spill risks as presented within activity-specific Environment Plan (EPs);
- ensure the processes and response structures are consistent with those used in applicable government and industry oil spill response plans, including:
    - the National Plan for Maritime Environmental Emergencies ('NatPlan') (AMSA, 2019);
    - State Maritime Emergencies (non-Search and Rescue) Plan ('VicPlan') (EMV, 2016);
    - Tasmanian Marine Oil Spill Contingency Plan ('TasPlan') (DPIPWE, 2011);
    - the AMOSPlan (AMOSC, 2017); and
    - National Offshore Petroleum Safety and Environmental Management Authority (NOPSEMA) Guidance note GN1488 Rev 2 – Oil pollution risk management (NOPSEMA Feb 2018)
- ensure effective integration and use of industry and government response efforts and resources;
- meet the following regulatory requirements:
    - Commonwealth - Regulation 14(8) of the Offshore Petroleum and Greenhouse Gas Storage (Environment) Regulations 2009 (herein referred to as the OPGGS(E))
    - Victoria - Regulation 17 of the Offshore Petroleum and Greenhouse Gas Storage Regulations 2011 (herein referred to as the OPGGS Regulations)
    - Tasmania – Regulation 20 of the Petroleum (Submerged Lands) (Management of Environment) Regulations 2012 (herein referred to as the P(SL) (MoE) Regulations).

This OPEP supersedes the Oil Pollution Emergency Plan, Bass Gas Offshore Operations CDN/ID 3972816 and the Oil Pollution Emergency Plan, Otway Offshore (same CDN as this OPEP).

A list of external and internal supporting references and plans applicable to the OPEP is supplied in Appendix I.

2 The Proponent

Beach Energy (Operations) Limited (Beach), is the operator of the Otway and BassGas offshore fields.

The offshore facilities and infrastructure are presented in Figure 1 and located within the petroleum titles relevant to the scope of this OPEP (Table 3.1).

3 Scope

This OPEP covers potential oil pollution emergencies that may result from Beach petroleum activities within State and Commonwealth waters off Victoria, including the Otway and Bass Basins. Spills within the Bass or Otway Basins may impact Victorian and/or Tasmanian jurisdictions.

The plan recognises the divisions of responsibility as defined under the terms of the "NatPlan", which have been incorporated into this plan.

3.1 Interface with other Beach documents

This OPEP interfaces with the follow documents:

- Beach Crisis Management Plan (CMP) CDN 18024233.

The purpose of the CMP is to detail the required actions by Beach – to be executed by the Crisis Management Team (CMT) members in line with the principle of prioritising People, Environment, Asset, Reputation, and Livelihood (PEARL). The document provides detail on the process of notification, escalation and activation to provide a state of readiness for effective deployment and response.

The CMP addresses the response, ongoing strategic management and associated recovery responsibilities – including processes and tools to be considered – and the strategic activities required to be initiated and associated arrangements required to be in place to manage a crisis event and to support Beach activities and personnel.

The CMP details Beach's emergency hierarchy, the key responsibilities of the Beach CMT and its links to the Beach Emergency Management Team (EMT), where providing crisis event support and focus on response hierarchy and associated strategic support.

The CMP is designed to appropriately address all Beach activities, countries and/or Business Unit locations and associated operations. Activities of primary contractors, subcontractors and suppliers are also covered under the CMP and it is designed to be activated in the event of a Beach crisis event (or the potential thereof), primarily to support and emergency event originating from a site-based incident.

The CMP details the organisation of the CMT, and the key responsibilities held therein.

The key responsibilities of the CMT are:

- reaction – strategically supporting emergency management efforts to contain and control a crisis event;
- stakeholder communication – managing the demand for information and interface; and
- strategic planning – control, business continuity and recovery processes.

- Beach Emergency Management Plan (EMP) CDN 18025990

The purpose of the EMP is to provide guidance to the EMT on processes, roles and responsibilities during an event. The document provides detail on the process of notification, escalation and activation to provide a state of readiness for effective deployment and response.

The EMP comprises actions and guidelines to enable Beach to:

- support any response at any site, provide operational support and advice where the event may have an impact that cannot be handled through normal business processes;
- facilitate appropriate notifications and communication with relevant stakeholders, both internal and external;
- coordinate sourcing and deployment of additional resources as required, including corporate assistance, communications, specialist technical input and communications; and
- this is achieved through pre-planning, appropriate mitigation and recovery management, of any potential major emergency event that may be associated with Beach's operations.

The EMP describes the operational concepts, structures and Emergency Management (EM) arrangements for the management of response and recovery activities, by outlining the processes and interrelationships between Beach and various stakeholders. It is designed as a generic construct that can be adapted as required, recognising that each event will be unique and therefore it is not possible to be overly prescriptive.

Furthermore, the EMP is designed to provide overarching support of Beach activities at various sites, facilities, commercial locations and associated operations. The EMP is designed to be activated in the event of a Beach emergency or crisis, to either:

- support a serious specific site / facility emergency (drilling, exploration or production) event that requires ongoing corporate or business continuity management and involvement; or
- a Beach non-emergency related event that has the potential to significantly impact or destabilise the entire organisation.

The EMP details each level of its 3-tier Crisis and Emergency Management (CEM) Framework, the key responsibilities of each, the associated responsibilities of the EMT members and includes the required interface with each Beach Emergency Response Team (ERT), Plans, organisation and responsibilities.

The Asset and Wells Emergency Response Plans are found on the intranet and provide supporting information to this Plan.

- Beach Well Operations Management Plan (WOMP)

A NOPSEMA accepted WOMP is required prior to well activities being undertaken in accordance with Part 5 of the Offshore Petroleum and Greenhouse Gas Storage (Resource Management and Administration) Regulations 2011.

The purpose of the WOMP is to detail the controls in place to restore well integrity in the event of a LOWC incident.

The WOMP specifically addresses well integrity risks and controls in accordance with the requirements of Part 5 of the OPGGS (RMA) Compilation No.8 2011. Operational safety including hazard identification, risk assessment, and controls shall be described in the MODU Safety Case and a campaign specific Safety Case Revision (SCR).

A detailed description of available source control equipment and resources including deployment timeframes is provided within each Beach Offshore Source Control Contingency Plan (SCCP). For the avoidance of doubt, each offshore well has its own individual SCCP.

Well specific SCCPs detail the source control strategy to contain a LOWC event in an effective and timely manner and is submitted to NOPSEMA as part of the WOMP. These SCCPs are consistent with International Oil and Gas Producers (IOGP) Report 594 - Subsea Well Source Control Emergency Response Planning Guide for Subsea Wells (Jan 2019). The SCCPs specifically detail:

- the structure, function and responsibilities of the Beach Emergency Management Team (EMT) and Source Control Incident Management Team (Source Control IMT) inclusive of external support services;
- details of well control and emergency response procedures and processes to be applied by the EMT and SCIMT during a LOWC event;
- an analysis of alternate MODUs capable of both being mobilised to the relief well location and of performing a dynamic well kill operation based upon identified selection criteria (including technical capability, current location, Australian Safety Case status and mutual aid arrangements);
- a mobilisation and deployment plan (including logistical pathways, potential constraints, and schedule) for equipment and personnel for effective implementation of source control (dynamic well kill and/or well capping where feasible) in a timely manner.
- a well-specific worst-case discharge (WCD) analysis and well kill simulation;
- pre-identified relief well locations and relief well intersection targets; and
- casing design, mud kill weight and pumping rate required to achieve a dynamic well kill based upon the intersection target.

- Activity-specific Environmental Plan (EP)

All petroleum activities in Commonwealth and State waters require an activity specific EP. Each EP includes:

- activity specific WCD oil pollution emergency scenarios;
- description of the environment that may be affected (EMBA) by an oil pollution emergency including key ecological and socio-economic receptors including matters protected under Part 3 of the EPBC Act;

- person(s) or organisations whose interests or activities may be affected by an oil pollution emergency;
- impact and risk evaluation for both planned operations and unplanned events inclusive of oil pollution;
- spill response needs analysis based upon activity spill risk profile; and
- response option feasibility assessment and ALARP (As Low As Reasonably Practicable) evaluation; and
- site specific Tactical Response Plans (TRP)

Site specific TRPs have been developed for priority protection areas along the Victorian coastline. The purpose of the TRPs is to pre-determine site and response information prior to an oil pollution incident to ensure an informed, timely and effective protection of priority areas as required. The TRPs detail:

Site Information: site location description and map, site access description and map, site specific logistical / access constraints, key ecological and socio-economic sensitivities within the area, nearby facilities and services.

Response Information: response strategies and tasks, site overview and maps, response checklists, site establishment information, local information including contact details of key stakeholders, detailed task checklists, resource requirements (personnel / vehicles / vessels / equipment / site support).

- Vessel-specific Shipboard Oil Pollution Emergency Plan (SOPEP) or Shipboard Marine Pollution Emergency Plan (SMPEP);
- SOPEP and SMPEP detail vessel specific spill response arrangements
- Beach Offshore Victoria Operational and Scientific Monitoring Program (OSMP).

The Offshore Victoria OSMP provides the framework for environmental monitoring response to Level 2 and Level 3 offshore oil spills from petroleum activities undertaken by Beach in the Otway and Bass Basins.

The OSMP is to be read in conjunction with the relevant EP, this OPEP, and the activity specific Addendum to the OSMP when considering the existing environment, values and sensitivities, credible oil spill risks and potential impacts, response activities and the decision processes that will apply if a spill occurs.

The OSMP is relevant to all Beach petroleum activities within the Otway and Bass Basins regulated under the Commonwealth OPGGS(E)R, Victorian OPGGSR and Tasmanian P(SL)(ME)R. This includes, but is not limited to the following activity types:

- operation of a facility or pipeline
- vessel activities

- drilling

Spill risks from the above activities that could result in a Level 2 or Level 3 spill event include two oil types:

- gas condensate
- marine diesel.

The OSMP is relevant to all oil types and states (i.e., fresh and weathered); and all distributions throughout the environment (e.g., surface, entrained, dissolved and shoreline).

3.2 Beach Offshore Facilities and Activities within the Otway and Bass Basins

This OPEP covers petroleum activities in Commonwealth waters, Victorian State waters and Tasmanian State waters, within the Otway and Bass Basins.

Beach facilities and activities covered by this OPEP are summarised in Table 1. A detailed description of offshore facilities and petroleum activities is available within activity-specific EPs.

The locations of facilities, infrastructure and petroleum titles covered by this OPEP are presented in Figure 1.

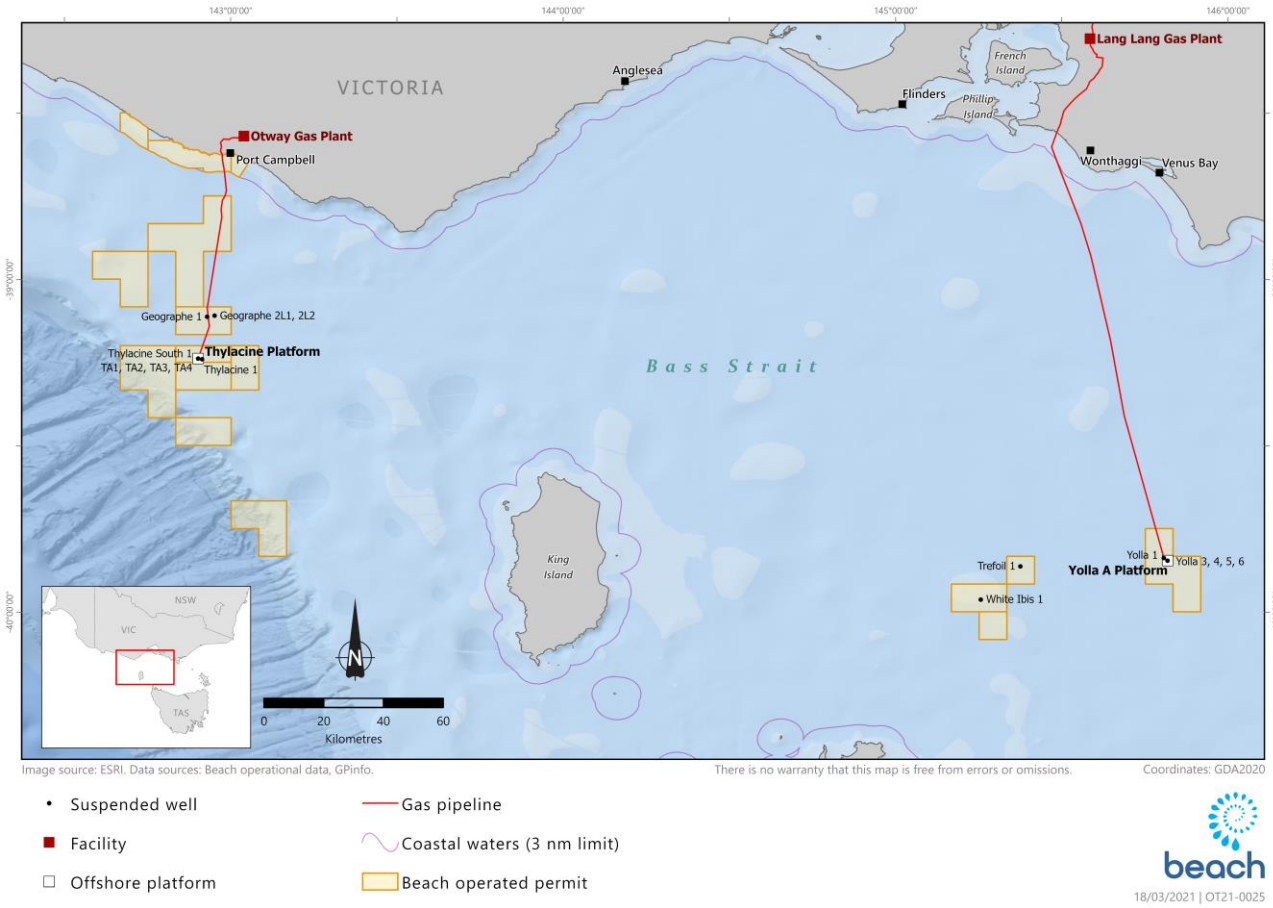


Figure 1: Beach Offshore Victoria Assets

Table 1: Summary of Beach facilities and activities within Victorian waters

Facility / Activity	Description	Title	Hydrocarbon type	Minimum distance from shore	Water Depth (approx.)	Flight Time (approx.)	Vessel Steaming Time (approx.)
Geographe production wells	Producing Geographe gas wells and two plugged and suspended Geographe wells (GEO-1 and GEO-3),	VIC/L23	Geographe gas condensate	45 km	80 m	20 min (Warrnambool)	16 hrs (Port Anthony)
Thylacine production wells	Producing Thylacine gas wells and the plugged and suspended Thylacine 1 exploration well.	TL/2 TL/3	Thylacine gas condensate	70 km	100 m	25 min (Warrnambool)	20 hrs (Port Anthony)
Thylacine Platform-A (unmanned)	Unmanned Thylacine-A production platform, supporting the wellheads and topsides facilities required for production metering from the combined Thylacine wells.	T/L2	Thylacine gas condensate	70 km	100 m	25 min (Warrnambool)	20 hrs (Port Anthony)
Otway Gas Pipeline	Offshore pipeline system consisting of a 500mm (20 inch) production pipeline and a 100mm mono ethylene glycol (MEG) piggyback service pipeline from the platform to the shore crossing at the Port Campbell Rifle Range, situated to the west of Port Campbell.	VIC/PL36(V) VIC/PL36 T/PL3	Co-mingled gas condensate	0-70 km	Shallow to 100 m	Varies	Varies
Offshore Drilling	Exploration and production drilling.	VIC/P43	Thylacine gas condensate	32 km	70 m	15 min (Warrnambool)	10 hrs (Port Anthony)
	La Bella production drilling.	VIC/P73	Gas condensate	45 km	90 m	20 min (Warrnambool)	16 hrs (Port Anthony)
	Geographe production drilling.	VIC/L23	Geographe gas condensate	45 km	80 m	20 min (Warrnambool)	16 hrs (Port Anthony)

Facility / Activity	Description	Title	Hydrocarbon type	Minimum distance from shore	Water Depth (approx.)	Flight Time (approx.)	Vessel Steaming Time (approx.)
	Thylacine production drilling.	T/L2 T/L3	Thylacine Gas condensate	70 km	100 m	25 min (Warrnambool)	20 hrs (Port Anthony)
Otway Basin Vessel-based activities	Site surveys & project support.	T/L1	Marine Diesel	0-70 km	Shallow to 100 m	Up to 25 min (Warrnambool)	Up to 20 hrs (Port Anthony)
Yolla production wells	Four producing Yolla gas wells and two plugged and suspended wells	T/L1	Gas and condensate	93 km	80 m		
Yolla-A Platform	Manned Yolla-A production platform, supporting the wellheads and topsides facilities	T/L1	Gas and condensate	93 km	80 m		
Yolla offshore Raw Gas Pipeline (RGP)	Offshore RGP system (350 mm diameter) from the platform to the shore crossing near Kilcunda	T/L1	Gas and condensate	0 - 93 km	Shallow to 80 m		
Bass Gas Vessel-based activities	Platform support, inspection and maintenance activities	T/L1	Marine Diesel	0 - 93 km	Shallow to 80 m		
Bass Strait Non-production wells	Suspended wells in the Bass Strait; Trefoil 1, White Ibis 1, and Yolla 1	T/RL2, T/RL4, T/L1	Gas condensate	83 km	60 – 80 m		
Otway Basin Non-production wells	Suspended wells in the Otway Basin; Aritsan 1, Geographe 1 and 3, Thylacine 1	VIC/P43, VIC/L23, T/L2	Gas condensate	32 km	70 – 100 m		

3.3 Hydrocarbon Types

There are two types of hydrocarbon covered in this OPEP that are associated with Beach's offshore activities;

- marine diesel
- gas condensate (Artisan, Geographe, Thylacine and Yolla).

3.3.1 Marine Diesel

Marine diesel (DMA blend) is a light petroleum distillate. At the environmental conditions experienced in Otway and Bass Basins, marine diesel is predicted to undergo rapid evaporative loss and slicks are expected to break up rapidly. Characteristics of the DMA blend diesel are detailed in Table 2 and Table 3.

Table 2: Marine diesel physical characteristics

Parameter	MDA Blend
Density (kg/m^3)	829 at 15°C
API	37.6
Dynamic viscosity (cP)	4.0 at 25°C
Pour point (°C)	-14
Oil category	Group II
Oil persistence classification	Light-persistent oil

Table 3: Marine diesel boiling point ranges

Parameter	Volatiles (%)	Semi-volatiles (%)	Low-volatiles (%)	Residual (%)
Boiling point (°C)	<180	180-265	265-380	>380
DMA Blend Diesel	6.0	34.6	54.4	5
	⇦	Non-Persistent ⇨		⇦ Persistent ⇨

3.3.2 Gas Condensate

The target reservoirs within the Otway and Bass Basins are gas condensate. As a result, no heavy oil will be present during extraction or drilling activities. The fields of the Otway and Bass Basins have slightly different condensate characteristics and potential flow rates (pressures). Characteristics of the gas condensate from the production wells are detailed in Table 4.

Condensate characteristics indicate that spills of these fluids are likely to spread rapidly, and residual hydrocarbons potentially distributed over a large area. Any slicks will break up readily as a result of weathering processes.

Table 4: Condensate Otway Basin

Parameter	Geographe	Thylacine	Yolla
Density (kg/m^3)	751 at 15^{o}C	805 at 15^{o}C	770.6 at 15^{o}C
API	56.9	44.3	
Dynamic viscosity (cP)	0.500 at 25^{o}C	0.875 at 20^{o}C	0.14 at 25^{o}C
Pour point (^{o}C)	-50	-50	
Oil category	Group I	Group I	Group I
Oil persistence classification	Non-persistent oil	Non-persistent oil	Non-persistent oil
Volatiles %	78.4	64.0	80
Semi-volatiles %	13.4	19.0	12
Low-volatiles %	7.2	16.0	6.55

3.4 Potential Worst-Case Spill Scenarios

The potential worst-case hydrocarbon spill scenarios relating to the offshore activities are:

- for drilling an open-hole and unrestricted well release from the Artisan-1 location representing the overall worst-case loss of well control (LOWC) within the Otway or Bass Basins given their proximity to shore, noting other wells within the area may have similar flow rates and reservoir properties but are in deeper water and located further from shore
- an uncontrolled well release from the Geographe production well location
- an uncontrolled well release from the Thylacine production well location
- an uncontrolled well release from the Yolla production well location
- a pipeline rupture
- a release of marine diesel from a vessel involved in the Otway or Bass Basin offshore activities, either near-shore or in deep water.

These hypothetical WCD have been subject to modelling via an OILMAP stochastic module used to quantify the probability of sea surface exposure, contact to shorelines, largest shoreline loading, time to shoreline loading, in-water dissolved aromatic and entrained hydrocarbon concentrations. This involved simulating multiple spill trajectories with randomly varying metocean conditions to represent varying annual conditions.

An analysis of the modelling results for visual and actionable surface and shoreline exposure, minimum time to shoreline contact and maximum shoreline loading is presented in Table 5 and 3-7. Further detail relating to spill modelling results and potential environmental impacts can be found within activity-specific EPs.

3.5 Spill Modelling Analysis

Table 5: Analysis of spill modelling

Spill Scenario	Drilling 8-1/2" open hole	Producing Wells		Pipeline Rupture	Vessel Spill	
Location	Artisan-1	Thylacine	Geographe	3 nm from shore – State / Commonwealth boundary	Artisan-1	3 nm from shore – State / Commonwealth boundary
Product	Thylacine condensate		Geographe Condensate	Co-mingled Condensate	DMA Blend Diesel	
Release Volume	2,584 bbl/day	1,010 bbl/day	750 bbl/day	1,175 bbl	300 m^3	300 m^3
Duration	86 days	86 days	86 days	14.4 min	6 hours	6 hours
Sea Surface 0.5g/m^2 (Barely Visible)	Up to 52 km and 53 km from the release site under summer and winter conditions, respectively Dissipates in <2 days	Up to 15 km and 17 km from the release site under summer and winter conditions, respectively	Up to 6 km and 7 km from the release site under summer and winter conditions, respectively	Up to 14.1 km and 19.6 km from the release site under summer and winter conditions, respectively Dissipates in <2 days	Up to 68 km and 93 km from the release site under summer and winter conditions, respectively Dissipates in <2 days	Up to 31.5 km and 45.8 km from the release site under summer and winter conditions, respectively Dissipates in <2 days
Sea Surface >10 g/m^2 (Actionable)	Up to 4 km and 3 km from the release site under summer and winter conditions, respectively Dissipates in <1 day	Nil	Nil	Up to 4.9 km and 5.2 km from the release site under summer and winter conditions, respectively Dissipates in <1 day	Up to 12 km and 10 km from the release site under summer and winter conditions, respectively Dissipates in <2 days	Up to 26.1 km and 33.9 km from the release site under summer and winter conditions, respectively Dissipates in <2 days
Shoreline >100 g/m^2 (Actionable)	Up to 4 km summer & 8 km winter	Nil	Nil	Up to 3 km summer & 4 km winter	Nil	Up to 10 km summer & 9.5 km winter

Spill Scenario	Drilling 8-1/2" open hole	Producing Wells		Pipeline Rupture	Vessel Spill	
Shoreline >1000 g/m^2 (High loading)	Nil	Nil	Nil	Nil	Nil	Up to 4 km summer & 4.5 km winter
Shoreline Minimum Time to Contact	3 days summer & 5 days winter	N/A	N/A	7 hours summer & winter	N/A	5 hours summer & winter
Shoreline Maximum Loading m^3	15 m^3 summer and 33 m^3 winter	Nil	Nil	5.0 m^3 summer and 6.5 m^3 winter	Nil	142 m^3 summer and 110 m^3 winter

Table 6: Summary of BassGas sea surface and shoreline OSTM results

Spill Scenario	LoWC	Pipeline Rupture	Vessel Spill
Location	Yolla wells	3 nm from shore	3 nm from shore
Product	Condensate	Condensate	MDO
Release volume	204,250 bbl	3,144.9 bbl	300 m^3
Duration	86 days	57.6 minutes	6 hours
Sea Surface			
1 – 10 g/m^2 (barely visible)	Up to 17.3 km from release site	Up to 9.4 km from release site	Up to 26.6 km from release site
10 – 50 g/m^2 (Actionable)	Nil	Up to 3 km from release site	Up to 10.7 km from release site
≥ 50 g/m^2 (Actionable)	Nil	Up to 0.7 km from the release site	Up to 2.5 km from release site

Shoreline			
Maximum length of shoreline contacted >100 g/m^2 (Actionable)	No contact	4 km	7 km
Maximum length of shoreline contacted >1,000 g/m^2 (High loading)	No contact	No contact	4 km
Absolute minimum time before contact at or above the low threshold	No contact	12 hours	10 hours
Mean maximum volume on shoreline	No contact	6.8 m^3	24 m^3

3.6 Response Areas

Figure 2 and Figure 3, represent the Otway Basin areas, and Figure 4 provides the Bass Basin area where a spill response could be undertaken to; protect, deflect, or mount a shoreline clean-up operation.

To identify areas where a response may be actionable the following oil exposures were used from NP–GUI–025: National Plan response, assessment and termination of cleaning for oil contaminated foreshores (AMSA 2015):

- A sea surface oil exposure of 10 g/m^2 as this represents the practical limit for surface response options; below this thickness, oil containment, recovery and chemical treatment (dispersant) become ineffective

- A shoreline contact exposure of 100 g/m^2 as this represents the minimum thickness that does not inhibit the potential for recovery and is best remediated by natural coastal processes alone.

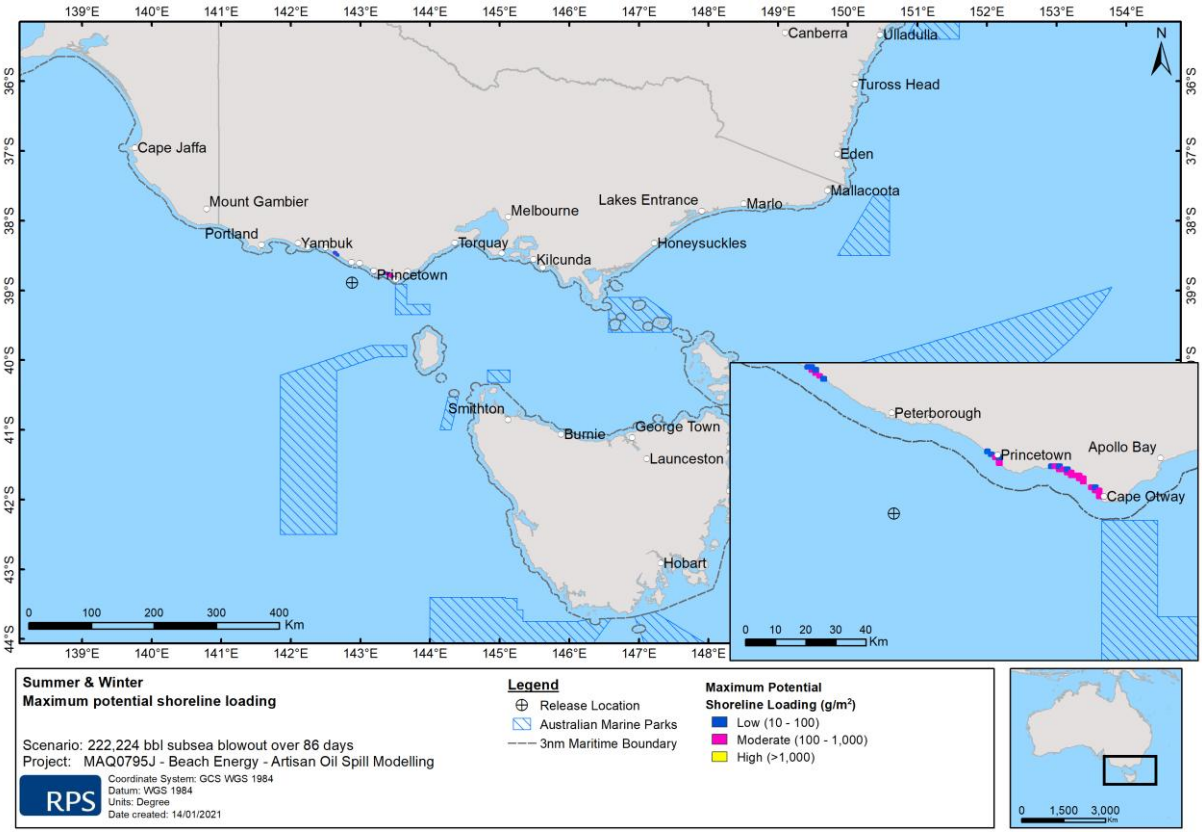


Figure 2: Condensate spill (LOWC) actionable response areas, Otway Basin – Summer & Winter (RPS APASA, 2019)

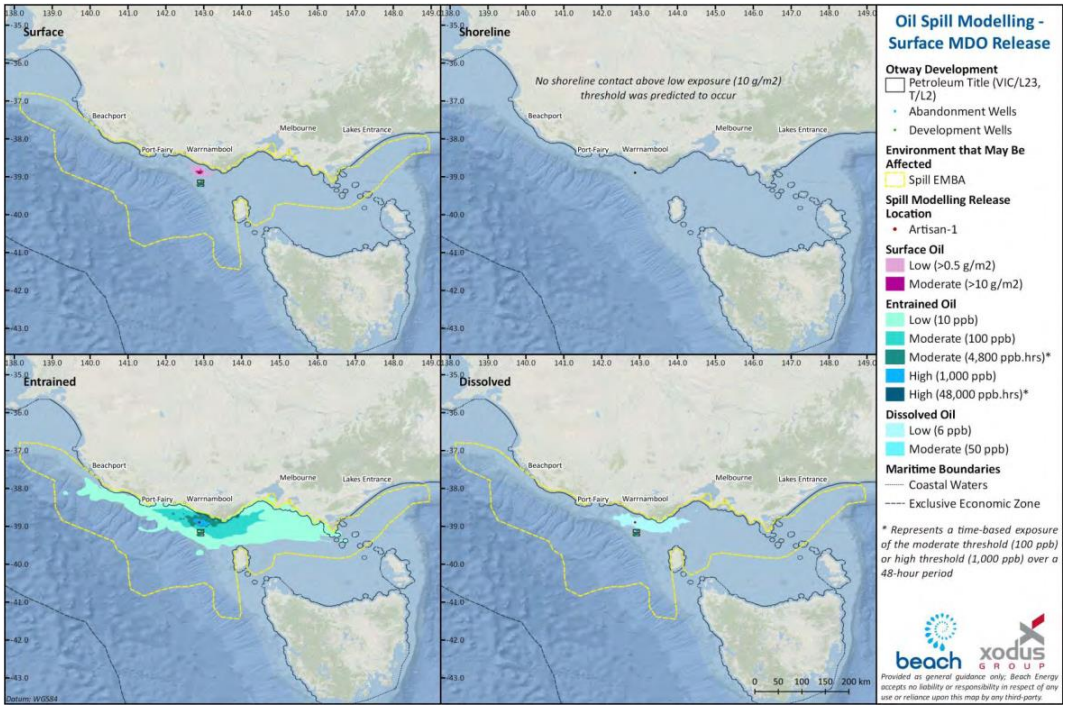


Figure 3: Marine diesel spill (300m^3), Otway Basin

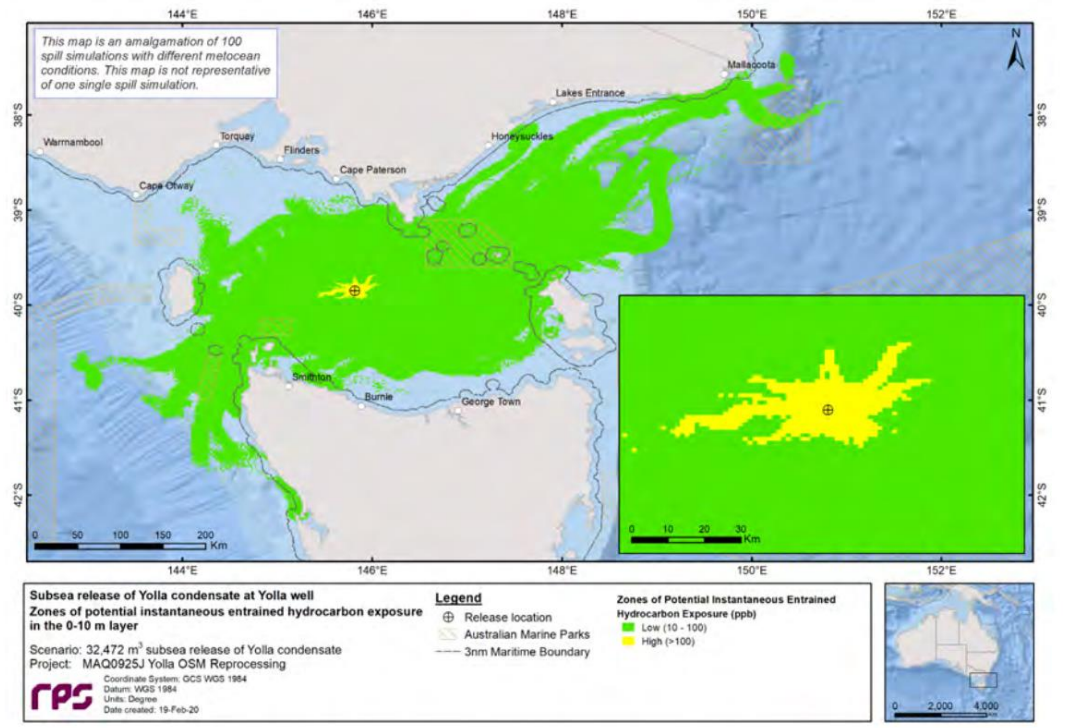


Figure 4: Condensate spill (LOWC), Bass Basin (RPS APASA, 2020)

4 Response Actions

4.1 Response Levels and Control Agencies

4.1.1 Level of Incident

The National Plan classifies incidents to provide direction on the potential consequence and impact of an incident. This assists in guiding agency readiness levels, incident notifications, response actions and potential response escalations. Beach's response plan is based on those identified by the National Plan and consists of three levels, which are based on the size and/or complexity of the incident.

Level 1 Incidents are generally able to be resolved through the application of local or initial resources only (first strike capability).

Level 2 Incidents are more complex in size, duration, resource management and risk and may require deployment of jurisdiction resources beyond the initial response.

Level 3 Incidents are generally characterised by a degree of complexity that requires the Incident Controller (EMT Leader) to delegate all incident management functions to focus on strategic leadership and response coordination and may be supported by national and international resources

4.1.2 Statutory and Control Agencies

Under existing Commonwealth and State Intergovernmental Agreements, authorities have been nominated with statutory and control responsibility for incidents within harbours, State waters and Commonwealth waters around Australia.

While Beach remains accountable for spills relating to its petroleum operations, the nominated Control Agency will vary depending on source, size and location of the spill as defined in Table 7.

State agencies such as the Victorian Department of Transport - Emergency Management Branch (DoT - EMB) or the Tasmanian Department of Primary Industries, Parks, Water and Environment (DPIPWE), may assume Incident Control in state waters under the following circumstances:

- the incident is greater than a Level 1 spill in state waters and requires immediate escalation
- the incident occurred in Commonwealth waters, but has impacted on State waters
- the Control Agency has requested State assistance
- the State believes that Beach is not implementing an appropriate response to the incident.

4.1.2.1 Victorian State Arrangements

If an incident occurs in Commonwealth waters and impacts Victorian State waters (spreading oil slick for example), DoT - EMB will assume Incident Control over the impacted area in State Waters. The Control Agency in Commonwealth Waters will remain responsible for managing the spill outside Victorian coastal waters in consultation with the State.

Whilst DoT - EMB is the Control Agency for marine pollution in Victorian State waters, Beach shall conduct initial necessary response actions in State waters, in accordance with this OPEP and continue to manage those operations until formal incident control can be established by DJPR.

Upon establishment of incident control by DJPR, Beach shall continue to provide planning and resources as required by the EMT Leader Beach will make available to DJPR an Emergency Management Liaison Officer (EMLO) who can mobilise to the incident control centre.

If an incident affecting wildlife occurs in Commonwealth waters close to Victorian State waters, the Control Agency may request support from Department of Environment, Land, Water and Planning (DELWP) to assess and lead a wildlife response.

Additional detail on the management of a cross-jurisdiction marine pollution incident that originates in Commonwealth waters and results in DJPR exercising its control agency obligations in State waters is provided in Section 5.7.

4.1.2.2 Tasmanian State Arrangements

The Tasmanian Environmental Protection Authority (EPA) Division (DPIPWE) is responsible for preparedness for and responding to oil and chemical spills in Tasmania. If an incident occurs in Commonwealth waters and has an impact on Tasmanian State waters, DPIPWE will assume Incident Control over 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.

When under direction of DPIPWE, a Beach EMLO, shall be allocated to DPIPWE.

The Tasmanian Oiled Wildlife Response Plan (WildPlan) is administered by the Resource Management and Conservation Division of the DPIPWE and outlines priorities and procedures for the rescue and rehabilitation of oiled wildlife.

Table 7: Statutory and Control Agencies

Spill Source	Level of Spill	Impact to State Waters (<3nm)	Impact to Commonwealth Waters (>3nm)	Statutory Agency	Control Agency
Condensate release from platform, sub-sea wells / installation or pipeline	1	✓		Vic DoT - EMB Tas DPIPWE	Beach*
			✓	NOPSEMA	Beach
	2	✓		Vic DoT - EMB Tas DPIPWE	Vic DoT - EMB Tas DPIPWE
			✓	NOPSEMA	Beach
	3	✓		Vic DoT - EMB Tas DPIPWE	Vic DoT - EMB Tas DPIPWE
			✓	NOPSEMA	Beach
Diesel release from vessel	1	✓		Vic DoT - EMB Tas DPIPWE	Vessel Owner / Operator*
			✓	Australian Maritime Safety Authority (AMSA)	Vessel Owner / Operator

* Supporting: Port of Hastings (Wilsons Promontory to Cape Schanck) and Port of Portland (Cape Otway to SA Border)

Spill Source	Level of Spill	Impact to State Waters (<3nm)	Impact to Commonwealth Waters (>3nm)	Statutory Agency	Control Agency
			✓ (within 500m platform exclusion zone)	NOPSEMA	Vessel Owner / Operator
	2 and 3	✓		Vic DoT - EMB Tas DPIPWE	Vic DJPR Tas DPIPWE
			✓	AMSA	AMSA

4.2 Immediate Action Plans and Notification Requirements (Contacts correct as of 01 November 2019)

Confirmation of providing access to relevant monitoring and evaluation reports when available; and

4.2.1 Vessel Spill / Collision (L1 / L2 / L3)

Table 8: Immediate Action Plan – Vessel Spill / Collisions

Item	Action	Responsibility	Timing
1.	**Initial Emergency Actions**		
1.1	Implement the relevant emergency response procedures to protect human life and the environment in accordance with the vessel SOPEP / SMPEP	Vessel Master	Immediate
1.2	Identify any potential fire risks and attempt to isolate the supply of oil to the spillage	Vessel Master	Immediate
1.3	Identify the extent of spillage and the weather/sea conditions in the area using SITREP (Appendix C. 2)	Vessel Master	ASAP
1.4	Notify Production Manager / MODU OIM / Drill Site Manager and provide initial SITREP (Appendix C. 2)	Vessel Master	ASAP
1.5	Notify Production Manager / Drilling Manager	PM / MODU OIM / Drill Site Manager	ASAP
1.6	Notify EMT Leader via NRC (03) 9411 2147	Beach PIC	ASAP
2.	**Level 1 Notifications**		
2.1	Any vessel collision with a facility or MODU within Commonwealth waters (>3 nm) and / or any hydrocarbon spill >80 L AMSA: Ph: 1800 641 792 Email: mdo@amsa.gov.au NOPSEMA: Ph: 1300 674 472 Email: submissions@nopsema.gov.au	Vessel Master / Production Manager / Drilling Manager	ASAP but not later than 2 hours after collision / spill

Item	Action	Responsibility	Timing
2.2	Spill with potential to impact Australian Marine Park(s) or impact matters of national environmental significance (including potential for oiled wildlife) Director of National Parks via Marine Compliance Duty Officer (24-hr): 0419 293 465 Provide: • titleholder details • time and location of the incident (including name of marine park likely to be affected) • proposed response arrangements as per the Oil Pollution Emergency Plan (e.g. dispersant, containment, etc.) • confirmation of providing access to relevant monitoring and evaluation reports when available; and • contact details for the response coordinator. Department of the Environment and Energy: Ph: (02) 6274 1111	Vessel Master / Production Manager / Drilling Manager	ASAP
2.3	Within or potential for moderate to significant environmental damage to Victorian State waters (<3 nm) – refer to activity-specific EP for clarification (Victorian) Department of Transport –Emergency Management Branch (DJPR EMB): Ph: 0409 858 715 (24/7) and Email: semdincidentroom@transport.vic.gov.au	Vessel Master / Production Manager / Drilling Manager	ASAP
2.4	Within or potential for release to cause, or may cause, environmental harm or environmental nuisance in Tasmanian State waters (<3 nm) – refer to activity-specific EP for clarification DPIPWE: Ph: +61 (0)3 6165 4599 or 1800 005 171 (within Tasmania only) Radio: TasPorts Vessel Traffic Services VHF radio channel 16/14/12 Call sign "relevant port name VTS" Email: incidentresponse@epa.tas.gov.au	Vessel Master / Production Manager / Drilling Manager	ASAP
2.5	Within port boundary or potential impact to Port boundary – notify relevant Port Authority	Vessel Master	Immediate
2.6	Complete Level 1 Incident Report (Appendix C. 3)	Vessel Master / Production Manager / Drilling Manager	ASAP
2.7	Notify and escalate to the EMT via the NRC (03) 9411 2147	Production Manager / Drilling Manager	Immediate
3.	**Level 2 / 3 Notifications**		
3.1	Notify EMT Leader for any spill or **any** vessel collision and provide initial SITREP (Appendix C. 2)	Production Manager / Drilling Manager	Immediate

Item	Action	Responsibility	Timing
3.2	Any vessel collision with a facility or MODU within Commonwealth waters and / or any Level 2 / 3 vessel spill AMSA: Ph: 1800 641 792 Email: mdo@amsa.gov.au NOPSEMA: Ph: 1300 674 472 Email: submissions@nopsema.gov.au	EMT HSE	ASAP but not later than 2 hours after becoming aware of spill
3.3	Within Commonwealth waters (> 3nm) – written report to NOPSEMA: Email: submissions@nopsema.gov.au and NOPTA: Email: info@nopta.gov.au	EMT HSE	Within 3 days of spill
3.4	Spill with potential to impact Australian Marine Park(s) or impact matters of national environmental significance (including potential for oiled wildlife) Director of National Parks via Marine Compliance Duty Officer (24-hr): 0419 293 465 Provide: ◦ titleholder details ◦ time and location of the incident (including name of marine park likely to be affected) ◦ proposed response arrangements as per the Oil Pollution Emergency Plan (e.g. dispersant, containment, etc.) ◦ confirmation of providing access to relevant monitoring and evaluation reports when available; and ◦ contact details for the response coordinator. And Department of the Environment and Energy: Ph: (02) 6274 1111	EMT HSE	ASAP
3.5	Within or potential for moderate to significant environmental damage to Victorian State waters (<3 nm) – refer to activity-specific EP for clarification or the impact of wildlife (including cetaceans) DoT EMB: Ph: 0409 858 715 (24/7) and Email: semdincidentroom@transport.vic.gov.au and DELWP: Ph: 1300 134 444 Email: sscviv.scmdr.delwp@scc.vic.gov.au	EMT HSE	ASAP but not later than 2 hours after becoming aware of spill
3.6	Within or potential for release to cause, or may cause, environmental harm or environmental nuisance in Tasmanian State waters (<3 nm) – refer to activity-specific EP for clarification DPIPWE: Ph: +61 (0)3 6165 4599 or 1800 005 171 (within Tasmania only) Radio: TasPorts Vessel Traffic Services VHF radio channel 16/14/12 Call sign "relevant port name VTS" Email: incidentresponse@epa.tas.gov.au	EMT HSE	ASAP (first instance of oil on/in water)

Item	Action	Responsibility	Timing
3.7	Within port boundary or potential impact to Port boundary – notify relevant Port Authority	Vessel Master	Immediate
3.8	Complete Level 2/3 Incident Report (Appendix C. 4)	EMT HSE	ASAP
3.9	Confirm takeover of incident control by AMSA (>3 nm) or State agency as the Control Agency (<3 nm)	EMT HSE	ASAP
4.	**Level 2 / 3 Monitoring, Evaluation & Surveillance**		
4.1	Request monitoring assistance from AMOSC via execution of Service Contract using Service Request for Mutual Aid (Appendix C. 6) as directed by Control Agency	EMT Leader	ASAP
4.2	Mobilise surveillance by aircraft via service provider (Appendix D, Appendix E, Appendix F) as directed by Control Agency	EMT Logistics	ASAP
4.3	Initiate Oil Pollution trajectory modelling via service provider (Appendix C. 5) as directed by Control Agency	EMT Logistics	ASAP
5.	**Level 2 / 3 Oil Pollution Response**		
5.1	Provide support and information to the Control Agency as directed	EMT Leader via EMLO	As directed
5.2	Determine offshore and onshore response options and request assistance from AMOSC via execution of Service Contract using Service Request for Mutual Aid (Appendix C. 6) and/or AMSA as directed by Control Agency AMSA: Ph: 1800 641 792 Email: mdo@amsa.gov.au AMOSC: 0438 379 328	EMT Leader	As directed
5.3	Assess and monitor shoreline and intertidal zones to identify areas affected by the Oil Pollution and to determine the nature of the impact (Appendix G) as directed by Control Agency	EMT Leader	As directed
5.4	Validate and agree implementation of relevant Tactical Response Plan(s) with Control Agency	EMT Leader / EMLO	ASAP
5.5	Implement Team Meeting and Operational Planning Cycle (Section 6.1)	EMT Leader	ASAP
5.6	Complete role-specific checklists as outlined in Appendix A. 3	All EMT	ASAP
6.	**Ongoing Monitoring**		
6.1	Implement Beach Offshore Victoria OSMP as directed by State Control Agency	EMT Leader / Monitoring Provider	As required

4.2.2 Loss of Integrity – Platform or Pipeline (L2 / L3)

Table 9: Immediate Action Plan – Loss of Integrity from Platform or Pipeline

Item	Action	Responsibility	Timing
1.	**Initial Emergency Actions**		
1.1	Implement the relevant emergency response procedures to protect human life and the environment and, those procedures focused at reducing the risk of fire or explosion	PIC	Immediate
1.2	Identify any potential fire risks and attempt to isolate the supply of oil to the spillage	PIC	Immediate
1.3	Identify the extent of spillage and the weather/sea conditions in the area using SITREP (Appendix C. 2)	PIC	ASAP
1.4	Notify Production Manager and provide initial SITREP (Appendix C. 2)	PIC	ASAP
1.5	Notify GM Vic Operations and provide initial SITREP (Appendix C. 2)	Production Manager	ASAP
1.6	Notify EMT Leader via NRC (03) 9411 2147	Production Manager	ASAP
2.	**Level 1 Notifications**		
2.1	Within Commonwealth waters (>3 nm) and / or any hydrocarbon spill >80 L NOPSEMA: Ph: 1300 674 472 Email: submissions@nopsema.gov.au	Production Manager (Production Manager may delegate the following actions to Beach Manager in charge of site)	ASAP but not later than 2 hours after spill
2.2	Spill with potential to impact Australian Marine Park(s) or impact matters of national environmental significance (including potential for oiled wildlife) Director of National Parks via Marine Compliance Duty Officer (24-hr): 0419 293 465 Provide: • titleholder details • time and location of the incident (including name of marine park likely to be affected) • proposed response arrangements as per the Oil Pollution Emergency Plan (e.g. dispersant, containment, etc.) • confirmation of providing access to relevant monitoring and evaluation reports when available; and • contact details for the response coordinator. And Department of the Environment and Energy: Ph: (02) 6274 1111	Production Manager	ASAP
2.3	Within or potential for moderate to significant environmental damage to Victorian State waters (<3 nm) – refer to activity-specific EP for clarification DoT EMB: Ph: 0409 858 715 (24/7) and Email: semdincidentroom@transport.vic.gov.au	Production Manager	ASAP

Item	Action	Responsibility	Timing
2.4	A release or potential release from pipeline within 3 nm (Victorian) Department of Jobs, Precincts and Regions – Earth Resources Regulation (DJPR ERR): Ph: 0419 597 010 (ERR Duty Officer) and Email: Compliance.Southwest@ecodev.vic.gov.au	Production Manager	ASAP
2.5	Complete Level 1 Incident Report (Appendix C. 3)	Production Manager	ASAP
2.6	Notify and escalate to the EMT if available response resources are inadequate	Production Manager	ASAP
3.	**Level 2 / 3 Notifications**		
3.1	Notify EMT Leader and provide initial SITREP (Appendix C. 2)	Production Manager	Immediate
3.2	Within Commonwealth waters (>3 nm) NOPSEMA: Ph: 1300 674 472 Email: submissions@nopsema.gov.au	EMT HSE	ASAP but not later than 2 hours after becoming aware of spill
3.3	Within Commonwealth waters (>3 nm) – written report to NOPSEMA: Email: submissions@nopsema.gov.au and NOPTA: Email: info@nopta.gov.au	EMT HSE	Within 3 days of spill
3.4	Spill with potential to impact Australian Marine Park(s) or impact matters of national environmental significance (including potential for oiled wildlife) Director of National Parks via Marine Compliance Duty Officer (24-hr): 0419 293 465 Provide: • titleholder details • time and location of the incident (including name of marine park likely to be affected) • proposed response arrangements as per the Oil Pollution Emergency Plan (e.g. dispersant, containment, etc.) • confirmation of providing access to relevant monitoring and evaluation reports when available; and • contact details for the response coordinator. And Department of the Environment and Energy: Ph: (02) 6274 1111	EMT HSE	ASAP
3.5	Within or potential for moderate to significant environmental damage to Victorian State waters (<3 nm) – refer to activity-specific EP for clarification or the impact of wildlife (including cetaceans) DoT EMB: Ph: 0409 858 715 (24/7) and Email: semdincidentroom@transport.vic.gov.au DELWP: Ph: 1300 134 444 Email: sscviv.scmdr.delwp@scc.vic.gov.au	EMT HSE	ASAP

Item	Action	Responsibility	Timing
3.6	Within or potential for release to cause, or may cause, environmental harm or environmental nuisance in Tasmanian State waters (<3 nm) – refer to activity-specific EP for clarification DPIPWE: Ph: +61 (0)3 6165 4599 or 1800 005 171 (within Tasmania only) Radio: TasPorts Vessel Traffic Services VHF radio channel 16/14/12 Call sign "relevant port name VTS" Email: incidentresponse@epa.tas.gov.au	EMT HSE	ASAP (first instance of oil on/in water)
3.7	Confirm takeover of incident by State agency (DJPR) as the Control Agency (<3 nm)	EMT HSE	ASAP
3.8	Notify AMSA and request 500 m exclusion zone from location of the spill. Request AMSA make a call to vessels to avoid the area. AMSA: Ph: 1800 641 792 Email: mdo@amsa.gov.au	EMT HSE	ASAP
3.9	Complete Level 2/3 Incident Report (Appendix C. 4)	EMT Leader	ASAP
3.10	Notify and escalate to CMT if Level 3 response required	EMT Leader	ASAP
4.	**Level 2 / 3 Monitoring, Evaluation & Surveillance**		
4.1	Request monitoring assistance from AMOSC via execution of Service Contract using Service Request for Mutual Aid (Appendix C. 6) as directed by Control Agency (inside 3nm)	EMT Leader	ASAP
4.2	Mobilise surveillance by aircraft via service provider (Appendix D, Appendix E, Appendix F) as directed by Control Agency (inside 3nm)	EMT Logistics	ASAP
4.3	Deploy oil spill tracking buoy	EMT Logistics	ASAP
4.4	Initiate Oil Pollution trajectory modelling via service provider (Appendix C. 5) as directed by Control Agency (inside 3nm)	EMT Logistics	ASAP
4.5	Request Oil Spill Trajectory Modelling from service provider (RPS APASA) RPS: Ph: 0408 477186 Email: rpsresponse@rpsgroup.com	EMT HSE	ASAP
5.	**Level 2 / 3 Oil Pollution Response**		
5.1	Assess the feasibility and safety risks to implement source control. Develop source control strategy and implement when safe to do so.	EMT Leader	ASAP
5.2	For loss of integrity from subsea wells, inform Source Control Incident Management Team (SCIMT) – see Table 10 below for immediate actions.	EMT Leader	ASAP
5.3	Determine offshore and onshore (if required) response options and request assistance from AMOSC via execution of Service Contract using Service Request for Mutual Aid (Appendix C. 6) and/or AMSA as directed by Control Agency AMSA: Ph: 1800 641 792	EMT Leader	As directed

Item	Action	Responsibility	Timing
	Email: mdo@amsa.gov.au AMOSC: 0438 379 328		
5.4	Assess and monitor shoreline and intertidal zones to identify areas affected by the oil spill and to determine the nature of the impact (Appendix G) as directed by Control Agency	EMT Leader	As directed
5.5	Validate and agree implementation of relevant Tactical Response Plan(s) with Control Agency (if required)	EMT Leader / EMLO	ASAP
5.6	Implement Team Meeting and Operational Planning Cycle (Section 6.1)	EMT Leader	ASAP
5.7	Complete role-specific checklists as outlined in Appendix A. 3	All EMT Members and specialist teams	ASAP
6.	**Ongoing Monitoring**		
6.1	Implement Beach Offshore Victoria OSMP as directed by State Control Agency	EMT Leader / Monitoring Provider	As required

4.2.3 Loss of Well Control (L2 / L3)

Table 10: Immediate Action Plan – LOWC

Item	Action	Responsibility	Timing
1.	**Initial Emergency Actions**		
1.1	Manage the safety of personnel on rig and in operational area – activate evacuation plans. Implement Otway Offshore Well Control Bridging document for Otway drilling campaign	MODU OIM	Immediate
1.2	Notify and escalate to Beach Drilling Superintendent / Offshore Drilling Manager. Call National Response Centre (NRC) and activate Beach Source Control Incident Management Team (SCIMT), Emergency Management Team (EMT) and CMT. NRC: 03 9411 2147	Beach Senior Wellsite Representative	Immediate
1.3	If possible / safe to do so, Identify the extent of spillage and the weather/sea conditions in the area and provide initial SITREP (Appendix C. 2) to EMT Leader	Beach Senior Wellsite Representative / Vessel Master	Within 1 hour
1.4	If possible / safe to do so, deploy oil spill tracking buoy from MODU / vessel	Beach Senior Wellsite Representative / Vessel Master	Within 1 hour
1.5	Prepare to control the source - activate the Offshore well-specific Source Control Contingency Plan (SCCP) inclusive of well-specific Relief Well Plan: • SCIMT Leader mobilises relief well planning group; • SCIMT Leader engage Well Control Specialists and prepare for mobilisation to Adelaide; • Rig / Vessel Broker contacted for procuring suitable rig and support vessels • initiate APPEA Memorandum of Understanding: Mutual Assistance to facilitate the transfer of alternate drilling unit and well site services from alternate Operator(s)	SCIMT Leader with SC IMT	Within 2 hours
1.6	Activate Emergency Management Liaison Officer (EMLO) (if necessary).	EMT Leader	Within 1 hour
1.7	Notify Production Manager	EMT Leader	Within 1 hour
1.8	Notify Operations Manager	EMT Leader	ASAP
1.9	Implement Team Meeting and Operational Planning Cycle (Section 6.1) and establish CMT / EMT / SCIMT personnel roster providing 24-hour coverage.	EMT Leader	Within 2hours
1.10	EMT Leader to activate and activate team	EMT Leader	Within 2 hours
1.11	Complete role-specific checklists as outlined in Appendix A. 3	All EMT	As activated
1.12	Manage the safety of all responders – activate the development of a Safety Management Plan	EMT Leader	Within 12 hours

Item	Action	Responsibility	Timing
1.13	BOP closure attempts with ROV initiated within 24 hrs	SCIMT Leader	Within 24 hours
1.14	Initiate AMOSC via execution of Service Contract using Service Request for Mutual Aid (Appendix C. 6) and engage AMSA to initiate National Response Team (NRT) and National Response Support Team (NRST). AMSA: Ph: 1800 641 792 Email: mdo@amsa.gov.au AMOSC: 0438 379 328	EMT Leader	Within 2 hours
2.	**Level 2 / 3 Notifications**		
2.1	For all LOWC incidents NOPSEMA: Ph: 1300 674 472 Email: submissions@nopsema.gov.au	EMT Leader	ASAP but not later than 2 hours after becoming aware of spill
2.2	Within Commonwealth waters (>3 nm) – written report to NOPSEMA: Email: submissions@nopsema.gov.au and NOPTA: Email: info@nopta.gov.au	EMT HSE	Within 3 days of spill
2.3	For all LOWC incidents given potential to impact Australian Marine Park(s) or impact matters of national environmental significance (including potential for oiled wildlife) Director of National Parks via Marine Compliance Duty Officer (24-hr): 0419 293 465 Provide: • titleholder details • time and location of the incident (including name of marine park likely to be affected) • proposed response arrangements as per the Oil Pollution Emergency Plan (e.g. dispersant, containment, etc.) • confirmation of providing access to relevant monitoring and evaluation reports when available; and • contact details for the response coordinator. And Department of the Environment and Energy: Ph: (02) 6274 1111	EMT HSE	ASAP
2.4	For all LOWC incidents with potential for moderate to significant environmental damage to Victorian State waters (<3 nm) or the impact of wildlife (including cetaceans) DoT EMB: Ph: 0409 858 715 (24/7) and Email: semdincidentroom@transport.vic.gov.au DELWP: Ph: 1300 134 444 Email: sscviv.scmdr.delwp@scc.vic.gov.au	EMT HSE	ASAP but not later than 2 hours after becoming aware of spill
2.5	For all LOWC incidents with potential to cause, or may cause, environmental harm or environmental nuisance in Tasmanian State waters (<3 nm) – refer to activity-specific EP for clarification DPIPWE: Ph: +61 (0)3 6165 4599 or 1800 005 171 (within Tasmania only)	EMT HSE	ASAP (first instance of oil on/in water)

Item	Action	Responsibility	Timing
	Radio: TasPorts Vessel Traffic Services VHF radio channel 16/14/12 Call sign "relevant port name VTS" Email: incidentresponse@epa.tas.gov.au		
2.6	Confirm takeover of incident by State agency as the Control Agency (<3 nm)	EMT HSE	ASAP
2.7	Notify AMSA and request 2 km exclusion zone from the well location. Request notification to marine traffic to avoid the area. AMSA: Ph: 1800 641 792 Email: mdo@amsa.gov.au	EMT HSE	ASAP
2.8	Complete Level 2/3 Incident Report (Appendix C. 4)	EMT Leader	ASAP
3.	**Level 2 / 3 Monitoring, Evaluation & Surveillance**		
3.1	Request monitoring assistance from AMOSC via execution of Service Contract using Service Request for Mutual Aid (Appendix C. 6) AMOSC: 0438 379 328	EMT Leader	Within 2 hours
3.2	Mobilise surveillance by aircraft via service provider (Appendix D, Appendix E, Appendix F)	EMT Logistics	ASAP
3.3	Initiate oil spill pollution trajectory modelling (Appendix C. 5). from service provider (RPS APASA) RPS: Ph: 0408 477186 Email: rpsresponse@rpsgroup.com	EMT Logistics	ASAP
3.4	Instruct project support vessels to perform support and surveillance function and engage Vessel Broker to source additional support / surveillance vessels.	EMT Logistics	ASAP
3.5	Deploy oil spill buoys from the MODU	EMT Logistics	ASAP
4.	**Level 2 / 3 Oil Spill Response**		
4.1	Provide support and information to the State Control Agency as directed	EMT Leader via EMT HSE	As directed
4.2	Determine offshore and onshore response options and request assistance from AMOSC via execution of Service Contract using Service Request for Mutual Aid (Appendix C. 6) and/or AMSA as directed by Control Agency AMSA: Ph: 1800 641 792 Email: mdo@amsa.gov.au AMOSC: 0438 379 328	EMT Leader	Within 2 hours / As directed
4.3	Validate and agree implementation of relevant Tactical Response Plan(s) with Control Agency	EMT HSE	ASAP
4.4	Deploy MODU and commence drilling relief well in accordance with Source Control Contingency Plan inclusive of Relief Well Plan	SCIMT Leader / SC IMT Operations	Within 8 weeks
5.	**Ongoing Monitoring**		

Item	Action	Responsibility	Timing
5.1	Implement Beach Offshore Victoria OSMP as directed by State Control Agency and in consultation with Director of National Parks and DotEE.	EMT Leader / Monitoring Provider	As required

5 Crisis and Emergency Management (CEM) Framework

The Beach emergency management structure consists of a three-tiered approach. With teams that have specific roles regarding response to and management of emergency and crisis events. This visual overview clearly depicts this framework and associated protocols for the effective management and coordination of all levels of emergency and crisis events impacting on the Beach organisation. The framework is depicted in Figure 5.

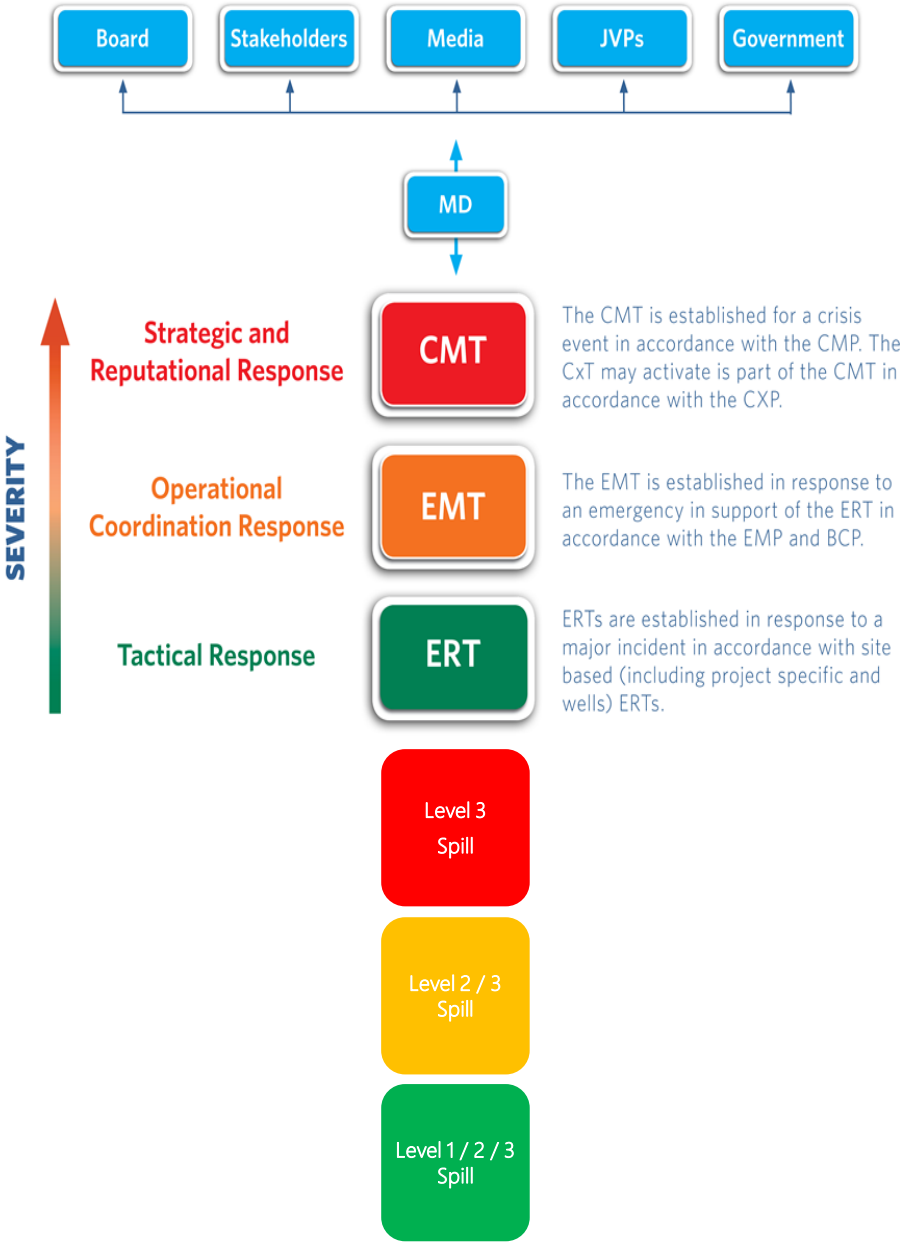


Figure 5: Beach Energy Crisis and Emergency Management Framework

In summary:

- site-based ERTs carry out emergency response activities at the site of the emergency.

- Adelaide and Melbourne based EMTs – provide operational management support to the site-based ERT, facilitate planning and liaise with external parties for all events, Australia wide.
- the oil spill/oil pollution response capability lives within the EMT (with IMO3 trained on-call representatives to ensure expedience of access to all company-wide resources required).
- during a spill event, the IMO3 becomes the EMT Leader and the on call EMT Leader becomes the Deputy.
- the Adelaide-based SCIMT interface with the MODU and implement Beach source control procedures in the event of a LOWC.
- the Adelaide-based CMT undertakes crisis management operations and direct strategic actions at the corporate level, addresses implications of the crisis on the employees, is concerned with the company's reputation, relationships with external parties and joint venture partners.
- the CMT is activated for a crisis event or as directed by the MD or the CMT Leader.

The extent of the response structure will be dictated by the size of the incident and the required response.

5.1 Alignment with National ICS

The structure of Beach's Crisis and Emergency Management system is aligned with the Australasian Inter-service Incident Management System (AIIMS) but modified enough to allow for established corporate processes and reporting during emergency events. The main nuance is the role change from the on-call EMT Leader to the IMO3 representative to become the EMT Leader in the event of an off-shore oil pollution event, with the on-call EMT Leader taking the role of Deputy and remaining the information conduit into the CMT. See Figures 5.2 and 5.3 for further detail.

5.2 The Managing Director

The Beach MD will be the critical interface between the CMT and senior external stakeholders, including, but not limited to the Beach Energy Board of Directors, the media and government.

The CMT Leader will keep the MD apprised of the incident and will discuss decisions of the CMT with the MD and render advice as required. However, the MD may assume the role of CMT Leader.

5.3 Crisis Management Team (CMT)

Leadership of the CMT (Figure 6) is empowered by the Beach MD to assume responsibility for providing strategic support to emergency or crisis events impacting Beach operations or commercial viability.

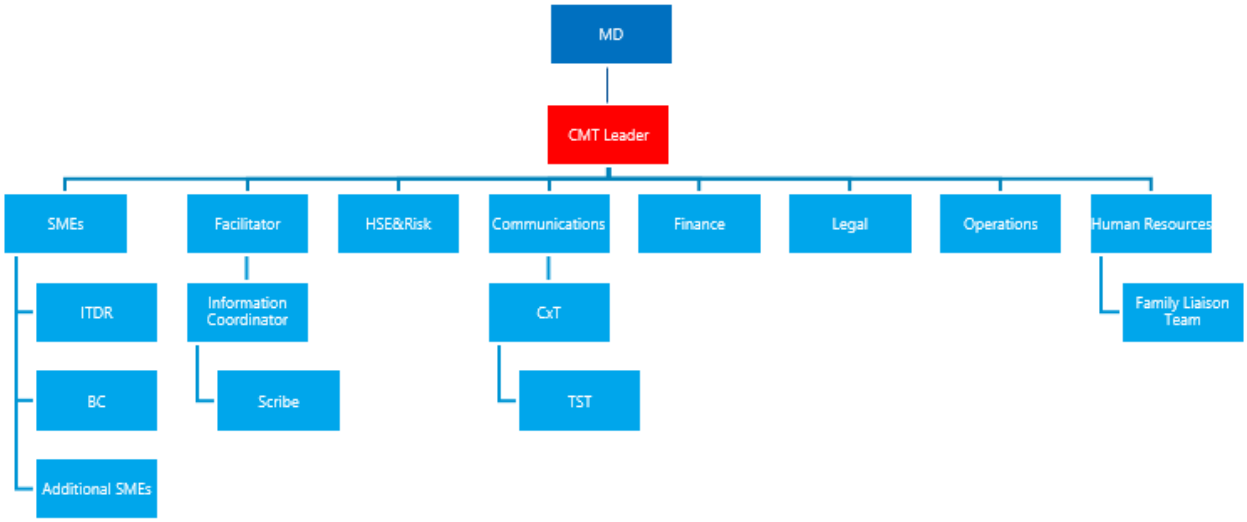


Figure 6: Composition of the Crisis Management Team

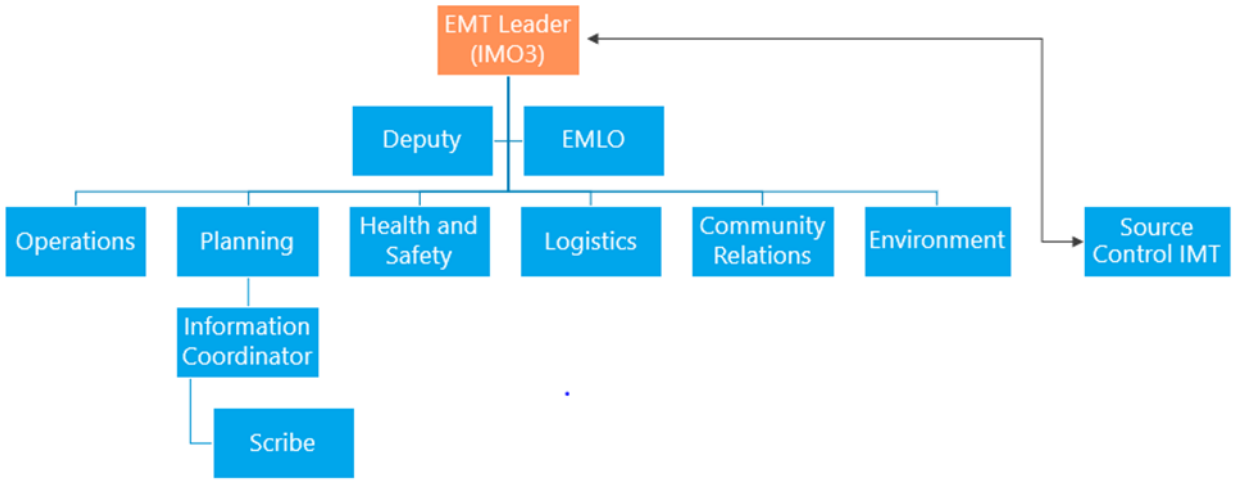


Figure 7: Composition of the Emergency Management Team

5.4 EMT composition for Off-shore Oil Spill/Oil Pollution response

The EMT for all level off-shore oil spill/oil pollution event (Figure) is led by the IMO Level 3-trained EMT Leader. Beach have an IMO3 qualified representative on-call 24/7. In the event of an offshore oil spill/pollution event, the EMT Leader assumes responsibility for implementing this OPEP and the OSMP (under the direction of State regulators within 3nm). The implementation of the Source Control Contingency Plan (SCCP) specific to the well, remains the responsibility of Operations. An Emergency Management Liaison Officer (EMLO) is embedded within the EMT and acts as the key interface between the EMT and State Control Agency Incident Management Teams (IMT).

The Deputy EMT Leader is the conduit of information from the EMT to the CMT (CMT Leader or CMT Operations).

The on-call roster is a 24hr / 7 days a week. There are four Australian based EMTs that are on a weekly roster from 10 am Friday morning to 10 am Friday morning. The on-call roster is a live document and is on the Beach Intranet.

5.5 Source Control Incident Management Team (SCIMT)

In the event of an offshore well control incident, the Operations – Wells function becomes the SCIMT Leader and activates the SCIMT. If the situation requires activation of the Source Control Contingency Plan, a Source Control IMT will be established (see SCCP references Section 10.1.1.3). The SCIMT Leader will lead the Source Control IMT but continues to report through to the EMT Leader. The primary function of the SCIMT is to bring the well under control, in compliance with ER priorities of PEARL.

The organisation structure and responsibilities of the SCIMT are detailed within the SCCPs and WOMPs that are produced and maintained by the asset or project owner for all wells. The structure of the SCIMT once activated for source control events is identical for all offshore incidents.

5.6 Emergency Response Team (ERT)

Each site has a site, project or area-specific Emergency Response Plan (ERP) and an ERT that is typically a Beach team led by the ERT Leader. or offshore vessels and rigs operating under contract to Beach, there are bridging ERPs to ensure adequacy of response and will respond to all Level 1 incidents. All plans and responses require notification to the Beach's EMT via the NRC.

All vessels and rigs are required to undertake emergency exercises prior to mobilising to Beach's permit area to ensure that communications work and that roles and responsibilities are clearly understood. These exercises are stored in Beach's incident and action reporting software (CMO) – Beach's Emergency incident and action management tracking software.

The ERT is responsible for managing all site / field incidents and coordinating a local response to any incident. The ERT are responsible for notification to the EMT for any ERT activation, regardless of level.

The National Response Team (NRT) and the National Response Support Team (NRST) provides support to control agencies in the event of a major marine oil pollution incident.

The NRT consists of personnel to fulfil the following Australian Interservice Incident Management System (AIIMS) positions (Table 5):

Table 11: NRT positions and numbers required

Role	Positions Required per State/NT	Totals
Planning Officer	1	7
Operations Officer	1	7
Logistics Officer	1	7
Aerial Observer	1	7
Response Team Leader	5	35
Total	9	63

Source: National Plan National Response Team Policy (NP-POL-002) 10 Nov 2014

The NRST has been developed to provide additional personnel to support an incident response. The following roles have been identified for a national capacity:

- Environmental Advisers
    - Environmental Adviser to Incident Controller
    - Technical Advisers in Planning and Operations (IMT)
    - Field Advisers
- Finance personnel
- Wildlife Coordinator
- Equipment Operators
    - Marco Operator
    - Offshore Containment/Recovery
    - Inshore Containment/Recovery
    - Vessel-based dispersant spraying
    - Dispersant Helicopter Spray Buckets
    - Shoreline Clean-up
- Shoreline assessment personnel

The Guideline on Accessing National Plan Support Arrangements sets out the initial notification of AMSA regarding the mobilisation of National Plan equipment and personnel. Once the initial notification has been given to AMSA via the Control Agency, the Incident Controller or one of the Incident Management Team will liaise with AMSA to request and manage personnel from the NRT, NRST and AMOSC Core Group (see below). Requests for personnel should be made to AMSA by telephone request or email to the AMSA Environment Protection Duty Officer or another nominated AMSA person. A verbal request must be confirmed within three (3) hours by an email.

Beach Energy has a Master Service contract with AMOSC. Under this contract:

- AMOSC will use its best endeavours to provide training and response services – generally (but not limited to) three AMOSC personnel or one third of AMOSC's store of equipment or consumables.
- AMOSC may request that an AMOSC Member provide equipment, consumables or personnel in response to a request for services made by another AMOSC member. As such, Beach has potential access to external resources from other AMOSC Members, both locally and regionally. The personnel available under this mutual aid arrangement form the AMOSC Core Group. The minimum number of AMOSC Core Group members is 84; normally there are more than 100 in the

group. AMOSC funds the training, revalidation and management for this number of Core Group members.

Whilst AMOSC provide a supporting role within the EMT, Beach Energy are responsible for the direction and control of all activity and matters during the Deployment Period and all activity and matters at the deployment locations in consultation and agreement with the relevant Control Agency.

5.7 Joint Strategic Coordination Committee (Victoria)

The following section has been adapted from DJPR guidance.

Transboundary arrangements from state to state is covered by the National Plan. Where Victorian State waters are impacted by cross-jurisdictional marine pollution incidents, DJPR will only assume the role of control agency for response activities occurring in Victorian State waters, in accordance with the State Maritime Emergencies (non-search and rescue) Plan. In this instance, Beach and DJPR shall work collaboratively, sharing response resources and providing qualified personnel to the DJPR IMT. To facilitate effective coordination between the two control agencies and their respective IMT, a Joint Strategic Coordination Committee (JSCC) shall be established. The control and coordination arrangements for cross-jurisdictional maritime emergencies is outlined in Figure 8.

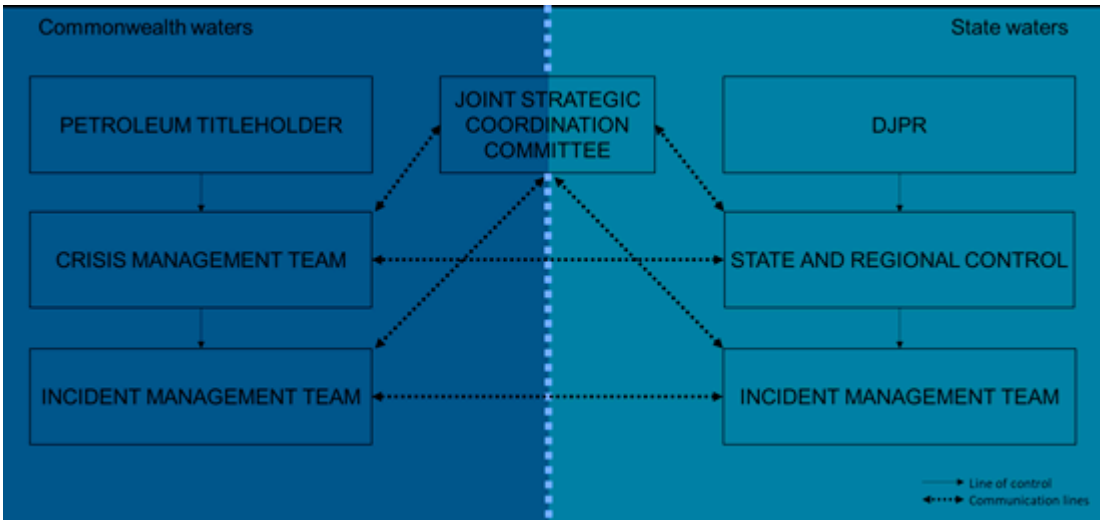


Figure 8: Joint Strategic Coordination Committee (Victoria) structure (DJPR, 2019).

The role of the JSCC is to ensure appropriate coordination between the respective IMTs established by multiple control agencies. The key functions of the JSCC include:

- ensuring key objectives set by multiple IMTs in relation to the marine pollution incident are consistent and focused on achieving an effective coordinated response
- resolving competing priorities between multiple IMTs
- resolving competing requests for resources between the multiple IMTs, including those managed by Australian Maritime Safety Authority (AMSA), such as national stockpile equipment, dispersant aircraft and the National Response Team
- resolution of significant strategic issues as they arise during the incident response

- ensuring that there is a shared understanding of the incident situation and its meaning amongst all key stakeholders
- ensuring there is agreement on how information is communicated to the public, particularly those issues that have actual or perceived public health implications
- ensuring adequate coordination and consistency is achieved in relation to access and interpretation of intelligence, information and spill modelling to promote a common operating picture.

The JSCC will be administered by DJPR and the inaugural JSCC meeting will be convened by the State Controller Maritime Emergencies (SCME) once both Beach and DJPR formally assume the role of control agency in respective jurisdictions.

The JSCC will be jointly chaired by the SCME and the Beach CMT/EMT Leader, who will determine whom will sit in the committee for a coordinated response. As the relevant jurisdictional authority in Commonwealth waters, NOPSEMA may opt to participate in the JSCC as they see fit.

In a cross-jurisdictional marine pollution incident, DJPR and Beach shall each deploy an EMLO to corresponding IMTs for effective communication between DJPR and Beach. The role of the DJPR EMLO includes, but is not limited to:

- represent DJPR and provide the primary contact for Beach, inter-agency and/or inter-State coordination
- facilitate effective communications between DJPR's SCME and Incident Controller and the Beach CMT / EMT Leader
- provide enhanced situational awareness to DJPR of the incident and the potential impact on State waters
- facilitate the delivery of technical advice from DJPR to the Beach EMT Leader as required.

The Beach EMLO will work under the direction of the DJPR and will be responsible for supplying additional resources to the Control Agency as required. This would be via internal Beach resources, AMSA (NRT & NRST), and/or AMOSC service contract.

5.8 Roster

A roster is maintained for CMT Leaders and for full EMTs as well as the SCIMT. The roster is promulgated each Friday morning for the next twelve weeks and is kept on the Beach Energy Intranet 'Umbrella' in the 'Emergency Management' site. See: Link

All CMT, EMT and SCIMT members will make themselves available when called. Primary members will advise their alternate when they will not be available to respond, and all rostered members are able to seek their counterpart as replacement and modify the roster to ensure 24/7 coverage.

Beach utilises the services of the National Response Centre (NRC) to be the conduit of information from the affected site to the on-call EMT Leader and EMT Leader to on call CMT Leader. The NRC will also activate the on-call teams, as directed.

6 Crisis and Emergency Management System (CEMs)

This section describes how to implement a response to an incident using the Beach Crisis and Emergency Management System (CEMS). Regardless of the size of the incident, the response process begins with incident detection, notification and activation of response personnel and other resources, and for L2 / L3 spills the establishment of the incident command, in the form of the EMT and Leader. The IMO3 EMT Leader is the 'Incident Commander' and as the response develops, the CEMs organisational structure and cyclical planning process are established.

For larger, more complex incidents (L2 / L3 spills), the EMT will expand in staffing (resourcing sought from within Beach or external SMEs) and the planning cycle becomes increasingly critical. All oil pollution response activities will include a written Incident Action Plan (IAP) which includes tactics and resource assignments to accomplish the response objectives established by the EMT Leader. The response is typically divided into operational periods, and the IAP is reviewed and revised during each operational period to reflect current objectives, strategies and response tactics to meet evolving incident conditions.

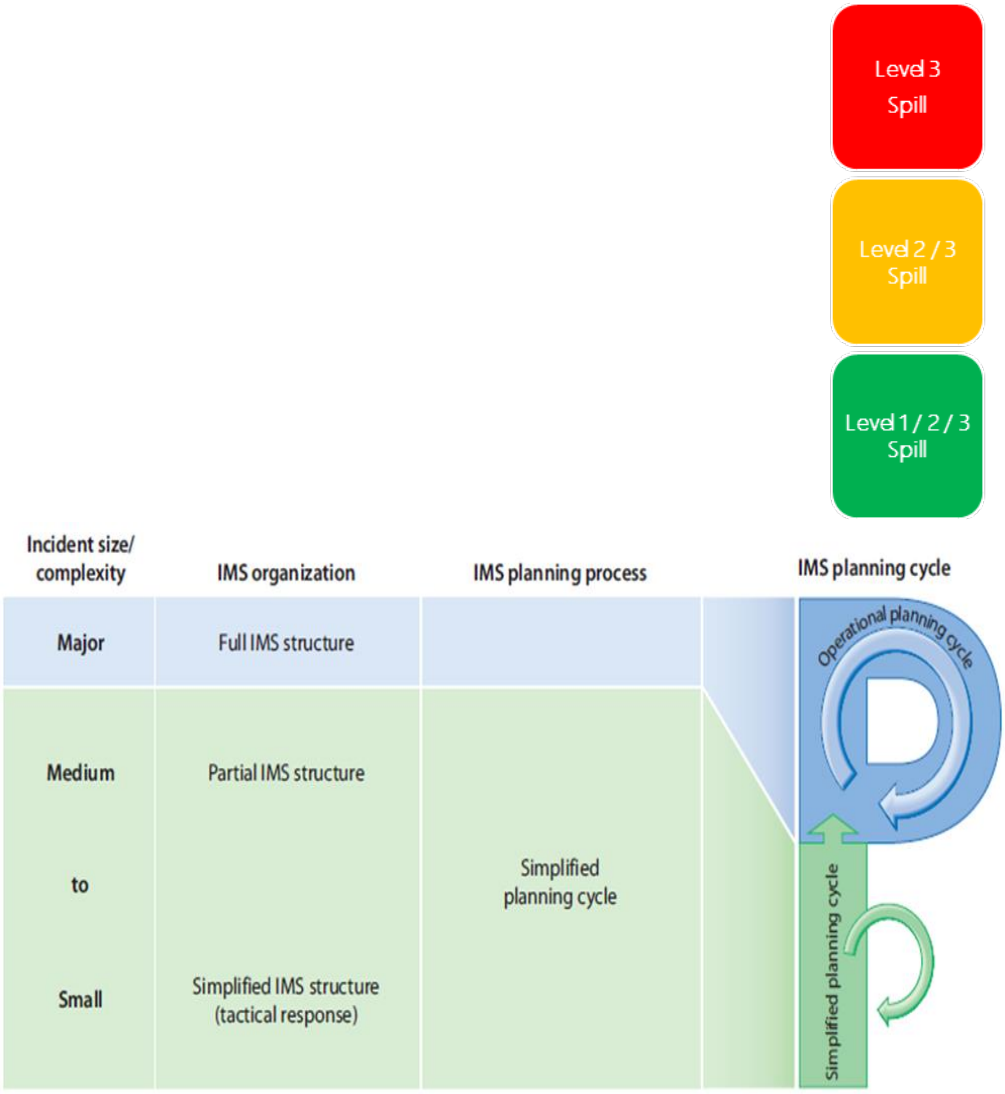


Figure 9: Application of the Beach Incident Management System for all events

6.1 Team Meeting and Operational Planning Cycle

Emergency Management (EM) is a 'team' orientated process: the EMT Leader, through the Deputy, will have reporting requirements to the CMT Leader and will need to receive updates from the site based ERT and/or the SCIMT Leader.

Once the team is activated and following an initial assessment of the specific circumstances of the oil spill/pollution emergency, the EMT Leader will lead and guide the EMT through a defined response process for emergency oil spill/oil pollution scenarios and responses, as outlined in Figure 6.2 and Table 6.1.

In order for this to occur with all participants receiving and giving information at the same briefing, the 'Team Process' has been adopted by Beach EMTs and the CMT. The team meeting and operational planning cycle is to be implemented until each of the strategy-specific termination criteria have been met. The structure of the EMT and frequency of the operational periods is relative to the scale and stage of the spill event.

Figure 10: Team Meeting and Operational Planning Cycle

Table 12: Team Meeting and Operational Planning Cycle Components

Immediate Actions and Notifications	First Responders: Implement Immediate Action Plan and make notifications relevant to spill scenario as per Section 4.2 above: • Vessel spill / collision (L1 / L2 / L3): Table 4.2 • Loss of integrity – platform or pipeline (L2 / L3): Table 4.3 • LOWC (L2 / L3): Table 4.4 Provide EMT Leader with initial situation report (Appendix C. 2 SITREP).
Activate	• EMT Leader: Assess event against the initial site situation report from First Responders and Activate EMT Planning and team for **any** L2 or L3 spill. • EMT Leader: assessing event, clarify roles and tasks required, including communication protocols with CMT • Notify SCIMT Leader for **any** LOWC event (if notification did not come from SCIMT) • Notify the CMT Leader upon activation and immediately for **any** L3 spill. • Notify the State Control Agency for **any** spill impacting or potentially impacting State waters • Determine team composition and commence callout (through the NRC) (03 94112147) • Establish the Crisis Comms Network and reporting frequency with the ERT and CMT • **EMT Members and SCIMT Members:** Attend EM Room and access Role Boxes • Conduct initial assessment • Commence objective setting with Planning and Control Agency (when relevant) • Clarify issues and/or concerns • Develop initial plan of action based upon feasible response strategies (Section 10 below) • Prepare for team briefing
Update	• Conduct team briefing – Establish 'rules' and chain of command (see ERP) • Gather current event information, utilising SITREP (Appendix C.2) / team's knowledge / damage assessments • Assess current event status and severity / potential severity – informed by operational monitoring. • Establish response priorities • Identify response areas and onshore priority planning areas (Section 8 below) • List and agree outcomes and strategic objectives • Assign roles and responsibilities • Resolve issue / concerns • Review team objectives – display prominently in the EM Room • Establish operational periods based upon spill risk profile (6/12/24/48 hours)
Issues	• For each outcome and objective, identify and list response issues and potential limiters • Commence scenario planning based on feasible response strategies (Section 10) • Draft Operational NEBA (Section 6.2) in collaboration and to the agreement of relevant Control Agency • Confirm protection priorities and key protection outcomes in collaboration and to the agreement of relevant Control Agency • Team members should consider issues specific to their role
Stakeholders	• Identify stakeholders – internal and external based upon assessment of potential hydrocarbon exposure. Use issues list as a prompt • Consider prioritising stakeholder list • EMLO to undertake stakeholder liaison • Engage relevant stakeholders and validate draft Operational NEBA (where relevant to stakeholders) • Record stakeholder interactions and consider stakeholder objections or claims • Form and approve key messaging asap
Actions	• Undertake risk assessment considering, asset integrity / safety / health / quality / environment (considering outcomes of operational NEBA and relevant Stakeholder objections or claims) • Develop and agree strategy specific IAPs with Control Agency (inclusive of Tactical Response Plans and establish monitoring, evaluation and surveillance program. • Identify and allocate tasks – including who is responsible and when they are due • EMT members clearly briefed on strategy specific IAPs, roles and responsibilities defined, and tasks allocated • Record and track progress and completion in EMQNet

Break-out	• All team members as needed, can break out to execute actions in accordance with strategy specific IAPs. • Deputy to brief CMT (Leader or Operations, as decided) • All teams to monitor and record response effectiveness • All members are to return at the agreed operational period interval, ready to update on actions executed.
Terminate Response & Demobilise	• Strategy-specific termination criteria must be achieved prior to terminating response: • **Source Control:** controls successfully implemented to stop the source of the spill and no further risk from release from vessel, facility or infrastructure. • **Monitoring & Evaluation:** source control successfully implemented and released hydrocarbon no longer posing risk to receptors at actionable thresholds as agreed with State Control Agency. • **Protection and Deflection:** Monitoring evaluation and surveillance indicates shoreline(s) no longer at risk from actionable thresholds of hydrocarbon and no net benefit gained by continuing protection and deflection as agreed with State Control Agency. • **Shoreline Clean-up:** Shorelines affected by actionable thresholds of stranded oil cleaned until no net benefit gained by continuing clean-up operations as agreed with State Control Agency. N.B. shoreline monitoring continues following termination of clean-up operations as agreed with State Control Agency. • **Oiled Wildlife**: No affected wildlife detected and affected individuals that have been (where possible) captured, triaged and rehabilitated as agreed with State Control Agency and / or Commonwealth Department of the Environment and Energy.

6.2 Net Environmental Benefit Analysis (NEBA)

The NEBA process is used to compare the likely positive and negative outcomes of various oil spill response options with respect to environmental sensitivities at risk from the spill or response activities. NEBA recognises that certain clean-up options may cause a net negative environmental impact in comparison to the impact of leaving the spill to disperse and weather naturally or alternative response options. The key objective is to identify the response options that will result in minimal impacts and maximum recovery of the environment, considering the specific sensitivities of the resources that have been prioritised for protection. The NEBA will be undertaken by the Control Agency or under the direction of the EMT for spills in Commonwealth waters.

A NEBA may be either 'strategic' (pre-spill event) or 'operational' (post-spill event).

The following steps allow for an effective NEBA to be conducted:

Step 1

a. Identify potential spill impact area based on incident specifics, trajectory modelling and observations. Within the predicted impact area, identify the key characteristics of the habitats. This can be based on field observation, aerial photos and local knowledge.

Step 2

a. Identify resources (human, ecological, economic etc) at risk at each of the different habitats within the impact area. During the NEBA, specific consideration must be given to formally managed environment receptors and relevant formal management advice:

- south-east Commonwealth Marine Reserves Network Management Plan 2013-23 (Director of National Parks, 2013)
- the following Conservation Advices / Recovery Plans that identify pollution as a key threat:
    - Conservation Advice *Balaenoptera borealis* (sei whale)
    - Conservation Advice *Balaenoptera physalus* (fin whale)
    - Recovery Plan for Marine Turtles in Australia (CoA, 2017), identified as acute chemical discharge (oil pollution)
    - Wildlife Conservation Plan for Migratory Shorebirds – 2015
    - Conservation Listing Advice for the *Neophoca cinerea* (Australian sea lion)
    - Recovery Plan for the *Neophoca cinerea* (Australian sea lion)
    - Conservation Advice *Calidris ferruginea* (Curlew Sandpiper) identified as Habitat degradation/ modification (oil pollution)
    - National Recovery Plan for Threatened Albatrosses and Giant Petrels 2011-2016
    - Conservation Advice for *Sterna nereis nereis* (Fairy Tern)

- the following Conservation Advices / Recovery Plans that identify habitats degradation/modification as threat, which may be consequence of accidental release of hydrocarbon:
    - Conservation Advice *Calidris canutus* (Red Knot)
    - Conservation Advice *Limosa lapponica baueri* (Bar-tailed Godwit (Western Alaskan))
    - Conservation Advice *Limosa lapponica menzbieri* (Bar-tailed Godwit (Northern Siberian))
    - Conservation Advice for *Numenius madagascariensis* (Eastern Curlew)
    - Conservation Advice for *Charadrius leschenaultia* (greater sand plover)
- the following conservation advices and recovery plans that identify the following conservation actions:
    - minimise chemical and terrestrial discharge.
    - ensure spill risk strategies and response programs include management for turtles and their habitats, particularly in reference to 'slow to recover habitats', e.g. nesting habitat, seagrass meadows or coral reefs.
    - ensure appropriate oil-spill contingency plans are in place for the subspecies' breeding sites which are vulnerable to oil spills.
    - implement measures to reduce adverse impacts of habitat degradation and/or modification.
- response activities associated will not be conducted in a manner inconsistent with the objectives of the respective zones of the AMPs and the principles of the IUCN Area Categories applicable to the values of the AMPs

Step 3

a. assess the potential impact from the spill on each of the resources at risk based on severity of impact and predicted recovery time. This is assuming no response to the spill.

b. a precautionary approach should be adopted, assuming that the entire site will be covered by oil and that this will persist at the site for at least 24 hours. However, in certain situations the behaviour of the spill may be more accurately predicted, and this information can be used when assessing potential impacts. The second assumption that must be agreed is whether the percentage of a species or resource impacted relates to the local (site), regional or even global (in the case of endangered species) population. This does not necessarily need to be consistently applied to all resources at the site. For example, it may be considered that if a resource is very abundant regionally then it is not significant enough at a particular site to warrant a high level of concern even though it may be seriously impacted at that site.

Step 4

a. review the site-specific advantages and disadvantages of the different response options available, using natural recovery as a baseline. The predicted effect, likely impact and recovery time of the various response options on each of the resources must be assessed.

b. in the case of a hydrocarbon spill from Beach activities or operations impacting Victorian State waters and/or lands, it is expected that the Control Agency (DJPR) would undertake an operational NEBA, with support from Beach as requested, in determining the most appropriate response actions in accordance with the NatPlan or the VicPlan as applicable. Under the NatPlan, Environmental Science Coordinators contribute advice on likely environmental outcomes of each response option to the spill planning team based on a NEBA approach.

c. as part of the response planning process, Beach has conducted strategic NEBA (Table 15). As part of the due diligence process, Beach shall also conduct an operational NEBA in consultation and agreement with the Control Agency regarding the results of that assessment and recommendations for response activities. Additionally, information from the NEBA may be used to help inform requirements for environmental monitoring relating to anticipated impacts from the spill and any response activities. Beach's operational NEBA assessment would be conducted by an environmental professional with experience in oil spill planning and response.

7 Responsibilities/Accountabilities

For Level 1 spills, the site ERT Leader has responsibility for oil spill/oil pollution response and implementation of this OPEP.

For Level 2/3 spills, the Beach EMT Leader has responsibility for oil spill/oil pollution response and implementation of this OPEP in parallel with the Emergency Management Plan (EMP) (INT 1000 SAF PLN, CDN/ID 18025990).

For any LOWC event, the SCIMT Leader has the responsibility for the implementation of the well-specific Source Control Contingency Plan (SCCP) inclusive of relief well planning. Roles and responsibilities for the SCIMT members (Section 5.5) are detailed within the well-specific SCCP.

Individual role checklists for the EMT can be found Appendix A.3.

Role-specific responsibilities for an offshore oil pollution emergency are detailed in the immediate actions and notifications (Section 4) of this OPEP.

For Level 3 spills, the CMT has responsibility for implementation of the CMP. CMT individual role checklists can be found in Appendix B of the CMP.

8 Response Areas and Onshore Priority Planning Areas

8.1 Response areas

To identify the response planning areas the following oil exposures were used (based on AMSA guidance):

- offshore: a sea surface oil exposure of >25 g/m^2 as this represents the practical limit for surface response options; below this thickness, oil containment, recovery and chemical treatment (dispersant) become ineffective

- onshore: a shoreline contact exposure of >100 g/m^2 as this represents the minimum thickness that does not inhibit the potential for recovery and is best remediated by natural coastal processes alone.

It is noted that within NOPSEMA Bulletin #1 Oil spill modelling (A652993) (NOPSEMA 2019) refers to >50 g/m^2 as a level to inform response planning, and therefore the use of >25 g/m^2 from stochastic modelling results is considered conservative.

For the spill scenarios as identified in Section 3.4, the response areas have been defined based on the outcomes of oil spill modelling (Figure 11, and 8-2).

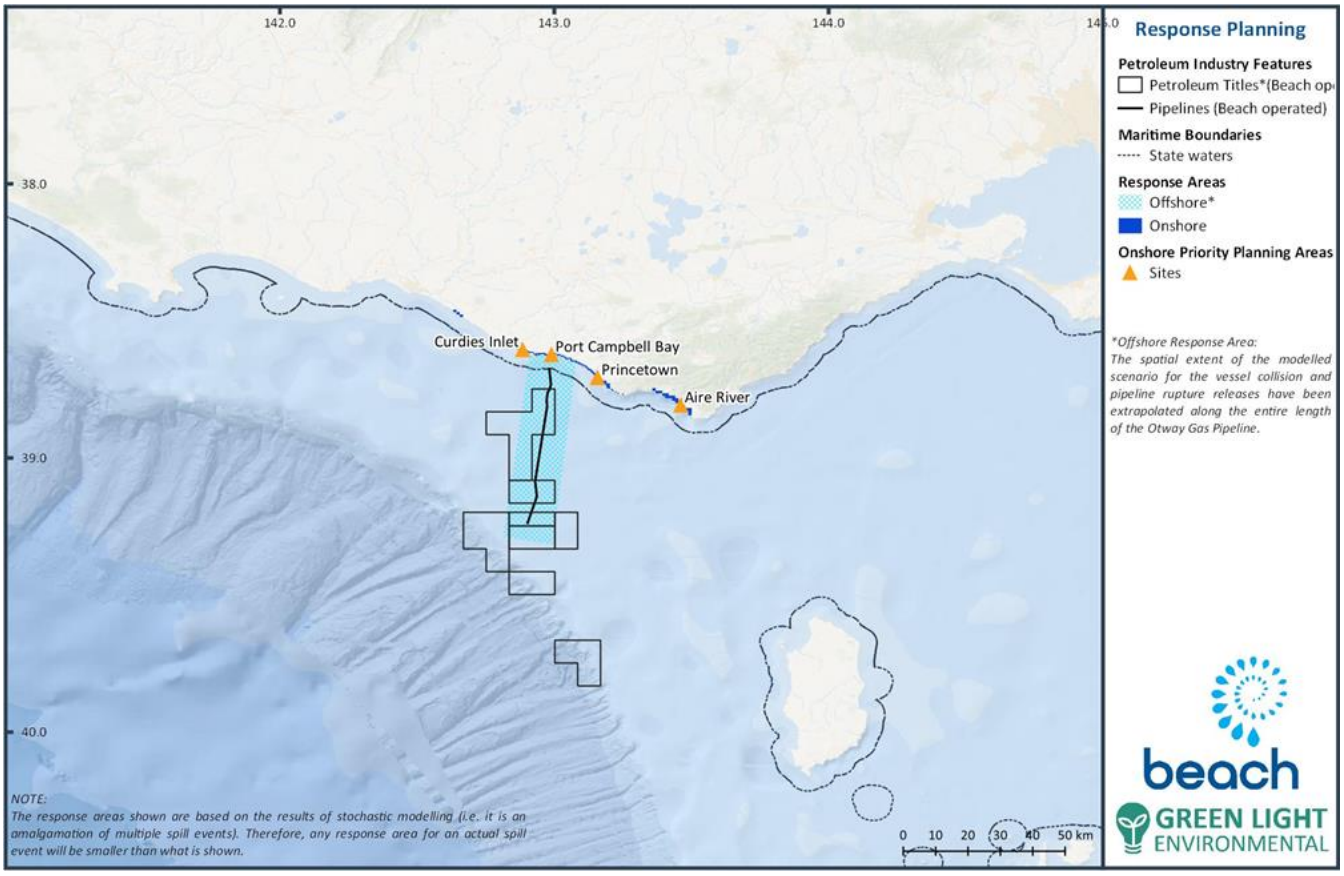


Figure 11: Otway Basin response areas and onshore priority planning areas

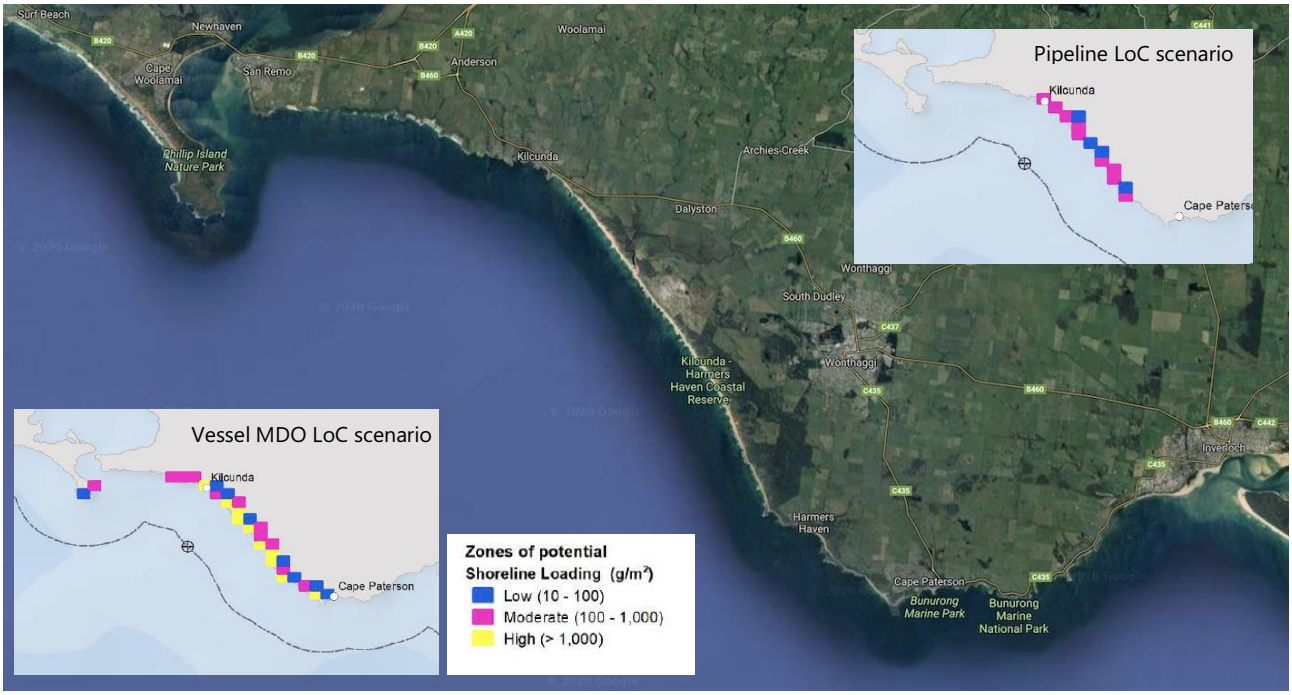


Figure 12: Bass Basin response areas and onshore priority planning areas

8.2 Onshore priority planning areas

Within the onshore response areas, priority planning areas have been identified where the following two criteria are met:

- predicted time to shoreline exposure is less than 7-days
- sensitive environmental receptors are present in the intertidal/coastal zone:
  - national or international important wetlands
  - sheltered tidal flats
  - mangrove or saltmarsh habitat
  - known breeding/calving/nesting aggregation areas for protected (threatened or migratory) fauna
  - known breeding/haul-out areas for pinnipeds
  - threatened ecological communities.

Note, the requirement for time to exposure is based upon the time required to plan and implement a response in this area, i.e. it is estimated to take approximately 5 days to develop and ground-truth a tactical response plan (TRP) and 24-48 hours to mobilise equipment and personnel to location.

The priority planning areas identified for spill scenarios that are relevant to the Otway and Basin assets and activities are detailed in Table 13. A series of TRPs have been developed for these priority protection areas to assist in implementing a rapid response.

Table 13: Otway and Bass Basin priority response planning areas

Priority response planning area Otway Basin	Sensitive environmental receptors
Aire River	• Wetland of national importance • Saltmarsh habitat • Coastal TEC's (Coastal Saltmarsh, Salt-wedge Estuary Communities)
Curdies Inlet	• Saltmarsh habitat • Coastal TEC's (Coastal Saltmarsh, Salt-wedge Estuary Communities
Princetown	• Wetland of national importance • Saltmarsh habitat • Coastal TEC's (Coastal Saltmarsh, Salt-wedge Estuary Communities)
Port Campbell Bay	• Coastal TEC's (Coastal Saltmarsh, Salt-wedge Estuary Communities
Priority response planning area Bass Basin	**Sensitive environmental receptors**
Powlett River	• Victorian Desalination Plant • Wetland of environmental significance • Saltmarsh habitat • Coastal TEC's (Coastal Saltmarsh, Salt-wedge Estuary Communities)
Shoreline San Remo to Cape Patterson	• Saltmarsh habitat • Coastal TEC's (Coastal Saltmarsh, Salt-wedge Estuary Communities)

9 Environmental Monitoring

The Offshore Victoria Operational and Scientific Monitoring Plan (OSMP) provides a framework for Beach's environmental monitoring response for Level 2 and Level 3 offshore hydrocarbon spills from their petroleum activities undertaken in the Otway and Bass Basins.

Oil spill monitoring has been divided into two types:

- operational monitoring which collects information about the spill and associated response activities to aid planning and decision making during the response or clean-up operations. Operational monitoring typically finishes when the spill response is terminated.

- scientific monitoring (also known as Type II or recovery phase monitoring) which is focussed on non-response objectives and evaluating environmental impact and recovery from the spill and response activities. Scientific monitoring may continue for extended periods after a spill response is terminated.

Operational monitoring studies may be implemented in conjunction with relevant response strategies as described in this OPEP (e.g. Monitoring and Evaluation, Protection and Deflection, Shoreline Clean-up and Oiled Wildlife Response (OWR)).

10 Response Strategies

There are several response strategies which can be utilised in response to hydrocarbon spills, including:

- source control
- monitoring and evaluation
- assisted natural dispersion
- chemical dispersants
- containment and recovery
- protection and deflection
- shoreline assessment and clean-up
- oiled wildlife response.

Table 14 summarises the response options that are feasible and effective in response to the hydrocarbon types associated with the Otway and Bass Basin offshore activities.

Table 14: Response option feasibility and effectiveness by hydrocarbon type

Response Strategy	Hydrocarbon Type	Feasibility / Effectiveness	Implement	Justification
Source control	Gas Condensate & DMA	Feasible & effective	Yes	Always primary spill response strategy. Reduction in release volume has direct environmental benefit. N.B. Relief well is the primary strategy for responding to a LOWC event. Well capping is not technically feasible.
Monitor & evaluate	Gas Condensate & DMA	Feasible & effective	Yes	Both gas condensate and DMA will largely evaporate and disperse rapidly, a residual fraction of the hydrocarbon may spread to sensitive receptors. Monitoring and evaluation of the spill trajectory will provide information to inform other response strategies and monitoring requirements.
Assisted natural dispersion	Gas Condensate	Not feasible & not effective	No	Gas condensate will evaporate and disperse rapidly, therefore assisted natural dispersion will present no net environment benefit.
	DMA	Feasible but partially effective	Pending Operational NEBA	DMA will evaporate and disperse rapidly. Depending on weather conditions, thickness of surface slick proximity to sensitive receptors this response may present a net environmental benefit.
Chemical dispersants	Gas Condensate & DMA	Feasible but not effective	No / Separate risk assessment.	Not recommended for Group I oils such as condensate due to the very low viscosity and high volatility – generally no environmental benefit gained by the application of dispersant on Group I oils. Subsea dispersant injection (SSDI) may reduce volatile organic compounds (VOCs) at sea surface within the response area, therefore creating a safer work environment for responders. However, given capping stack system (CSS) are not feasible to deploy, SSDI is not considered for this application. If the SCIMT determine that is a benefit to safe offshore operations then it may be considered with a separate risk assessment. **Confirmation for emergency use must be obtained from NOPSEMA prior to use 1300 674 472**
	DMA	Feasible but not effective	No	Although "conditional" for Group II oil, the size of potential spill volume and the natural tendency of spreading into very thin films is evidence that dispersant application will be an ineffective response. The dispersant droplets will penetrate through the thin oil layer and cause 'herding' of the oil which creates areas of clear water and should not be mistaken for successful dispersion (see ITOPF – Technical Information Paper No. 4: the use of chemical dispersants to treat oil spill/oil pollution).

Response Strategy	Hydrocarbon Type	Feasibility / Effectiveness	Implement	Justification
Containment & recovery	Gas Condensate	Not feasible & not effective	No	High volatility of condensate creates inherent safety risks when attempting to recover mechanically. Logistically, gas condensate will evaporate faster than the collection rate of a thin surface film present. To be of value, contain and recover techniques are dependent on adequate oil thickness (generally in excess of 10 g/m^2)
	DMA	Not feasible & not effective	No	Low viscosity property allows for efficient containment by boom and recovery by oleophilic skimmers (i.e. komara disc skimmer) with ~90% hydrocarbon to water recovery rate. To be of value, contain and recover techniques are dependent on adequate oil thickness (generally in excess of 10 g/m^2), The normal sea state of the Otway and Bass Basins do not provide significant opportunities to utilise this equipment.
Protection & deflection	Gas Condensate	Potentially feasible & partially effective	Pending Operational NEBA	High volatility of condensate creates inherent safety risks when attempting to deflect mechanically. The normal sea state of the Otway and Bass Basins do not provide significant opportunities to utilise this equipment efficiently.
	DMA	Potentially feasible & partially effective	Pending Operational NEBA	Low viscosity property allows for efficient protection and deflection with boom such as absorbent, zoom boom and beach guardian. The normal sea state of the Otway and Bass Basins do not provide significant opportunities to utilise this equipment efficiently.
Shoreline assessment & clean-up	Gas Condensate	Potentially feasible & partially effective	Pending Operational NEBA	Condensate is highly volatile and will evaporate naturally even if shoreline impact occurred. Potentially, more environmental impact would occur during clean-up operations depending on the shoreline type and sensitivities present. Shoreline assessment activities would occur if shoreline impact occurred.
	DMA	Potentially feasible & partially effective	Pending Operational NEBA	The normal sea state of the Otway and Bass Basins encourages natural processes with high energy wave action, wind and regular storm events. Potentially, more environmental impact would occur during clean-up operations depending on the shoreline type and sensitivities present. Shoreline assessment activities would occur if shoreline impact occurred.

Response Strategy	Hydrocarbon Type	Feasibility / Effectiveness	Implement	Justification
Oiled wildlife response	Gas Condensate	Potentially feasible & partially effective	Yes	If oiling occurs in areas above the conservative environmental exposure threshold of >10 g/m^2 for surface & >100 g/m^2 for shoreline, oiled wildlife response may be effective. At the direction of State Control Agency, impacts to wildlife shall be monitored and oiled wildlife response implemented to affected wildlife as appropriate. Effectiveness of response option depends on affected species and habitat type.
	DMA	Potentially feasible & partially effective	Yes	

10.1 Strategic NEBA and Response Strategy Implementation

Table 15 summarises the response strategies that are relevant (based upon the extent of hydrocarbon exposure) and feasible or potentially feasible to implement for hypothetical spill scenarios associated with Offshore activities and a strategic pre-spill NEBA.

Table 15 : Response feasibility and strategic NEBA

Scenario	Hydrocarbon Type	Response	Strategic NEBA	Key Operational Considerations
Vessel Spill	DMA	Source Control	Yes, source control always considered to provide net environmental benefit by virtue of reducing the overall spill volume.	Other marine users Other petroleum Operations / Titleholders
		Monitor & Evaluate	Indirect benefit by informing response strategies. Aerial and vessel surveillance to be mobilised to determine the extent and direction of L2/L3 spill.	EPBC Regulations 2000 – Part 8 Division 8.1 interacting with cetaceans Wildlife Marine Mammals Regulations 2009 (Vic) Relevant Conservation Advices, Conservation Plans, Conservation Management Plans and Recovery Plans for nearshore and shoreline MNES (refer Section 6.2). Include management for turtles and their habitats, particularly in reference to 'slow to recover habitats', e.g. nesting habitat, seagrass meadows or coral reefs. Consider breeding sites which are vulnerable to oil pollution. Implement measures to reduce adverse impacts of habitat degradation and/or modification. Other marine users and coastal communities Refer to Tactical Response Plans
		Assisted Natural Dispersion	Site-specific operational NEBA required prior to undertaking response option given variability in potential impact depending on location of spill in relation to marine ecology and habitats.	
		Protect & Deflect	Yes, potential net environmental benefit to coastal habitats, coastal ecology and socio-economic receptors. Site-specific operational NEBA required prior to undertaking response option.	
		Shoreline Clean-up	Yes, potential net environmental benefit to coastal habitats: sandy beaches & intertidal rocky platforms. Potential net benefit to shoreline birds and socio-economic receptors. Potential negative impact for coastal habitats: saltmarsh / seagrass & Wetlands. Site-specific operational NEBA required prior to undertaking response option.	
		Oiled Wildlife Response	Will occur (at the direction of State Control Agency) for all impacted species: cetaceans, pinnipeds, turtles & sea birds. Coastal ecology: shoreline birds, pinniped haul-out sites & penguin colonies.	

Scenario	Hydrocarbon Type	Response	Strategic NEBA	Key Operational Considerations
Loss of Integrity Platform or Pipeline	Gas Condensate	Source Control	Yes, source control always considered to provide net environmental benefit by virtue of reducing the overall spill volume.	
		Monitor & Evaluate	No direct net environmental benefit. Indirect benefit by informing response strategies.	
Loss of Well Control	Gas Condensate	Source Control	Yes. Source control always considered to provide net environmental benefit by virtue of reducing the overall spill volume. N.B. does not apply to CSS as this is not a feasible response option for well within the Otway and Bass Basins	Other marine users Other petroleum Operations / Titleholders
		Monitor & Evaluate	Indirect benefit by informing response strategies. Aerial and vessel surveillance to be mobilised to determine the extent and direction of L2/L3 spill.	EPBC Regulations 2000 – Part 8 Division 8.1 interacting with cetaceans Wildlife Marine Mammals Regulations 2009 (Vic) Relevant Conservation Advices, Conservation Plans, Conservation Management Plans and Recovery Plans for nearshore and shoreline MNES (refer Section 6.2). Include management for turtles and their habitats, particularly in reference to 'slow to recover habitats', e.g. nesting habitat, seagrass meadows or coral reefs. Consider breeding sites which are vulnerable to oil pollution. Implement measures to reduce adverse impacts of habitat degradation and/or modification. Other marine users and coastal communities Refer to Tactical Response Plans
		Protect & Deflect	Yes, potential net environmental benefit to coastal habitats, coastal ecology and socio-economic receptors. Site-specific operational NEBA required prior to undertaking response option.	
		Shoreline Clean-up	Yes, potential net environmental benefit to coastal habitats: sandy beaches & intertidal rocky platforms. Potential net benefit to shoreline birds and socio-economic receptors. Potential negative impact for coastal habitats: saltmarsh / seagrass & Wetlands. Site-specific operational NEBA required prior to undertaking response option.	
		Oiled Wildlife Response	Will occur (at the direction of State Control Agency) for all impacted species: cetaceans, pinnipeds, turtles & sea birds. Coastal ecology: shoreline birds, pinniped haul-out sites & penguin colonies.	

10.1.1 Source Control

Source control is the primary and most effective form of spill response. In the event of an offshore hydrocarbon spill, the feasibility of controlling the spill from the source should always be considered, giving due consideration to logistical constraints and safety implications.

Source control equipment and resources available to Beach in the event of a LOWC are detailed in Appendix B. 1.

10.1.1.1 Vessel

For a vessel spill at sea, the Vessel Master shall implement the Shipboard Marine Pollution Emergency Plan (SMPEP) or Shipboard Oil Pollution Emergency Plan (SOPEP) (equivalent to class).

10.1.1.2 Pipeline / Platform

System pressures are monitored via the distributed control system (DCS) onshore, and the platform and pipeline can be shut down via the DCS or emergency shut down (ESD) can be implemented from the platform.

10.1.1.3 Well Control

Restoring well control is the primary objective under a LOWC scenario. The primary method of well control is via a dynamic well kill by intersecting the well bore below the release location via a relief well and circulating kill weight drilling fluid into the well bore, thus controlling the flow of hydrocarbons from the reservoir.

Recommended source control strategies are detailed within the well-specific Source Control Contingency Plans (SCCP):

- Artisan-1 Source Control Contingency Plan (SCCP) CDN/ID: S4810RD718250;
- Thylacine North-1 Source Control Contingency Plan (SCCP) CDN/ID: S4110AV718255;
- Thylacine West-1 Source Control Contingency Plan (SCCP) CDN/ID: S4110AD718258;
- Geographe-5 Source Control Contingency Plan (SCCP) CDN/ID: S4110AD718256
- Geographe-4 Source Control Contingency Plan (SCCP) CDN/ID: S4210AD718257
- Thylacine North-2 Source Control Contingency Plan (SCCP) CDN/ID: S4110AD718259
- Thylacine West-2 Source Control Contingency Plan (SCCP) CDN/ID: S4110AD718260
- Beach Offshore Source Control Contingency Plan (SCCP)
- Relief Well Plan Basic - Otway and Bass (T-5100-35-MP-005)

Relief Well

Drilling a relief well is the primary source control strategy for wells in the Otway and Bass Basins. Each well, or group of similar wells, has a Relief Well Plan detailing: the relief well strategy for each well or

group of similar wells, anticipated timeframes to drill a relief well and resources available to implement the relief well strategy.

Beach anticipate the mobilisation of an alternate MODU to the Otway and Bass Basins and the successful intersection of a flowing well would take approximately 86 days. Details of the most suitable source control methods applicable to the specific wells will be detailed in well-specific Source Control Contingency Plan, inclusive of the relief well plan and dynamic kill modelling.

Well Kill Simulation

Blowout and relief well modelling shows a worst-case scenario of a 15 ppg (1.8 sg) kill mud pumped at approximately 64 bpm down the choke and kill lines of the relief well is sufficient to achieve a dynamic well kill based on intersecting the wells below the 9 5/8" casing shoe. The maximum pump pressure is less than 3,000 psi (4,600HP power requirement). It is important to highlight that the fracture strength of both the relief well and target well casing shoes are not exceeded in the simulated well kill modelling. The well kill can be achieved with one relief well.

Sensitivity of blowout scenarios has been done to demonstrate a lower bound of 11.3 ppg (1.35 sg) kill mud pumped at 33 bpm down the choke and kill lines of the relief well is sufficient to achieve a dynamic well kill. The maximum pump pressure is less than 3,000 psi (2,283 HP power requirement). The well kill can be achieved with one relief well.

Relief Well Locations

Two relief well sites have been identified for each location, even though modelling confirms only one relief well is required for the kill operation. This redundancy will give contingency in the event one of the relief well sites is deemed not accessible. Final sites will be chosen based on a risk assessment considering the actual conditions in the event of a LOWC.

Relief Well Targets

An intersection point as deep as possible, but above top of the reservoir, is preferable in order to achieve maximum frictional and hydrostatic pressure drop in the blowing wellbore. Steel is required in the blowout well in order to home in on the target using magnetic ranging techniques, hence the 9 5/8" casing shoe will be the deepest possible intersection point for an open hole blowout scenario.

The relief well may be drilled directly to the target, or alternatively a conventional strategy of approach and cross-by of the target well to facilitate detailed ranging and triangulation. Subsequently, the relief well should parallel the blowout well at close proximity. This section is used to align the relief well with the blowout well before intersecting at the planned kill point. The relief well designs are based on conservative directional drilling parameters.

MODU Selection

The Fields that Beach operates in Victoria are considered remote locations and therefore likely to have an impact on the time taken for a suitable rig to be mobilised to the relief well location. This timeframe has been built into the oil pollution modelling. rig broker reports are used to monitor the rig market on a monthly basis and, if required, assist in sourcing and contracting a suitable MODU, including whether the facility has a valid Australian Safety Case.

The rig broker can be contracted to identify and contract a suitably specified rig (including Australian Safety Case status) within 14 days. Note, a MODU mobilised from the NW Shelf or Singapore is likely to take 35 days. These periods have been factored into the relief well schedule within the well-specific relief well plans.

MODU selection for relief well drilling will be based on the following:

- rating of well control equipment: Rigs considered shall have equipment rated to at least 10,000 psi to perform the required well kill;
- water depth: Rig being considered for relief well drilling must be rated for a minimum water depth of 60 m-100 m;
- seabed conditions.
- rig with a valid Australian Safety Case;
- proximity to the Otway and Bass Basins; and
- ability to engage in a mutual aid agreement with the operator.

Capping Stack System (CSS) Deployment

Rough sea states, including high waves and longer wave periods, can affect the safe operating limits of CSS deployment. The sea state can negatively impact the ability to safety deploy capping stack using a deck crane or A-frame located on the stern of the deployment vessel. Furthermore, if the vessel is experiencing too much heave due to wave action, the CSS could unintentionally hit the subsea wellhead during deployment causing damage to the equipment itself and to the wellhead. Thus, operating limits of acceptable sea states are required for deployment of the equipment for successful deployed in adverse sea state environments such as the Otway and Bass Basins. However, the gas plume environment in shallow water conditions is manifestly different to a deeper water environment due to the exclusion zone above the wellhead preventing vertical installation of the equipment. The feasibility analysis has confirmed that due to the technical complexity of deploying a CSS in shallow waters with a gas plume environment and harsh metocean conditions the use of a capping stack is not operationally suitable for Beach wells within the Otway and Bass Basins.

10.1.2 Monitoring and Evaluation

Understanding the behaviour and trajectory of hydrocarbon slicks is required for L2 and L3 spill scenarios to confirm the potential for environmental harm from the spill. There are a number of methods that can be used to monitor and evaluate hydrocarbon spills including direct observation (surveillance by air, vessel or tracking buoys), manual calculations, or computer modelling. Each of these methods, including the triggers for their use, is discussed in the following sections.

10.1.2.1 Predicting spill trajectory

Manual calculations for estimation of spill trajectory will be used for an initial calculation in parallel with oil spill trajectory modelling to provide an accurate spill trajectory for the current weather conditions and type/volume of hydrocarbon spill.

For a L2 or L3 spill, trajectory modelling would be conducted based on real time spill and metocean data and this information would be used to refine the spill response planning and execution.

10.1.2.2 Aerial / Vessel surveillance

Estimation of hydrocarbon volume can be estimated using the Bonn Agreement Oil Appearance Code (BAOAC – Refer to Appendix D).

Aircraft provide a better platform than vessels for surveillance, and Beach would utilise this option in the event of a Level 2 or 3 spill to provide information on the location, extent, trajectory and spill volume estimate.

Fixed-wing aviation support available to Beach in the event of a L2/L3 spill is detailed in Appendix B. 3. Trained oil spill observers would be engaged from AMOSC to undertake the observations.

Aerial observations would be discontinued (with only shoreline surveillance remaining) once no areas of metallic sheen or true oil colour were observed as this would indicate that the slick thickness was less than 5 microns throughout and therefore poses little risk of environmental harm and is not amenable for any on-water or shoreline clean-up techniques.

10.1.2.3 Satellite Tracking Buoys

These units can be used to track the movement and extent of a spill. Beach own two satellite tracking buoys that are on the MODU. If additional buoys are required, Beach will obtain them from AMOSC and may be used in parallel with aerial surveillance to track the extent of a spill.

10.1.3 Protection and Deflection

Deflection equipment such as booms can be deployed to deflect slicks from encroaching on environmentally sensitive areas. Absorbent type booms are a suitable secondary protection measures at environmental sensitive sites. The feasibility and effectiveness of these measures is largely dependent on calm sea conditions allowing for the deployment of booms and this response option is only warranted where shoreline resources or offshore infrastructure are at risk.

Priority response areas are identified in Section 8.2.

Detailed Tactical Response Plans (TRPs) have been developed for priority protection areas.

All protection and deflection operations within State waters shall be under the direction of the state control agency. Beach will support protection and deflection operations as direct by state control agency.

10.1.4 Shoreline Clean-Up

Shoreline clean-up strategies must be developed in consideration of the shoreline character, resources at risk, and nature and degree of oiling. In general, other strategies are considered prior to shoreline clean-up due to the immediate environmental impact, heavy resource requirement, health and safety concerns (i.e. manual handling, heat stress, fatigue, etc), logistical complexities and waste management.

Shoreline clean-up of diesel or condensate is not generally feasible or beneficial in the high energy environments typical of the Victorian south coast, and any diesel would be highly weathered before it could make landfall and would be expected to have minimal environmental impacts.

The coastline of the Otway Basin is dominated by sheer sandstone cliffs, while the Bass Basin has sand dunes and rock formations. Both coastlines have small and remote beaches which experience frequent heavy surf and swell. These locations rarely have vehicles that would allow for the deployment of clean-up equipment and teams. Any hydrocarbons on these shorelines will likely weather rapidly and be broken down by natural processes.

In the event shoreline impact, DJPR would be the State Control Agency for the response within Sate waters or lands. Beach would support the response option as directed.

10.1.5 Oiled Wildlife Response (OWR)

10.1.5.1Victorian State waters

DELWP is the agency responsible for responding to wildlife affected by a marine pollution emergency in Victorian State waters. If an incident which affects or could potentially affect wildlife occurs in Commonwealth waters close to Victorian State waters, AMSA will request support from DELWP to assess and lead a response if required. DELWP's response to oiled wildlife is undertaken in accordance with the Wildlife Response Plan for Marine Pollution Emergencies (draft).

Beach will provide support for the response through provision of resources as requested by DELWP utilising existing contracts such as AMOSC.

AMOSC maintains oiled fauna kits.

Both DELWP and AMSA have local and regional oiled wildlife response capability that may be activated under the direction of DELWP.

Personnel may also be deployed under the direction of DELWP to undertake wildlife response activities in State jurisdiction.

DELWP responds to oiled wildlife notifications and has identified the following steps which must be taken when reporting wildlife affected by an oil spill:

1. notify the DJPR State Duty Officer on 0409 858 715 and the DELWP State Agency Commander on 1300 13 4444 immediately.

2. notify AMSA (02 6230 6811) if the oil spill occurs in Commonwealth waters and wildlife is affected.

3. determine the exact location of the animal and provide accurate directions. Maintain observation until DELWP can deploy staff to the site.

4. take response actions only as advised by DELWP or AMSA:

- determine the exact location of the animal for accurate directions for appropriately trained wildlife response personnel. Maintain observation and keep people, dogs and wildlife scavengers away until trained rescuers have arrived.

- avoid handling or treating injured wildlife as this may cause further stress and poses a safety risk to untrained handlers.

10.1.5.2Tasmanian State Waters

The Tasmanian Oiled Wildlife Response Plan (WildPlan) is administered by the Resource Management and Conservation Division of the DPIPWE and outlines priorities and procedures for the rescue and rehabilitation of oiled wildlife.

Wildlife rescue kits are held at the Hobart and Launceston DPIPWE offices.

To activate oiled wildlife response, contact Natural and Cultural Heritage Division (OWR) on (03) 6165 4396

10.1.5.3Commonwealth Waters

Beach will activate AMOSC and AMSA in the event of a Level 2 / 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 Oil Spill Trajectory Modelling (undertaken by RPS APASA via AMOSC contract) will determine the direction of the spill and the potential interaction of any wildlife. Fixed-wing aircraft would be mobilised via Babcock's and will be used to observe any slick. If it is safe to do so, vessels will be mobilised to the slick area.

To activate, contact:

AMSA: Ph: 1800 641 792

Email: mdo@amsa.gov.au

AMOSC: 0438 379 328

To notify the Department of the Environment and Energy of oiled or potentially oiled wildlife in Commonwealth waters, contact switchboard: Ph: (02) 6274 1111 and the director of national parks: Ph: (02) 6274 2220

10.2 Waste Management

10.2.1 Disposal of Waste

Of the modelled worst-case discharge scenarios, only a near-shore diesel spill from a vessel collision of a full LOWC from Artisan-1 well location is predicted to result in actionable thresholds of shoreline hydrocarbon exposure. Likewise, these scenarios also have the potential for waste generation from oiled wildlife response.

10.2.2 Waste Management Methodology

This section provides context for the potential scale of waste that may be generated during oil pollution response operations.

During clean-up and oil recovery operations, the type and amount of waste generated will depend on the location and recovery method (see Table 16).

Table 16: Waste volume calculation

Location	Hydrocarbon: Waste volume	Comments
Offshore recovery	1: 3	Inefficiency of recovery systems causing higher levels of water to oil ratio intake
Shoreline clean-up	1: 10-20	Significant increase in waste volume due to collection of surrounding environment

In the event of a clean-up operation, temporary waste handling bases will be set up at designated staging areas such as Port Welshpool. Beach in conjunction with its current waste management contractor will determine the suitability of temporary storage facilities for the collected hydrocarbons and oily debris. Table 17 summarises packing, storing and disposal of different types of waste that Beach's EPA licensed waste contractor, can support.

The transport of waste material may be required at sea, from sea to land and on land to on land, liquid transport trucks, flatbed trucks, dump trucks and gully suckers can be utilised to transport waste material through Beach's licensed waste contractor.

Table 17: Waste category, storage, disposal and treatment options

Waste category	Packing & temporary onsite storage	Disposal & treatment[5]
Oiled Liquids	Oil field tanks (fast tanks) IBC Tank trucks Livestock tanks Sealed oil drums Lined skips/pits[1]	Recovery and recycling Bioremediation/land farming[3] Incineration/land filling[2]
Oiled man-made materials	Lined skips Lined earthen pits or berms[1] Industrial waste bags Plastic trash bags Sealed-top drums	Recovery and recycling Incineration/land filling[2]
Oiled naturally occurring organic materials	Lined skips Lined earthen pits or berms[1] Industrial waste bags Plastic trash bags Sealed-Top drums	Recovery and recycling Bioremediation/land farming[3] Incineration/land filling[2]
Oiled dead wildlife/birds[4]	Industrial waste bags Plastic trash bags	Incineration/land filling[2]

1. lined pits for the storage of oiled wastes cannot be constructed within a National Park due to the sensitivity of the location. The potential impacts on subterranean fauna and aquifers must be considered at all other locations.
2. incineration and land filling will only occur at appropriately licensed waste disposal facilities
3. suitable areas to be identified in consultation with local and state authorities.
4. wildlife and birds are collected by those trained in wildlife recovery. All dead wildlife and birds must be segregated. Some wildlife carcasses may need to be retained for scientific purposes. DELWP and/or DPIPWE will provide direction if this is required.
5. sorted by most preferred to least preferred method

11 Spill Response Environmental Performance Outcomes, Standards & Measurement Criteria

Table 18: Spill Response Environmental Performance Outcomes, Standards and Measurement Criteria

Environmental Performance Outcome	Environmental Performance Standard	Responsible Person	Measurement Criteria
Response Capability			
Beach maintain trained and competent EMT and CMT personnel for the duration of the activity.	**Training and Competency** Beach maintain trained and competent EMT and CMT personnel as per Table 13.1 and Table 13.2.	Crisis, Emergency & Security Advisor	Training and competency records
Source Control			
Isolation of spill source & cessation of spill to sea from vessel spill	**SOPEP/SMPEP** All vessels contracted by Beach within the Otway and Bass Basins shall have an SOPEP / SMPEP (appropriate to class).	Vessel Owner / Operator	Pre-mobilisation inspection records demonstrate vessel SOPEP / SMPEP in place prior to vessel entering the field
Beach has appropriate source control plans in place prior to undertaking drilling activities	**Source Control Plans** Prior to undertaking drilling activities Beach shall have: • a NOPSEMA accepted WOMP for each well prior to drilling and throughout the production phase detailing the controls in place to restore well integrity in the event of a LOWC incident; • a well specific Source Control Contingency Plan (SCCP) inclusive of relief well plan demonstrating source control response arrangements are in place to: ◦ deploy an alternate MODU and commence drilling a relief well within 8 weeks of a LOWC incident; and ◦ successfully intersect a flowing well within 86 days.	Offshore Wells Manager	Documented NOPSEMA accepted WOMP prior to drilling Documented well specific SCCP inclusive of Relief Well Plan prior to drilling
Beach maintains capability to effectively implement well control	**Well Control Resources** Prior to undertaking drilling activities Beach shall; • be a signatory to the APPEA Memorandum of Understanding: Mutual Assistance; • maintain contractual agreements with well control specialists to supply specialist personnel and equipment to facilitate source control activities; • maintain agreements with Vessel / Rig Broker(s) to access suitable response support vessels and alternate MODU(s); • have enough and suitably qualified personnel, or knowing have access to enough personnel, to form and maintain the Source Control Incident Management Team (SCIMT) for the worst-case 86-day duration of a LOWC incident; and • have enough equipment and consumables, or knowingly have access to enough equipment and consumables, to effectively intersect a flowing well.	Offshore Wells Manager	Signed copy of APPEA Memorandum of Understanding: Mutual Assistance Well Control Specialist contract(s) in place Vessel / MODU Broker reports available Register of SCIMT members and roster in place
Beach validates source control capability is accessible and available in a timely manner	**Spill Response Exercises – Source Control** Prior to undertaking drilling activities within the Otway and Bass Basins, and annually thereafter, Beach shall undertake a source control exercise ensuring arrangements are in place to: • effectively apply the SCCP in a hypothetical LOWC event; • initiate the APPEA Memorandum of Understanding: Mutual Assistance via APPEA members and confirm a suitable alternate MODU could be engaged within 2 weeks of a hypothetical LOWC event; • mobilise Well Control Specialists to Adelaide within 3 days of a hypothetical LOWC event; • contract suitable support vessels within 2 weeks of a hypothetical LOWC event; • initiate the SCIMT within 2 hours of a hypothetical LOWC event and maintain the SCIMT (to the structure detailed within the well specific SCCP) for a worst-case 86-day LOWC event; and • access enough equipment and consumables to effectively intersect a flowing well based upon the relief well strategy detailed within the well specific relief well plan Prior to undertaking drilling activities in the Otway and Bass Basins, Beach shall test emergency communications protocols between: • the MODU and National Response Centre (NRC)	Offshore Wells Manager / Crisis, Emergency & Security Advisor	Exercise records confirm pre-drill and annual source control capability testing Exercise records confirm access to enough source control equipment and personnel within timeframes specified within well specific SCCPs and relief well plans Exercise records confirm emergency communications protocols in place and effective Rig and vessel exercise / drill records

Environmental Performance Outcome	Environmental Performance Standard	Responsible Person	Measurement Criteria
	• the EMT, CMT and SCIMT • the EMT and Regulatory authorities / Control Agencies • the EMT / SCIMT and source control response providers Beach shall validate that all contracted MODUs and vessels have undertaken exercises and spill drills in accordance with their approved SOPEP / SMPEP or equivalent.		
Monitoring and Evaluation			
Beach maintains capability to effectively implement monitoring & evaluation	**Monitoring & Evaluation Resources** Beach shall: • maintain a service contract with AMOSC to enable access to AMOSC personnel and equipment and other AMOSC Members personnel (AMOSC Core Group) and equipment under mutual aid arrangements; • validate AMOSC on call roster to ensure trained aerial observers can be available within 4 hours for deployment; • maintain a contract with an aircraft operator enabling mobilisation of aircraft for aerial monitoring within 90 min of initiation; • maintain contractual arrangements to access Oil Spill Trajectory Monitoring service providers, either directly or via AMOSC; • maintain arrangements with a Vessel Broker to gain access to surveillance vessels; • maintain an oil spill tracking buoy aboard the MODU during offshore drilling activities for ready deployment during a L2/L3 spill event.	Crisis, Emergency & Security Advisor	AMOSC service contract in place AMOSC equipment and personnel audited by Beach. Aviation contracts in place OSTM contract in place (with RPS APASA) Vessel / MODU Broker reports available Record of spill tracking buoy aboard MODU
Risks managed from monitoring & evaluation	**Risk Assessment** In consultation with State Control Agency and relevant stakeholders, and prior to undertaking monitoring & evaluation operations, Beach shall undertake an operational NEBA and risk assessment (Beach's Risk Assessment Process will be used unless otherwise directed) to mitigate potential impacts to: • Marine fauna including listed migratory species; • Commercial shipping; • Aviation; and • Socio-economic receptors	EMT Leader	Documented risk assessment Consultation records
Beach implements monitoring & evaluation to inform spill response for L2/3 spills	**Implement Monitoring & Evaluation** Beach shall implement monitoring and evaluation (as per s10.1.2 or as directed by the Control Agency) during a L2/L3 oil pollution emergency or as requested by State Control Agency where State waters are, or have the potential to be, impacted.	EMT Leader	Incident records confirm monitoring and evaluation undertaken during L2 / L3 spill event.
Monitoring undertaken	**Operational Monitoring** During monitoring and evaluation operations Beach shall implement operational monitoring in alignment with the Offshore Victoria Operational and Scientific Monitoring Plan (OSMP) (CDN/ID S4100AH717908)	EMT Leader	Monitoring records maintained
Shoreline Clean-up			
Beach maintains capability to effectively assess shorelines and implement shoreline clean-up	**Shoreline Clean-up Resources** Beach shall: • maintain a service contract with AMOSC to enable access to AMOSC personnel and equipment and other AMOSC Members personnel (AMOSC Core Group) and equipment under mutual aid arrangements; • validate AMOSC on call roster to ensure trained in shoreline assessment can be available within 4 hours for deployment; • prior to drilling, engage with AMSA regarding potential access arrangements to the National Response Team (NRT) and National Response Support Team (NRST) in the event of an oil pollution emergency; • maintain a contract with licenced waste contractors and licenced waste facilities to enable appropriate disposal / treatment of oil contaminated waste.	Crisis, Emergency & Security Advisor	AMOSC service contract in place AMSA engagement records regarding access to NRT and NRST Waste Management contract in place

Environmental Performance Outcome	Environmental Performance Standard	Responsible Person	Measurement Criteria
Shoreline Assessment undertaken	**Shoreline Assessment** In consultation with State Control Agency, an assessment shall be undertaken of affected and potentially affected shorelines to establish response priorities and outcomes when developing Incident Action Plans (IAPs).	EMT Leader	Shoreline assessment records inform response priorities and outcomes within IAPs
Monitoring undertaken	**Operational Monitoring** During shoreline clean-up operations Beach shall implement operational monitoring in alignment with the Offshore Victoria Operational and Scientific Monitoring Plan (OSMP) (CDN/ID S4100AH717908):	EMT Leader	Monitoring records indicate monitoring undertaken in accordance with NOPSEMA accepted OSMP.
Shoreline clean-up present net environmental benefit	**NEBA** Beach shall jointly undertake a NEBA with State Control Agency and only implement shoreline clean-up where a net environmental benefit is agreed with the Control Agency.	EMT Leader	Documented NEBA Communications records
Risks managed from shoreline clean-up operations	**Risk Assessment** In consultation with State Control Agency and relevant stakeholders, and prior to undertaking shoreline clean-up operations, Beach shall undertake a risk assessment (Beach's Risk Assessment Process will be used unless otherwise directed) to mitigate potential impacts to: • shoreline habitats; • shoreline communities; • oiled wildlife; • cultural heritage sites; and • socio-economic receptors	EMT Leader	Documented risk assessment
Relevant access authority obtained	**Site Access** In consultation with State Control Agency, access authority from relevant stakeholders shall be obtained prior to undertaking shoreline clean-up operations.	EMT Leader	Records of access authority
Tactical Response Plans developed	**Tactical Response Plans** Prior to undertaking drilling activities in the Otway or Bass Basin, Tactical Response Plans (TRPs) shall be developed for all priority protection areas where predicted shoreline hydrocarbon loading exceeds 100 g/m^2 within 7 days and include: • site Information: site location description and map, site access description and map, site specific logistical / access constraints, key ecological and socio-economic sensitivities within the area, nearby facilities and services. • response Information: response strategies and tasks, site overview and maps, response checklists, site establishment information, local information including contact details of key stakeholders, detailed task checklists, resource requirements (personnel / vehicles / vessels / equipment / site support).	Crisis, Emergency & Security Advisor	Documented TRPs for all priority protection areas
Oiled Wildlife Response			
Beach maintains capability to effectively implement oiled wildlife response	**Oiled Wildlife Resources** Beach shall: • maintain a service contract with AMOSC to enable access to AMOSC personnel and equipment and other AMOSC Members personnel (AMOSC Core Group) and oiled wildlife response equipment under mutual aid arrangements; • validate AMOSC on call roster to ensure trained oiled wildlife responders can be available within 4 hours for deployment; • prior to drilling, engage with AMSA regarding potential access arrangements to the National Response Team (NRT) and National Response Support Team (NRST) and addition oiled wildlife response equipment in the event of an oil pollution emergency; and • maintain a contract with licenced waste contractors and licenced waste facilities to enable appropriate disposal / treatment of oil contaminated waste.	Crisis, Emergency & Security Advisor	AMOSC contract in place AMSA engagement records regarding access to NRT and NRST Waste Management contract in place
Required notifications undertaken	**Notifications** Beach shall notify State Control Agency (DJPR), DELWP and the Department of Environment and Energy AMSA as soon as possible after a spill that has, or has the potential to, affect wildlife in either State or Commonwealth waters.	Emergency Management Liaison Officer	Communications records

Environmental Performance Outcome	Environmental Performance Standard	Responsible Person	Measurement Criteria
Operational monitoring undertaken	**Operational Monitoring** Beach will implement, via scientific monitoring consultants, the following operational monitoring in alignment with the Offshore Victoria Operational and Scientific Monitoring Plan: • Study O3: Oiled wildlife surveillance	EMT Leader	Monitoring records
Shoreline clean-up present net environmental benefit	**NEBA** Beach shall jointly undertake a NEBA with State Control Agency (DJPR) and DELWP and only implement oiled wildlife response where a net environmental benefit is agreed with the DELWP.	EMT Leader	Documented NEBA Communications records
Risks managed from shoreline clean-up operations	**Risk Assessment** In consultation with State Control Agency, DELWP and relevant stakeholders, and prior to undertaking oiled wildlife response, Beach will undertake site-specific risk assessment and mitigate potential impacts to: • shoreline habitats; • shoreline communities; • oiled wildlife; • cultural heritage sites; and • socio-economic receptors	EMT Leader	Documented risk assessment Consultation records
Authority to handle wildlife obtained	**Fauna Handling** In consultation with DELWP, only authorised responders shall handle and treat oiled wildlife.	EMT Leader	Consultation records Licencing records.
Monitoring undertaken	**Operational Monitoring** During oiled wildlife response Beach shall implement operational monitoring in alignment with the Offshore Victoria Operational and Scientific Monitoring Plan (OSMP) (CDN/ID S4100AH717908)	EMT Leader	Monitoring records indicate monitoring undertaken in accordance with NOPSEMA accepted OSMP.
Waste Management			
Waste management appropriate	**Waste Management Plan** Site-specific waste management plans will be developed in consultation and agreement with the EPA, DJPR EMB and the land custodian / owner.	EMT Leader	Documented Waste Management Plan Consultation records
Waste storage appropriate	**Waste Storage** Waste storage arrangements will be agreed with the Beach Waste Management Contractor in consultation and agreement with the EPA, DJPR EMB and the custodian / owner and will be: • fully bunded; • secured; and • supervised	EMT Leader	Documented Waste Management Plan Consultation records
Waste disposal appropriate	**Waste Facility** Wastes will be segregated and manifested to ensure they are sent to an appropriately licenced waste facility as agreed with the EPA.	EMT Leader	Documented waste manifest Licenced waste Contractors & waste facilities. Consultation records
Waste transport appropriate	**Waste Transport** Wastes will be transported by correctly permitted vehicles to licenced waste facilities in accordance with Victorian EPA requirements.	EMT Leader	Documented waste manifest Licenced waste transporters Consultation records

12 On-Going Response Preparedness and Exercises

12.1 OPEP Review

The plan shall be reviewed and updated as necessary in response to one or more of the following:

- annually
- when major changes which may affect the oil spill/pollution response coordination or capabilities have occurred
- routine testing of the plan if gaps are identified within the plan
- after an actual emergency
- if Beach's spill risk profile changes significantly due to additional activities or operations.
- changes in COVID-19 measures or restrictions

The review of the plan shall consider external influences including:

- change in any relevant legislation
- COVID-19 measures or restrictions
- advice from the government relating to the conservation of listed species
- updates to State or Australian Marine Park management plans
- changes in fisheries management or other socio-economic features of the environment
- new knowledge about the receiving environment in bioregional profiles or published scientific literature that may contribute to environmental baselines or data collection methods
- change in State or Commonwealth oil spill response arrangements and resources.

12.2 Testing Arrangement

In accordance with Regulation 14 (8A) & (8C) of the OPGGS(E) Regulations the response arrangements within this OPEP including :

- when they are introduced
- when they are significantly amended
- in accordance with Appendix H of this document – Testing Schedule
- 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

- 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.

The effectiveness of response arrangements will be measured by the performance standards detailed in Table 18 for each exercise type and take into account any COVID-19 measures or restrictions. Exercises will be documented, and corrective actions/recommendations tracked to closure.

A log shall be maintained during all oil pollution response exercises including a record of the effectiveness and timeliness of the response against the objectives of the exercise.

Where objectives are not met, or potential improvements have been identified during an exercise, these learnings shall be recorded and retained for inclusion into the subsequent revision of this OPEP.

Where significant deficiencies are identified in the effectiveness or timeliness of response arrangements as identified within this OPEP, this OPEP shall be updated within one month of the exercise to address the identified issues.

As required by the Environment Regulation 14(8A), the testing must relate to the nature and scale of the risk of oil pollution relevant to the activity.

Testing arrangements appropriate to the nature and scale of each activity covered by this OPEP are included in Appendix H.

In accordance with Regulation 14 (8C) (d) and (e), these arrangements are also designed to provide for:

- the various locations of Beach facilities and activities in the Otway and Bass Basins.
- response arrangements in relation to each of the facilities and activities.

Not all spill preparedness and response testing environmental performance outcomes will be tested simultaneously. The frequency of testing will relate to the potential spill level, spill risk and complexity of response.

Table 19: Spill Preparedness and Response Testing Environmental Performance Outcome, Standards and Measurement Criteria

Environmental Performance Outcome	Environmental Performance Standard	Testing Timing / Frequency	Responsible Person	Participants	Measurement Criteria
Vessel Operations (Level 1 / 2 spill)					
Response systems functioning	Emergency communications between shore base, MODU and offshore vessels shall be tested when the vessel is new to field	Prior to arrival in field	Beach Contract Owner	Shore base MODU Vessel(s)	Exercise records confirm effective communications
Procedures in place and appropriate	Beach shall validate that each vessel within field has a SOPEP / SMPEP	Prior to arrival in field	Beach Contract Owner	Vessel(s)	Vessel inspection / audit records confirm SOPEP / SMPEP in place
	Beach EMT shall test the effectiveness of OPEP & OSMP in guiding spill response and remediation based upon: • notification timing and completeness; • timeliness of response according to predicted response timing; • availability of response personnel; • training and competency of response personnel	Approximately[1] one month prior to drilling in field and then annually	Crisis, Emergency & Security Advisor	EMT on call roster AMOSC Monitoring Provider	Exercise records confirm OPEP / OSMP effective
	Beach shall test the effectiveness of Emergency Management Plan in guiding EMT to fulfil roles and responsibilities	Annually	Crisis, Emergency & Security Advisor	EMT	Exercise records conform all EMT able to fulfil allocated roles & responsibilities

[1] Timing of any testing will be determine based on the availability of the crew who will be involved in the activity with the time required to implement any changes.

Environmental Performance Outcome	Environmental Performance Standard	Testing Timing / Frequency	Responsible Person	Participants	Measurement Criteria
Contractual arrangements in place to obtain equipment & people	Beach shall validate contractual arrangements with external service providers the capability of each service provider to respond according to scope.	Approximately[1] one month prior to drilling in field and then annually	Crisis, Emergency & Security Advisor	Contract Owner(s) Service Providers	All required contracts in place
Equipment available in a timely manner	Beach shall validate equipment stock levels and deployment times from AMOSC (desktop) based upon those presented within this OPEP	At least one month prior to drilling in field and then annually	Crisis, Emergency & Security Advisor	Contract Owner AMOSC	Written confirmation of AMOSC capability
Appropriately trained people available	Beach shall validate the capability of environmental monitoring providers to ensure they continue to meet Beach requirements based upon company spill risk profile and potential monitoring scope of work (desktop)	Upon contract renewal	Crisis, Emergency & Security Advisor	Contract owner(s) Monitoring Providers	Written confirmation of Environmental Consultant capability to implement OSMP
	Internal and external training requirements for EMT validated (desktop)	Approximately[1] one month prior to drilling in field and then annually	Crisis, Emergency & Security Advisor	Leaning & Development	Training records in place and meet capability requirements
Pipeline and Platform Operations (Level 1 / 2 spill) as above plus					
Response systems functioning	Emergency communications shall be tested between ERT and EMT	Annually	Crisis, Emergency & Security Advisor	ERT EMT	Exercise records confirm effective communications
	Emergency notifications between EMT and Regulator(s) tested (including regulatory timeframes)	Annually	Crisis, Emergency & Security Advisor	EMLO EMT Regulators	Exercise records confirm effective communications and notification timeframes met
Contractual arrangements in place to obtain equipment & people	Beach shall validate contractual arrangements with external service providers the capability of each service provider to respond according to scope.	Annually	Crisis, Emergency & Security Advisor	Contract Owner(s) Service Providers	All required contracts in place

Environmental Performance Outcome	Environmental Performance Standard	Testing Timing / Frequency	Responsible Person	Participants	Measurement Criteria
Drilling (Level 2 / 3 LOWC) as above plus					
Response systems functioning	Emergency communications between the MODU and EMT / SCIMT tested	At least one month prior to drilling in field and then 6-monthly	Crisis, Emergency & Security Advisor	MODU EMT / SCIMT	Exercise records confirm effective communications
	Emergency notifications between EMT and Regulator(s) tested (including regulatory timeframes)	At least one month prior to drilling in field and then annually	Crisis, Emergency & Security Advisor	EMLO EMT / SCIMT Regulators	Exercise records confirm effective communications and notification timeframes met
	Communication systems and methods between CMT / EMT Leader / SCIMT Leader / EMT members tested	At least one month prior to drilling in field and then 6-monthly	Crisis, Emergency & Security Advisor	CMT / EMT/ SCIMT	Exercise records confirm effective communications
	OSTM arrangements tested	Approximately[1] one month prior to drilling in field and then annually	Crisis, Emergency & Security Advisor	AMOSC OST Service Provider	Exercise records confirm ability to initiate OSTM
Procedures in place and appropriate	Beach shall test readiness or arrangements to implement the relief well plan under the APPEA MoU	Approximately[1] one month prior to drilling in field and then annually	Crisis, Emergency & Security Advisor	SCIMT APPEA Well Control Specialists	Exercise records confirm relief well plan in place & tested
	Beach shall test the effectiveness of Source Control Contingency Plan guiding SCIMT to fulfil roles and responsibilities	Approximately[1] one month prior to drilling in field and then annually	Crisis, Emergency & Security Advisor	SCIMT	Exercise records conform all EMT able to fulfil allocated roles & responsibilities
Equipment available in a timely manner to respond to a L2 / L3 LOWC	Beach shall test logistics pathways for mobilisation & deployment of L2 / L3 equipment, including support vessels and suitable MODUs validated (desktop)	Approximately[1] one month prior to drilling in field and then annually	Crisis, Emergency & Security Advisor	MODU / Rig Broker SCIMT Other Operator(s) under MoU	Exercise records confirm logistics pathways open and likely to facilitate deployment within anticipated timeframes

Environmental Performance Outcome	Environmental Performance Standard	Testing Timing / Frequency	Responsible Person	Participants	Measurement Criteria
Appropriately trained people available to respond to a L2 / L3 LOWC	Validation Well Control Specialists capability continues to meet Beach requirements based upon company spill risk profile (desktop)	Approximately[1] one month prior to drilling in field and upon contract renewal	Crisis, Emergency & Security Advisor	Well Control Specialists Learning and Development	Written confirmation of Well Control Specialists capability
	Internal and external training requirements for the SCIMT validated (desktop)	Approximately[1] one month prior to drilling in field and then annually	Crisis, Emergency & Security Advisor	Learning and Development	Training records in place and meet capability requirements

13 Training and Competency

All personnel who have been assigned Beach EMT roles are required to be conversant with their roles and associated responsibilities as defined within the EMP and OPEP.

All personnel with specific roles or responsibilities within the Beach CEM Framework shall receive appropriate levels of training and ongoing development commensurate with the responsibility and associated accountabilities required of each position.

A Crisis and Emergency Management Team Capability Matrix is managed and updated by the Senior Capability Advisor. A summary of Oil Pollution related training and competency requirements for CMT and EMT personnel is provided in Table 20 and Table 21.

As detailed in Table 20 and Table 21 beach has identified the minimum number of personnel per position to appropriately respond to an oil spill/pollution event at the modelled requirement of 180 days. A minimum number of four trained personnel per position is based on that at any time one person may be on leave or not available at the time of activation of the event. This allows for three trained personnel to be available.

Beach maintain an on-call roster of a full EMT per shift (Friday to Friday) with four EMTs on rotation but have a redundancy of additional appropriately trained and qualified staff.

Table 20: **External** Training Requirements for CEM Capability

Course Name	Minimum personnel	PMAOMIR320 (Manage Incident Response Information)	Management (IMO L2)	Command & Control (IMO L3)	PMAOMIR418 (Coordinate Incident Response)
EMT					
Leader	4	✓		✓	✓
Operations	4	✓	✓		✓
Planning	4	✓	✓		✓
Information Coordinator	4	✓			
Scribe	4	✓			
HSE	4	✓	✓		
Logistics	4	✓			✓
EMLO	4	✓	✓		
Community Relations	4	✓			
CMT					
CMT Leader	4				✓
CMT Facilitator	2	✓	✓		
CMT Members					

Course Name	Minimum personnel	PMAOMIR320 (Manage Incident Response Information)	Management (IMO L2)	Command & Control (IMO L3)	PMAOMIR418 (Coordinate Incident Response)
Duration of Training / Course		4 days	4 days	4 days	4 days
Frequency of training/refresher		Lifetime validation, however, Beach require revalidation every 4 years	3 years, full course	3 years, full course	Lifetime validation, however, Beach require revalidation every 4 years
Current Provider		RTO	AMOSC	AMOSC	RTO

Table 21: **Internal** Training and Exercising Requirements for CEM Capability

Course Name	Minimum personnel	Individual OPEP / OSMP Awareness	Introduction/ Refresher to Beach CEM	Desktop Exercise	EMT 'Live' OPEP test (Australia and NZ)	'Live' Exercise (with SCIMT)
EMT						
Leader	4	✓	✓	✓	✓	✓
Deputy	4	✓	✓	✓	✓	✓
Operations	4	✓	✓	✓	✓	✓
Planning	4	✓	✓	✓	✓	✓
Information Coordinator	4	✓	✓	✓	✓	✓
Scribe	4	✓	✓	✓	✓	✓
Environment	4	✓	✓	✓	✓	✓
Health & Safety	4	✓	✓	✓	✓	✓
Logistics	4	✓	✓	✓	✓	✓
EMLO	4	✓	✓	✓	✓	✓
Community Relations	4	✓	✓	✓	✓	✓
CMT						
CMT Leader	4	✓	✓	✓	✓	✓
CMT Facilitator	2	✓	✓	✓		✓
CMT Members	As per CMT roster	✓	✓	✓		✓

Course Name	Minimum personnel	Individual OPEP / OSMP Awareness	Introduction/ Refresher to Beach CEM	Desktop Exercise	EMT 'Live' OPEP test (Australia and NZ)	'Live' Exercise (with SCIMT)
Duration of Training		2 hours	3 hours	3 hours	3 hours	3 – 6 hours
Frequency of training / exercise		Annually	Annually and for onboarding new members as required	Annually	Annually for Australia and NZ	Annually
Trainer		CES Advisor (TAEIV)	CES Advisor (TAEIV)	CES Advisor (TAEIV) and external facilitator	AMOSC with CES Advisor (TAEIV)	CES Advisor (TAEIV) and external facilitator

Note: additional SME training, Pre-Spud exercises, additionally requested role specific training, training on EMQNet occur as required throughout the year, CMT exercises for CMT only scenarios, Business Continuity and IT Disaster Recovery events occur and are captures in the relevant documents and recorded as part of Beach's Training and Capability requirements. All activities are recorded on CMO and recommendations are captured and actioned recorded via this means.

14 Record keeping

All consultation correspondence, written reports (including monitoring, audit, test and review reports such as emergency exercise logs used to record the effectiveness and timeliness of the response against the objectives of the exercise, or any other record relating to the environmental performance of this OPEP must be retained for a minimum of 5 years following the cessation of activities within the scope of this OPEP.

All records must be stored in a way that makes retrieval of the document or record reasonably practicable.

15 List of Abbreviations

Definitions of terms used in this document:

Abbreviation	Definition
AMOSC	Australian Marine Oil Spill Centre
AMSA	Australian Maritime Safety Authority
CEM	Beach Emergency's Crisis and Emergency Management Framework
CMP	Crisis Management Plan
CMT	Crisis Management Team
CMO	Beach's incident and action reporting software
CSS	Capping Stack System
CxT	Crisis Communications Team
DCS	Distributed Control System

Abbreviation	Definition
DotEE	(Commonwealth) Department of the Environment and Energy
DELWP	(Victorian) Department of Environment, Land, Water and Planning
DJPR EMB	(Victorian) Department of Jobs, Precincts and Regions – Emergency Management Branch
DJPR ERR	(Victorian) Department of Jobs, Precincts and Regions – Earth Resources Regulation
DPIPWE	(Tasmanian) Department of Primary Industries, Parks, Waters and Environment
EMBA	Environment that May be Affected
EMLO	(Beach) Emergency Management Liaison Officer
EMT	Emergency Management Team
EP	Environment Plan
EPA	Environmental Protection Authority
ERP	Emergency Response Plan
ERT	Emergency Response Team
ESD	Emergency Shut Down
HSE	Health, Safety, and Environment
IMT	Incident Management Team (Used at Beach for Source Control IMT)
IMO	International Maritime Organisation accreditation
JSCC	Joint Strategic Coordination Committee
LOWC	Loss of Well Control
MD	Managing Director
National Plan	National Plan for Maritime Environmental Emergencies
NEBA	Net Environmental Benefit Analysis
NOPSEMA	National Offshore Petroleum Safety and Environmental Management Authority
NOPTA	National Offshore Petroleum Titles Administrator
NRC	National Response Centre
OIE	Offset Installation Equipment
OSMP	Operational & Scientific Monitoring Plan
OSMIP	Operational & Scientific Monitoring Implementation Plan
OSRL	Oil Spill Response Limited
OSTM	Oil Spill Trajectory Model
OWR	Oiled Wildlife Response
PIC	Person in Charge of site
POLREP	Marine Pollution Report
SCCP	Source Control Contingency Plan
SC IMT	Source Control Incident Management Team (activated under the SCIMT)
SCME	State Controller Maritime Emergencies

Abbreviation	Definition
SIRT	Subsea Incident Response Toolkit
SITREP	Marine Pollution Situation Report
SMPEP	Shipboard Marine Pollution Emergency Plan
SOPEP	Shipboard Oil Spill Pollution Emergency Plan
SSDI	Subsea Dispersant Injection
TAEIV	Training and Assessment Certificate 4
TST	Telephone Support team
VOC	Volatile Organic Compounds
SCIMT	Source Control Incident Management Team
WOMP	Well Operations Management Plan

16 Document information and history

Document custodian group

Title	Name/s
DocCust-HSER-Environment	Tm Flowers, Phil Wemyss

Document superseded

Rev	Date	Document number	Document name
5	26/06/2019	3972816	Oil Pollution Emergency Response Plan – OPEP – Yolla-A Platform
6	31/01/2020	3973983	Otway Offshore Oil Pollution Emergency Plan (OPEP)

Document history

Rev	Date	Changes made in document	Reviewer/s	Consolidator	Approver
A	15/05/2021	Yolla-A and Thylacine OPEPs merged	Frank Groen, Geoff Randall	Sam Payne	-
0	21/10/2021	Approved for use	-	-	Tim Flowers

Appendix A Emergency Contacts Directory (Current 1st November 2019)

A. 1. External Contacts

A. 1. 1 Regulatory Contacts

Regulator	Contact	Phone	E-Mail
AMSA	Marine oil pollution	1800 641 792	mdo@amsa.gov.au https://www.amsa.gov.au/about/contact-us
DotEE	Director of National Parks	02 6274 2220	marineparks@awe.gov.au
	Switchboard	02 6274 1111	
NOPSEMA	Emergency	1300 674 472	submissions@nopsema.gov.au
NOPTA	Titles		titles@nopta.gov.au & info@nopta.gov.au
Transport for NSW	Manager, Marine Pollution & Emergency Response	0419 484 446	Shayne.wilde@transport.nsw.gov.au
Port Authority of NSW	Harbour Master, Eden Operations	0438 374 034	pwebster@portauthoritynsw.com.au
	Whale Hotline	0427 942 537	
	Natural and Cultural Heritage (OWR) Division	(03) 6165 4396	Kathryn.Lambert@dpipwe.tas.gov.au
Vic DELWP	State Control Centre	1300 134 444	sscviv.scmdr.delwp@scc.vic.gov.au
	Customer Service Centre	136186	
Vic DJPR	General	13 61 86	customer.service@ecodev.vic.gov.au
	State Duty Officer	0409 858 715 (24/7)	sccvic.sdo.transport@scc.vic.gov.au & semdincidentroom@transport.vic.gov.au
	West of Cape Otway – Portland Region	(03) 5525 0900	
	East of Cape Otway – Port Philip Region	(03) 9644 9777	
	Compliance South West Team	0419 597 010 ERR Duty Officer	Compliance.Southwest@ecodev.vic.gov.au
Vic Gippsland Ports	Duty Officer	(03) 5150 0500	
Vic Port of Portland	Duty Officer	(03) 5525 0999	

A. 1. 2 Responder Contacts

Responder	Function	Contact	Phone	E-Mail
Adagold Aviation Pty Ltd	Fixed-wing aviation support		1800 767 747	
AMOSC	Spill Response - all		0438 379 328	
AMSA	Spill Response - vessel		1 800 641 792	
Boots and Coots (Halliburton) (Australia, New Zealand, Papua New Guinea, Timor Leste)	Well Control Specialist	Level 27, 140 St. Georges Terrace Perth WA 6000 Australia	Perth: +61 8 9455 8300 or 24/7: +1-281-931-8884 or 1-800-BLOWOUT	
Babcock	Fixed-wing & helicopter support		0438 237 242	
Cudd Well Control (Houston)	Well Control Specialist	Headquarters: Cudd Well Control 2828 Technology Forest Blvd. The Woodlands, TX 77381	T: 713.849.2769 F: 713.849.3861	cwcinfo@cudd.com

A. 1. 3 Consultant Contact

Consultant	Service	Contact	Phone	E-Mail
BMT	OSMP implementation	Level 4 20 Parkland Rd Osborne Park Western Australia 6017	+61 8 6163 4900	
Cardno	OSMP implementation	Level 11 515 St Paul's Terrace Fortitude Valley QLD 4006	+61 (7) 3369 9822	
GHD	OSMP implementation	Level 10 999 Hay Street Perth, Western Australia 6000	+61 8 6222 8222	
RPS	OSMP Implementation PlanOSMP implementation	27 – 31 Troode Street, West Perth, WA, 6005Level 10 999 Hay Street Perth, Western Australia 6000	0427 933 944 / 0458 568 277	
RPS APASA	Oil Spill Modelling		0408 477 196	

A. 2. Internal Beach Contacts

A. 2. 1 Internal Beach Contacts

Contact / Function	Phone	E-Mail
Vic GM Operations	0436645483	
BassGas Production Manager	0419 890 559	
Otway Production Manager	0476 828 914	
EMT Leader	(03) 9411 2147 (via the NRC)	
Source Control Incident Management Team Leader	(03) 9411 2147 (via the NRC)	
Crisis, Emergency and Security Advisor	0447 718 481	ces@beachenergy.com.au

A. 3. Emergency Management Team Role Checklists for Oil Pollution Event

Role	Responsibility
EMT Leader	❑ Recognise and maintain response priorities (People, Environment, Assets, Reputation and Livelihood) ❑ Provide strategic direction and leadership to the whole EMT – this will include the OP IMT, the SCIMT and the SC IMT. ❑ Determine structure of response team, discuss with OP IMT Leader and activate EMT/OP IMT ❑ Develop and implement a coordinated range of support initiatives across the activated teams (SCIMT/SC IMT and OP IMT) to resolve the event, including being the conduit of information to the CMT Leader; and ❑ Communicate the format in which discussions will occur (e.g. utilising Team Process' or regular timing schedule for updates) ❑ Decide on communications method with CMT Leader (via EMT Leader or Deputy) **Activate/Update/Initial actions** ❑ Activate the OSMP/OPEP (possibly, in consultation with EMT Environment) ❑ Government and corporate communications ❑ Chair team meetings / briefing / debrief sessions – set and review response objectives ❑ Carry out incident assessment and escalation potential analysis: ◦ Are all people accounted for and safe? ◦ Is the sources isolated? ◦ What is the current size of the spill? ◦ What is it? (product name and properties) ◦ Where is it? (GPS reference, distance and bearing from, place name) ◦ How big is it? (Volume, area) ◦ Where is it going? (Current forecast, weather and tide) ◦ When will it get there? ◦ What is in the way? (Prioritise protection) ◦ What is happening to it? (Weathering) ◦ How could it escalate? ❑ Roles and responsibilities: ◦ Statutory agency ◦ Combat agency ❑ Notifications: ◦ Reports ◦ Crisis Management Team ◦ EPA ◦ Key Stakeholders ❑ Assess and declare the event level– consult with CMT to carry out organisational as required (through CMT Communications) ❑ Discuss with CMT Leader requirement for additional SMEs to be brought into the EMT (or specialist teams) or into the CMT ❑ Escalate / de-escalate event as appropriate and carry out associated activations / notifications ❑ Review and approve meeting minutes / actions on event status boards and task list ❑ Establish / review team objectives **Issues**

Role	Responsibility
	❑ Recognise and maintain response priorities (People, Environment, Assets, Reputation and Livelihood) and ensure response teams are doing the same ❑ Response strategy development / review and execution – refer to specific EMP Appendices for response and communications guidance, information, contingency plans and SOPs ❑ Identify other emergency or crisis management plans that are endorsed by regulators for the impacted asset and what thresholds these plans have regarding activation of and coordination with additional teams ❑ Alignment / consistency of EMT members' actions and activities – manage response continuity ❑ Align EMT actions and response with those of other activated response teams (e.g. ERT / CMT) ❑ Communications strategy and requirements (with relevant EMT members) ❑ Industry wide considerations (including notifications – joint response obligations) ❑ Industry / NOPSEMA communication obligations ❑ Impact minimisation – contain event and begin recovery ❑ Regulatory notification requirements (e.g. ESV, NOPSEMA etc) within timelines as defined in licenses **Stakeholders** ❑ Contribute to stakeholder identification and prioritisation ❑ Customers – review / assess ongoing impact to customers (liaise with EMT Logistics or Commercial)) ❑ Consider stakeholder needs and expectations – e.g. regulators, government agencies, emergency services, community groups, employees, media outlets, customers, retailers ❑ Other industry participants and communications / notification groups – as per Emergency Communications Protocol (if applicable) ❑ Industry partners – e.g. retail companies, contractors (per industry practices and contractual obligations) ❑ Industry meetings – attend meetings / arrange representation, contribute on behalf of Beach ❑ Regulators (e.g. ESV, NOPSEMA, UTR etc) – advise regulators of operating constraints (e.g. reduced pipeline operating pressures) ❑ EMT CMT Leader – provide SITREP / briefing as event changes and following EMT meetings **Actions** ❑ During any absences from the Emergency Management Room, delegate to Deputy or Planning to support team function ❑ Guide and advise EMT members on response requirements, identify and allocate tasks ❑ Activate support teams as necessary to assist the response (including subject matter experts, system technical / supply advisers, communications specialists) ❑ Establish team meeting / briefing schedule (including frequency and timing) – with EMT Planning ❑ Provide regular updates to CMT ❑ Identify and apply appropriate plans, procedures and work instructions ❑ Refer any media interest to EMT Communications ❑ Consider shift handover for extended responses – including for support staff / teams ❑ Log of events – maintain and record your decisions, actions, updates and contacts **Concluding Actions** ❑ Identify and complete all outstanding actions and obligations ❑ Ensure all relevant strategy specific termination criteria have been met in agreement with Control Agency ❑ Declare end of event and coordinate / chair EMT debriefing

Role	Responsibility
	❑ Formulate and implement a stand down plan with other activated response and support teams – manage consistency and coordination of actions ❑ Confirm notification of all operational resources / 3rd party responders of event conclusion ❑ Authorise and participate in the post-event investigations (by Legal representative) – assign actions, track and monitor progress and completion status ❑ Provide all log sheets and written records / correspondence to EMT Planning
EMT Deputy	❑ Act as 2IC of the EMT, and carry out tasks as requested by EMT Leader ❑ Provide advice on overall management of EMT, including H&S and HR aspects ❑ Act as conduit of information to the CMT, for update briefings and direct liaise with Finance ❑ Decide on communications method with CMT Leader and CMT Finance and if required, HR ❑ Recognise and maintain response priorities (People, Environment, Assets, Reputation and Livelihood) and ensure response teams are doing the same ❑ Response strategy development / review and execution – refer to specific EMP Appendices for response and communications guidance, information, contingency plans and SOPs ❑ Identify other emergency or crisis management plans that are endorsed by regulators for the impacted asset and what thresholds these plans have regarding activation of and coordination with additional teams ❑ Alignment / consistency of EMT members' actions and activities – manage response continuity ❑ Align EMT actions and response with those of other activated response teams (e.g. ERT / CMT) ❑ Communications strategy and requirements (with relevant CMT members) **Stakeholders** ❑ Contribute to stakeholder identification and prioritisation ❑ Customers – review / assess ongoing impact to customers (liaise with EMT Logistics or a commercial representative for advice) ❑ Consider stakeholder needs and expectations – e.g. regulators, government agencies, emergency services, community groups, employees, media outlets, customers, retailers ❑ Other industry participants and communications / notification groups – as per Emergency Communications Protocol (if applicable) ❑ Industry partners – e.g. retail companies, contractors (per industry practices and contractual obligations) ❑ Commercial – Liaise with commercial members for updates on operating production commitments ❑ Brief CMT Leader – provide SITREP / briefing as event changes and following EMT meetings **Actions** ❑ During any absences of EMT Leader from the Emergency Management Room, assume management functions to support ongoing team functions ❑ Guide and advise EMT members on response requirements, identify and allocate tasks ❑ Consider shift handover for extended responses – including for support staff / teams ❑ Log of events – maintain and record your decisions, actions, updates and contacts **Concluding Actions** ❑ Provide all log sheets and written records / correspondence to EMT Planning
EMT Planning	❑ This position is help by an IMO2 qualified EMT Member ❑ Provides support to the EMT Leader in delivering timely integrated crisis management actions ❑ May serve as a sounding board for the EMT Leader ❑ Will assist the EMT Leader in developing the objectives in the first hour of notification of an event;

Role	Responsibility
	❑ EMT Planning will manage the EM Room and team members within it. This includes moderating discussions and adherence to the rules of the room leading the 'Team Process' ❑ EMT Planning is the 2IC of the EMT and is the conduit of information from the Leader to the Information Coordinator and Scribe. EMT Planning will act as Leader when the EMT Leader steps out or is unavailable. **Activate/Update** ❑ Upon activation, attend the EMT as directed – obtain event briefing from EMT Leader ❑ Create and distribute POLREP within first 60 minutes of notification ❑ Commence a personal event log ❑ Determine level of response and staffing requirements – in consultation with EMT Leader ❑ Establish Emergency Management Room and notify EMT members of its location – verify that all equipment is present and functioning correctly (with EMT Information Coordinator) ❑ Advise EMT Leader of status of team members (available / unavailable / arrived / en-route) ❑ Confirm ERT / CMT contact information, distribute Emergency Management Room (EMR) / EMT contact information ❑ Consider the need to appoint separate role holders for the EMT Planning and Information Coordinator roles (with EMT Leader) **Activation** ❑ Assist EMT Leader to chair meetings / briefing sessions ❑ Contribute to overall event assessment based on current information ❑ Prompt EMT Leader to establish / review team objectives ❑ Advise EMT members on EMT process, their roles, responsibilities and any outstanding actions / commitments and ensure induction for new/incoming members ❑ Prepare SITREP (coordinate with Information Coordinators) – distribute to activated response team/s ❑ Initiate personal log of events **Phase 1:** ❑ Recognise and maintain response priorities (**P**eople, **E**nvironment, **A**ssets, **R**eputation and **L**ivelihood) ❑ Obtain and collate IAP documentation ❑ Identify immediate priority areas for protection ❑ Draft IAP, recording response: ◦ Aim ◦ Objectives ◦ Response Strategies ◦ Tasks ◦ Resourcing ❑ Present IAP to EMT Leader for approval and distribute ❑ Conduct NEBA ❑ Conduct Trajectory (ADIOS) ❑ Security and integrity of EMR and safety of EMT members – authorised entry for the EMR ❑ Administrative and logistical support required by the EMT (deploy support groups) ❑ Monitor and manage effectiveness, morale and fatigue levels of the EMT ❑ Extended operation – assist EMT Leader with EMT member shift changes, manage to minimise impact on response continuity and fatigue of team members

Role	Responsibility
	❑ Resourcing – identify and provide support resources to assist the EMT to function (e.g. facilities, administrative and logistical, current and future needs, establish a SAP work centre cost code for time writing purposes) **Phase 2:** ❑ Information Review ❑ Planning Preparations ❑ Response Strategies ❑ Supporting Plans ◦ Health and Safety ◦ Waste Management ◦ Oiled Wildlife Response ❑ Further develop IAP ❑ Implement response strategies **Ongoing Actions** ❑ Manage information flow and ensure information remains up-to-date ❑ Obtain regular updates from Operations, Logistics and CMT Finance, Information Coordinator and Scribe ❑ Report Key outcomes to the EMT Leader ❑ Monitor / manage the EMT membership (e.g. monitor fatigue and effectiveness, source alternates) ❑ Assist EMT Leader with EMT briefing schedule (preparation, execution, timing) ❑ Monitor team log – ensure that key event information is recorded (e.g. decisions, actions, updates and contacts) and confirm this is undertaken by the EMT Information Coordinators when activated ❑ Consider shift handover for extended responses – including for support personnel ❑ Log of events – maintain and record your decisions, actions, updates and contacts **Concluding Actions** ❑ Identify End Point Criteria ❑ Notify all staff ❑ Ensure completion of duties ❑ and identify and complete all outstanding actions and obligations ❑ Assist EMT Leader to coordinate / chair EMT debriefing and implement an EMT stand down plan ❑ Issue a notification to the business regarding stand down of the EMT ❑ Collect and collate log sheets written records / correspondence from all EMT members – compile a comprehensive master event log and provide to CMT Legal ❑ Review post-event reports and identify areas for improvement (with EMT Leader) – assign actions and track their progress and completion ❑ Review Emergency Management Plan and identify updates
EMT Information Coordinator	❑ The Information Coordinator is responsible for ensuring accurate and appropriate collection and recording of information ❑ The Information Coordination is responsible advising the EMT Scribe, as required, regarding room set up and populating the display charts **Activate/Update** ❑ Upon activation, attend the EMT as directed – report to EMT Planning for briefing and requirements ❑ Assist EMT Planning with EM Room setup – confirm all equipment is present and functioning

Role	Responsibility
	❑ Prepare recording devices for use e.g. whiteboards, laptops etc. ❑ Compile an initial Situation Report, collating all the key event information and data – provide to the EMT Leader for review and distribution ❑ On instruction from the EMT Planning, assist in initiating a team log of events – consult EMT members as necessary for clarification and details of response actions undertaken so far ❑ Maintain a record of the status on the Status Board as directed by the EMT Leader ❑ Record / document EMT briefing meetings – record decisions, actions and outcomes ❑ Update event records immediately following EMT briefings ❑ Assist EMT Planning with preparation of event SITREPs **Issues** ❑ Record / document EMT issues ❑ Information updates / current event statistics and data – gather, compile and provide to the EMT Leader ❑ Key event information – identify required information categories with EMT Leader (e.g. geographical area affected, number of customers impacted, resources deployed, response / recovery duration) **Stakeholders** ❑ Record stakeholder identification, prioritisation and notifications ❑ EMT Leader – provide information and statistics on the size and scale of the event, assist with their distribution to internal stakeholders **Actions** ❑ Maintain an accurate and chronological team log / record of events ❑ Your recording function is critical – DO NOT get involved in any other activities ❑ Record actions / tasks assigned to EMT members and track their status – inform EMT members of overdue tasks / unfulfilled commitments ❑ Notify EMT Planning if you are having trouble maintaining event records (e.g. unsure of what to record, volume of information is too great, too many discussions occurring simultaneously) ❑ Request additional Information Coordinators as required – assign tasks and responsibilities ❑ Clarify any confusion of events / actions as soon as apparent ❑ Prepare and populate an information template to capture key event information ❑ Display and maintain information hardcopies in EMR (e.g. media releases, contact lists, event details – maps, details of event scene) **Actions** ❑ Be prepared to compile and distribute minutes / status summaries during the event as required – liaise with EMT Planning for assistance ❑ Maintain a record of EMT members assigned to team roles / present in the EM Room ❑ Consider shift handover for extended responses – including for support personnel ❑ Log of Events – maintain / record TEAM decisions, actions and contacts **Concluding Actions** ❑ Enter any outstanding information into recording logs / devices ❑ Identify and complete any outstanding actions and obligations ❑ Participate in event debriefs as necessary – act as recording secretary ❑ Assist EMT Planning to collect and consolidate log sheets and written records / correspondence into a master event log

EMT Scribe

- ❑ The Scribe is responsible for commencing the event on EMQNet and ongoing updating of stakeholders and tasks
- ❑ The Scribe is responsible for populating the display charts, under the direction of the Information Coordinator
- ❑ The Scribe is responsible for maintaining the visual display of EMT and CMT members phone numbers, and the start and finish time of CMT Members (for fatigue management)
- ❑ Continuous management and updating of EMQNet, preparation of SITREPs as requested
- ❑ Maintains a record of the event and the activities of the EMT for reference during the event and following return to BAU
- ❑ Record of all stakeholder notification and engagement required
- ❑ Records all financial commitments, costs for informing the CMT Finance of costs (expended and anticipated).

Activate/Update/Initial Actions

- ❑ Upon activation, attend the EMT as directed – report to Information Coordinator for briefing and requirements
- ❑ Assist EMT Information Coordinator with Emergency Management room setup – confirm all equipment is present and functioning
- ❑ Prepare recording devices for use e.g. whiteboards, laptops etc.
- ❑ Compile an initial Situation Report collating all the key event information and data – provide to the EMT information Coordinator for review and distribution
- ❑ On instruction from the EMT Planning, assist in initiating a team log of events– consult EMT members as necessary for clarification and details of response actions undertaken so far
- ❑ Maintain a record of the status on the Status Board as directed by the EMT Information Coordinator
- ❑ Record / document EMT briefing meetings – record decisions, actions and outcomes
- ❑ Update event records immediately following EMT briefings
- ❑ Assist EMT Information Coordinator with preparation of event SITREPs

Phase 1

- ❑ Information updates / current event statistics and data – gather, compile and provide to the Leader
- ❑ Key event information – identify required information categories with EMT Leader (e.g. geographical area affected, number of customers impacted, resources deployed, response / recovery duration)

Phase 2:

- ❑ Maintain an accurate and chronological team log / record of events
- ❑ Your recording function is critical – DO NOT get involved in any other activities
- ❑ Record actions / tasks assigned to EMT members and track their status – inform EMT members of overdue tasks / unfulfilled commitments
- ❑ Notify EMT Planning if you are having trouble maintaining event records (e.g. unsure of what to record, volume of information is too great, too many discussions occurring simultaneously)
- ❑ Request additional Information Coordinators as required – assign tasks and responsibilities
- ❑ Clarify any confusion of events / actions as soon as apparent
- ❑ Prepare and populate an information templates to capture key event information
- ❑ Display and maintain information hardcopies in EMR (e.g. media releases, contact lists, event details – maps, details of event scene)
- ❑ Be prepared to compile and distribute minutes / status summaries during the event as required – liaise with EMT Planning for assistance
- ❑ Maintain a record of EMT members assigned to team roles / present in the EMR

Role	Responsibility
	❑ Consider shift handover for extended responses – including for support personnel ❑ Log of Events – maintain / record TEAM decisions, actions and contacts **Concluding Actions** ❑ Enter any outstanding information into recording logs / devices ❑ Identify and complete any outstanding actions and obligations ❑ Participate in event debriefs as necessary – act as recording secretary ❑ Assist EMT Planning to collect and consolidate log sheets and written records / correspondence into a master event log
EMT Community Relations	EMT Community Relations will most likely go on to be part of the Crisis Communication Team (CxT), but will remain the conduit of information between the EMT and the CxT (in the CMT); **Activate/Update** ❑ Contribute to overall event assessment based on current information ❑ Provide input to a review of the severity classification ❑ Review response outcomes against external communications and community management objectives ❑ Advise the EMT on likely / expected reputational and community perspectives, interest and reactions ❑ Establish contact with any other activated external communications or community teams / representatives within Beach (including CxT) – agree on standard event communication protocols ❑ Initiate personal log of events ❑ Confirm the EMT Leader communications needs and expectations ❑ Identify any response-related communications already undertaken or received ❑ Refer to Crisis Communications Plan (If applicable) (Attachment 1 of CMP) **Issues** ❑ Recognise and maintain response priorities (People, Environment, Assets, Reputation and Livelihood) ❑ Communication priorities (establish in consultation with CxT Leader) ❑ Media / reputation exposures – communicate to the EMT any immediate, emerging and ongoing communications issues, interest and activity (e.g. traditional and social media, NGOs, other stakeholders) ❑ External scrutiny – monitor external (e.g. media) awareness / reporting of event ❑ Spokesperson considerations – Identify need early and discuss with CxT/CMT Communications ❑ Media attendance – arrange through any media attending event scene / Beach locations (including security, segregation from response, response to information requests, communication of key messages) ❑ Influential / aggressive media or community stakeholders – with CxT/CMT Communications, formulate specific response strategies, prepare spokesperson ❑ External contact – manage filtering, prioritisation and re-direction of incoming event related calls (e.g. media, next of kin, community) including resource requirements, information needs (e.g. approved / key messages) ❑ Call centre / switchboard, IVR messaging, SMS, websites – with CxT/CMT Communications, identify resource requirements, actions, information needs (including currency and accuracy of scripts / information) **Stakeholders** ❑ Identify key media, government and community contacts and develop briefing schedule / management strategy –assign responsibilities to individual CxT members

Role	Responsibility
	❑ Prompt direction from CxT/CMT Communications, Inform / notify relevant media, community groups and external agencies ❑ Provide updates on external and community related issues and actions/support, utilise for implementation of communications and media strategies at the event scene **Actions** ❑ Activate support personnel / groups and media / communication strategies as necessary – brief activated teams ❑ Consider stakeholder feedback during response strategy development, advise EMT on stakeholder perspectives, interest and reactions ❑ Develop media and community plans and materials and manage its distribution ❑ Coordinate prompt development, review and approval of communications material (e.g. event information, community / public safety information etc)– with EMT Emergency Manager, Legal, Commercial ❑ Develop key messages and materials for media and community – maintain consistency between messages from Communications and with other activated teams (e.g. ERT, CMT) ❑ Maintain EMT awareness and understanding of key messages ❑ Establish, maintain and distribute disclosure standards and communications protocols – clearly communicate which information is confidential and which may be released ❑ Prompt EMT members to maintain records of all stakeholder interactions ❑ Keep a communications log of all event related calls made / received ❑ Undertake notification and management of assigned stakeholders ❑ Consider shift handover for extended responses – including for support personnel ❑ Log of events – maintain and record your decisions, actions, updates and contacts **Concluding Actions** ❑ Advise EMT leader on the timing and reputational and community implications of stand down timing ❑ Identify and complete all outstanding actions and obligations ❑ Participate in event debriefs as necessary (including with CMT is required) ❑ Provide all log sheets and written records / correspondence to EMT Planning (including communications logs) ❑ Consider on-going media and community attention – develop suitable management strategies ❑ Confirm that all relevant stakeholders are notified of the event conclusion ❑ Review effectiveness of the CxP and identify areas for improvement Upon activation, attend or advise the EMT as directed – obtain event briefing from EMT Leader and assist (as requested) with classification on the Event Classification Matrix
EMT Logistics	Coordination of resources required to the affected site as well as required within the EMT. **Activate/Update/Initial Actions** ❑ Upon activation, attend or advise the EMT as directed – obtain event briefing from EMT Leader ❑ Initiate personal log of events ❑ Consider setting up a process to track, manage and collect costs and how to report to CMT Finance ❑ Provide an event update to the EMT on response resourcing (e.g. the availability of support services, equipment and materials and the status of outstanding resources requests) ❑ Ensure implementation of Procurement Strategy ❑ Ensure implementation of Staging Area Strategy ❑ Ensure implementation of Communications Strategy (working with CMT Communications)

Role	Responsibility
	❑ Ensure implementation of Medical Strategy (working with EMT H&S and Source Control IMT) ❑ If required, build support to include Procurement Coordinator, Staging Area Coordinator, Communications Coordinator and Medical Coordinator **Initial Response** ❑ Recognise and maintain response priorities (People, Environment, Assets, Reputation and Livelihood) ❑ Establish spill/pollution response equipment list for the required area(s) and place on standby or mobilise as required, including: ◦ Dispersant (Boat/Air) ◦ Oil Spill Response Equipment ◦ Transport ◦ Accommodation/Food ◦ PPE ◦ Waste Management Gear ◦ Vessels ◦ Crane ◦ Personnel ◦ Lay Down Area ❑ Establish other agencies and authorities available for support ❑ Organise air/vessels/locals to monitor and evaluate ❑ EMT response resource requirements – manage supply and deployment to site (in liaison with EMT Operations and ERT Resource Management) ❑ Response funding – activate management processes (e.g. fund tracking / transfer procedures) ❑ Resource usage, prioritisation and estimation of (and resource allocation to) future service and support requirements – develop a resource plan for the event ❑ Staging areas for coordination of operational dispatch and relief of resources ❑ Specialist response needs – source specialist personnel, services and equipment (manage ongoing resourcing) – liaise with EMT Operations for requirements ❑ Contractual requirements and implications related to emergency utilisation of contract staff currently allocated to undertaking scheduled / planned works **Ongoing Response** ❑ Activate support personnel / group as necessary – brief and allocate tasks ❑ Identify service and support requirements for planning operations ❑ Mobilise spill response gear as required ❑ Update team on ETA of resources ❑ Request support from other agencies/authorities such as: ◦ Fire ◦ Police ◦ SES ◦ Council ◦ Labour Hire ◦ Ports and Harbours ◦ Community Groups ◦ Local Companies

Role	Responsibility
	❑ Refer any media interest to EMT Communications ❑ Consider shift handover for extended responses – including for support personnel ❑ Log of events – maintain and record your decisions, actions, updates and contacts **Concluding Actions** ❑ Identify and complete all outstanding actions and obligations ❑ Participate in event debriefs as necessary ❑ Collect and collate records of all procurements relating to the event – produce a comprehensive record of ordering, delivery and invoicing of supplies and services for accounts processing ❑ Confirm payment of all external / third party suppliers, close all response-related purchase orders ❑ Formulate and manage implementation of an event demobilisation plan for response resources (liaise with ERT Logistics and EMT Operations) ❑ Ensure clean up and repair or assets if required ❑ Provide all log sheets and written records / correspondence to EMT Planning
EMT Health & Safety	The Health and Safety Response functions ensures that the resolution activities are in accordance with Beach's HSE directives and meet all the regulatory requirements. The HSE function will work closely with the CMT HSE & Risk representative. **Activate/Update** ❑ Upon activation, attend or advise the EMT as directed – obtain event briefing from EMT Leader and assist with set up as and notifications as required ❑ Initiate personal log of events ❑ Review any safety or environment related response, activity or contacts made prior to your arrival ❑ Contribute to overall event assessment based on current information ❑ Provide input to a review of the event classification ❑ Brief EMT on those people injured or at risk, as well as any environmental activities and issues **Issues** ❑ Recognise and maintain response priorities (People, Environment, Assets, Reputation and Livelihood) ❑ Status of people injured or at risk – source from affected site and update EMT (including head count, casualty numbers, locations and status), provide to EMT Operations ❑ Liability – identify any deviation between safety and environment procedural / policy requirements and any actions leading up to and during the event / response ❑ Common faults – identify any elements of the event that may impact other Beach assets (e.g. through use of similar equipment / processes or operating conditions / environments) **Stakeholders** ❑ Contribute to stakeholder identification and prioritisation ❑ Regulatory reporting – verify that appropriate HSE regulatory bodies have been contacted – including state Safe Work regulators ❑ ERT HSE – assist the affected ERT(s) with health and safety management at the scene ❑ Liaise with CMT Legal – discuss legal privilege requirements and impacts on response and investigations **Actions** ❑ Facilitate H&S risk assessments to inform development of IAPs ❑ Activate support personnel / group as necessary – brief and allocate tasks ❑ Assist and advise the EMT in development of an appropriate response strategy ❑ Provide the EMT with relevant company records or data (e.g. safety and environment policy records, training records, qualifications of affected personnel, company HSE statistics)

Role	Responsibility
	❑ Provide EMT with specialist H&S advice and support relevant to the response (including critical issues) ❑ Document injury / fatality details and advise EMT on legislative reporting ❑ Undertake notification and management of assigned stakeholders ❑ Refer any media interest to EMT Communications ❑ Consider shift handover for extended responses – including for support personnel ❑ Log of events – maintain and record your decisions, actions, updates and contacts **Concluding Actions** ❑ Identify and complete all outstanding actions and obligations ❑ Participate in event debriefs as necessary ❑ Provide all log sheets and written records / correspondence to EMT Planning ❑ Assist EMT Human Resources to organise counselling for affected personnel and monitor attendance ❑ Assist in final reporting to safety regulators – verify that requirements have been met ❑ Monitor any long-term health, environment or ecological effects related to the event or the response
EMT Environment	**Activate/Update** ❑ Consult with EMT Leader on activating the OSMP/OPEP ❑ Establish protection priorities and objectives in collaboration and agreement with Control Agency ❑ Develop Operational NEBA in collaboration and agreement with Control Agency ❑ Develop strategy specific incident action plans (IAPs) (excluding well control) in collaboration and agreement with Control Agency ❑ Feedback into the EMT about notifications and reporting requirements ❑ Monitor and evaluate – plane for visibility (AMOSC will supply trained aerial observer) ❑ Ongoing modelling (trajectory) APASA ❑ Work with EMT Logistics to deploy satellite tracking buoy ❑ GIS person is pulled in as part of the team, to provide mapping and visibility ❑ Implement Operational and Scientific Monitoring Plan (OSMP) ❑ Feedback monitoring and evaluation into the Team Meeting and Operational Planning Cycle ❑ Community information – work with EMT Communication for community liaison and stakeholder tracking. **Issues** ❑ Recognise and maintain response priorities (People, Environment, Assets, Reputation and Livelihood) **Stakeholders** ❑ Contribute to stakeholder identification and prioritisation ❑ Regulatory reporting – verify that appropriate HSE regulatory bodies have been contacted – including state Environmental protection Agencies **Actions** ❑ For any spill or release verify that appropriate surveillance and tracking is in place ❑ Consider the requirement to monitor possible environmental and ecological effects of any release ❑ If relevant, provide a profile of areas likely to be affected by any toxic release (produce maps if possible) – assist activated ERT(s) to prioritise areas for protection / special consideration ❑ Undertake actions as per any pre-prepared Environmental Plan or Oil Pollution Response Plans

Role	Responsibility
	❑ Provide the EMT with relevant environmental contaminants registers for affected systems (e.g. PFOS/PFAS) ❑ Consider shift handover for extended responses – including for support personnel ❑ Log of events – maintain and record your decisions, actions, updates and contacts ❑ Provide the EMT with relevant company records or data (e.g. environment policy records) **Concluding Actions** ❑ Identify and complete all outstanding actions and obligations ❑ Participate in event debriefs as necessary ❑ Provide all log sheets and written records / correspondence to EMT Planning ❑ Assist in final reporting to environmental regulators – verify that requirements have been met ❑ Monitor any long term environment or ecological effects related to the event or the response
Emergency Management Liaison Officer	This role is held by an IMO2 qualified EMT Member **Key Interfaces** ❑ EMT HSE: Provide updates, advise on HSE issues ❑ The Department of Jobs, Precincts and Regions (DJPR): is Victoria's State Government mining and resources regulator. Under the Emergency Management Act (EMA) 2013, DJTR is the control agency for marine pollution Oil Pollutions in Victorian coastal waters up to three nautical miles. ❑ NOPSEMA: According to the EMA 2013, the National Offshore Petroleum Safety and Environmental Management Authority (NOPSEMA) is the Statutory Agency for oil related spills greater than three nautical miles from the Victorian shoreline. ., While NOPSEMA maintains regulatory oversight of offshore petroleum incidents, offshore petroleum titleholders are required to control the response activities ❑ AMOSC: The oil industry established The Australian Marine Oil Pollution Centre (AMOSC) as a not-for-profit subsidiary company of the Australian Institute of Petroleum (AIP). To respond to oil related incidents **Activate/Update** ❑ Upon activation, attend or advise the EMT as directed – obtain event briefing from EMT Leader and assist (as requested) with event classification per the Event Classification Matrix ❑ Initiate personal log of events ❑ Review any safety or environment related response, activity or contacts made prior to your arrival ❑ Provide assessment of the stakeholders that require notification ❑ Gain approval EMT Leader to notify appropriate stakeholders ❑ Ensure AMOSC is notified and deployed **Issues** ❑ Coordinate Beach Energy and Emergency Services response for injured via the appropriate control agency ❑ Check legal position of notifications and messaging and gain approval to proceed ❑ Ensure the internal stakeholders are notified of the incident and the notification requirements of control agencies **Stakeholders** ❑ Prioritize safety of the public and employees ❑ Confirm liaison point of control agency under the EMA 2013 ❑ Confirm liaison point for AMOSC ❑ Set regular teleconferences and agendas ❑ Set location of meetings in control agency wishes to meet in person ❑ Appoint a scribe to note take and update the EMT after all meeting

Role	Responsibility
	❑ Receive sitreps from the EMT via EMQNet or dial in to update briefs **Actions** ❑ Regularly update EMT on control agency and AMOSC coordination ❑ Maintain meeting minutes and actions in the form of a sitrep which is shared amongst the EMT, control agency and AMOSC ❑ Refer any media interest to EMT Leader (to enable immediate referral to EMT) ❑ Consider shift handover for extended responses (greater than 8 hours)– including support personnel such as a scribe ❑ Log of events – maintain and record your decisions, actions, updates and contacts **Concluding actions** ❑ Identify and complete all outstanding actions and obligations ❑ Participate in event debrief/s as necessary ❑ Provide all log sheets and written records / correspondence to EMT Information Coordinator ❑ Assist EMT Human Resources to organise counselling for affected personnel and monitor attendance ❑ Assist in final reporting to safety and environment regulators – verify that requirements have been met ❑ Monitor any long-term health, environment or ecological effects related to the event or the response
EMT Operations	This function may be the conduit of information from the site/field, as directed by the EMT Leader. This function may activate as specialist teams but maintain the requirement to be part of the 'Team Process' and provide a representative to the EMT Monitor rosters and resources of the affected site during a declared event until the EMT Planning role is activated. Communicate with the affected ERT Incident Manager or Site Controller and assist with coordination of all activities undertaken directly to resolve an event. This includes oversight and application of company resources to the response and at the scene in support of the EMT response strategy. Provide technical advice on the affected system/assets that may involve alternate response strategies and overall assessment of impacts that the event and any planned response may have on production. **Activate/Update/Initial Actions** ❑ First Strike Response ❑ Report to EMT Room ❑ Initiate personal log of events ❑ Provide event updates to the EMT, including current situation, response progress, emergent risks ❑ Contribute to overall event assessment based on current information ❑ Provide input to a review of the event classification ❑ Actual operational outcomes Vs EMT response priorities / actions / objectives ❑ Ensure implementation of Marine Strategy ❑ Ensure implementation of Shoreline Strategy ❑ Ensure implementation of Waste Management Strategy ❑ Coordinate aerial operation ❑ Built Operations Group as required, with Marine Coordinator, Shoreline Coordinator, Waste Management Coordinator and possibly with Aviation Coordinator and Wildlife Coordinator) **Phase 1:** ❑ Recognise and maintain response priorities (People, Environment, Assets, Reputation and Livelihood)

Role	Responsibility
	❑ Attend first and subsequent EMT meetings ❑ Report on immediate response actions taken and outcomes including current status ❑ Ensure all field staff are briefed using SMEACS format ❑ Arial Surveillance Arrange with logistics for either a fixed wing aircraft or helicopter (as required) ❑ Have an aircraft perform Ariel Surveillance with an observer ❑ If aircraft is required for dispersant spraying, a separate aircraft will need to be sources – task logistics **Phase 2:** ❑ Obtain regular updates from personnel within the Operations group (if any) ❑ Oversee completion of tasks ❑ Report key outcomes reported to the EMT Leader ❑ Consider shift handover for extended responses – including for support personnel ❑ Log of events – maintain and record your decisions, actions, updates and contacts **Concluding Actions** ❑ When notified by EMT Leader of termination of response, inform all (if any) Operations staff ❑ Identify and complete all outstanding actions and obligations ❑ Participate in event debriefs as necessary ❑ Contribute to implementation of the event demobilisation plan (with EMT Logistics) ❑ Provide all log sheets and written records / correspondence to EMT Planning

Appendix B Spill Equipment and Resources (Current 1st November 2019)

B. 1. Source Control Equipment – Well Control

A detailed description of available source control equipment and resources including deployment timeframes is detailed within the Beach Offshore Source Control Contingency Plan (SCCP) and well-specific relief well plans. A summary of these resources is provided below.

B. 1. 1 Well Control Specialists

Access to a range of source control equipment including equipment and personnel is available through 3rd party contracts with:

- Boots and Coots (Halliburton): https://www.halliburton.com/en-US/ps/project-management/well-control-prevention/well-control-prevention-services.html
- Cudd Well Control: http://www.cuddwellcontrol.com/

Contact details for these well control specialists are provided in Appendix A.

B. 1. 2 MODU

The Otway and Bass Fields are considered remote locations and therefore likely to have an impact on the time taken for a suitable rig to be mobilised to the relief well location. This timeframe has been built into the Oil Pollution Modelling. Rig broker reports are used to monitor the rig market on a monthly basis and if required, assist in sourcing and contracting a suitable MODU. The rig broker can be contracted to identify and contract a suitably specified rig (including Australian Safety Case status) within 14 days. Note, a MODU mobilised from the NW Shelf or Singapore is likely to take 35 days. These periods have been factored into the relief well schedule within the well-specific relief well plans.

MODU selection for relief well drilling will be based on the following:

- Rating of well control equipment: Rigs considered shall have equipment rated to at least 10,000psi to perform the required well kill and pumping capacity to meet the well kill requirements.
- Water depth: Rig being considered for relief well drilling must be rated for the water depth of 60m-105m
- Seabed conditions.

B. 1. 3 Casing and Consumables

A detailed description of casing and consumable requirements based upon relief well design is detailed within the well-specific relief well plans.

B. 2. Maintenance Vessels & Vessels of Opportunity

Beach has existing contracts in place to support its maritime requirements including vessels to support relief well drilling operations.

The contracts for the Otway Basin currently reside with a number of service provides that have undertaken the Beach Contracts and procurement process.

Over time vessels and operating companies change in the region. Beach has a procurement process, contractor management process and contracting management system that is implemented prior to engagement of vessels.

Any vessels used on the project will carry a vessel SOPEP and Level 1 spill equipment on-board appropriate to the nature and scale of the vessel and vessel crew are fully trained and exercised in the application of the SOPEP.

Beach receives a monthly update of available vessels under an existing arrangement with a Vessel Broker. The availability and location of vessels capable of deploying the capping stack equipment, if suitable for the specific site, will be confirmed prior to spud of the wells.

Both operational and scientific monitoring program implementation requires vessel support, however these vessels do not need to meet the technical specifications of tug support vessel required for the MODU during relief well drilling operations, therefore alternate vessels can be used for these operations. Also, much of the monitoring program will likely be undertaken in near shore environments where larger vessels would be unsuitable.

B. 3. Fixed Wing Aviation Support

Beach may call upon fixed wing aircraft for aerial surveillance in the event of a Level 2 or Level 3 spill. The need for this service will be determined by the EMT Leader during the incident response and as per the OPEP Part 2 of this OPEP.

Beach have an existing contract with Babcock's to supply fixed-wing aerial support. Additionally, Adagold Aviation Pty Ltd can act as an aviation broker and engage the most appropriate aircraft available.

Beach will supply the aviation provider with the relevant flight pattern and log sheet for the surveillance and any additional trained oil spill observers via arrangements with AMOSC.

B. 4. Helicopter Support

During an incident response, Beach may call upon helicopter services to undertake aerial surveillance assistance or transport personnel in an event of a Level 2 or 3 spill, with the requirement determined by the EMT Leader at the time of the incident.

Babcock are the current contractor for the provision of helicopter services for Beach's Otway offshore activities. At least one helicopter will be available for use by Beach during a spill response. A helicopter will be located at either Warrnambool or Tooradin.

When drilling projects are in progress there may also be other Babcock helicopters located at Warrnambool or Essendon. Beach and Babcock have a working arrangement for this service and tests the call out process as part of its emergency response test plan and schedule.

A typical total mobilisation and flight time from:

- Essendon to site is about 1hr 45min (minimum)
- Tooradin to site is about 1hr 30min hours

- Warrnambool to site is about 50 min (20 min flight time)

Beach will supply the helicopter provider with the relevant flight pattern and log sheet for the surveillance and trained oil spill observers via arrangements with AMOSC.

B. 5. Oiled Wildlife Response

Under the National Plan, Maritime Emergencies Non-Search & Rescue (NSR) Plan and TasPlan, the response to oiled wildlife from a vessel spill where a government agency is the Control Agency is covered in terms of responsibilities and equipment.

In Victoria, DELWP is the lead agency for wildlife impacted by marine pollution. The response procedures are defined in the Wildlife Response Plan for Marine Pollution Emergencies. This plan is incorporated as part of State Maritime Emergencies (non-search and rescue) Plan where an oil spill has occurred.

The Tasmanian Oiled Wildlife Response Plan (WildPlan) is administered by the Resource Management and Conservation Division of the Department of Primary Industries, Parks, Water and Environment (DPIPWE) and outlines priorities and procedures for the rescue and rehabilitation of oiled wildlife.

Oiled wildlife kits are available through AMOSC, the national plan and state agencies. DELWP has a number of first strike kits as well as arrangements in place for triage and rehabilitation of small oiled seabirds. Wildlife rescue kits are held at the Hobart and Launceston DPIPWE offices.

AMOSC also has wildlife equipment which can be mobilised directly by Beach in the event of a spill where there is a likelihood of oiled wildlife requiring treatment. However, it is noted that the remoteness and typical sea conditions of the Otway offshore area and the logistic constraints associated with finding and collecting oiled wildlife at sea, will limit the feasibility of an offshore wildlife response effort.

Advice will be sought from AMOSC and regulatory agencies to guide any decisions regarding mounting a wildlife response will be based on the risks posed by the spill and safety and feasibility of a response.

B. 6. Government Resources

B. 6. 1 Australian Maritime Safety Authority

The Australian Maritime Safety Authority (AMSA) administers the National Plan which requires each State and Territory to produce its own contingency plans to support the national plan. If a spill occurs in Victorian or Tasmanian state waters the Maritime Emergencies (NSR) Plan or TasPlan is activated. If the spill is beyond the resources of the state agencies, then the additional resources can be sourced through agreements in the National plan for a marine pollution response.

B. 6. 2 Victorian Department of Jobs, Precincts and Regions (DJPR) Emergency Management Branch (EMB)

In the event of a diesel spill from a supply vessel near shore, the equipment within the respective port region will be utilised as per the Maritime Emergencies (NSR) Plan through Vic DJPR Emergency Management Branch (EMB).

In an event of a Level 2/3 incident, Vic DJPR, as per the Maritime Emergencies (NSR) Plan, may provide the following assistance as required:

- Provision of vessels and support to CFA/FRV for chemical spills in State Waters
- Coordinate the supply of State equipment and personnel resources in support of the Incident Management Team
- Coordinate provision of Victorian equipment and personnel for any interstate or Commonwealth response.

VIC DJPR EMB is updated with Beach's program changes as part of its consultation program and shall be provided a copy of the accepted OPEP.

B. 6. 3 Tasmanian Department of Primary Industry, Parks, Water and Environment (DPIPWE)

In the event of a spill from a vessel near shore, the equipment within the respective port will be utilised as per the TasPlan through Tas DPIPWE. This equipment may also be available to support a Level 2 or 3 spill where Beach is the Control Agency. Stockpiles of Level 1 equipment are located at Burnie, Devonport, Bell Bay and Hobart Ports and a current list of equipment is available from Tas DPIPWE.

B. 7. AMOSC Resources

AMOSC is supported by a core group of key personnel from oil industry members companies who are trained and regularly exercised in spill response. When called upon under arrangements established in AMOSPlan, Core Group Members are able to respond to an incident at short notice and provide a high level of expertise in leading teams on the ground responding to an incident. Actual timings and Core Group availability is updated monthly and can be obtained through AMOSC as required. AMOSC also holds large stockpiles of oil spill response equipment designed for both coastal and offshore use and has established contractual arrangements and processes for the mobilisation of equipment and personnel to assist with a spill anywhere in Australian waters. A list of the AMSOC available equipment can be obtained through the AMOSC or their website.

AMOSC assistance may be sought in the event of a Level 2 or 3 spill. Beach's EMT Leader shall determine when and whether AMOSC notification and assistance will be required.

Under AMOSPlan, should the spill response require equipment or personnel from another company, the request for assistance is made directly by Beach to that company. AMOSC can assist in this dialogue through the Mutual Aid Policy, and Beach will contact AMOSC to activate the relevant Principal & Agency Agreement (of the lending company) and Mutual Aid Policy if borrowing resources.

AMOSC headquarters and their major equipment base are located in Geelong, adjacent to the Port of Geelong Corio Quay Supply base.

Beach shall provide AMSOC a copy of the accepted OPEP.

B. 8. Environmental Monitoring Resources

Beach has a current Master Service Agreement in place with several recognised specialist environmental consultants capable of undertaking scientific monitoring. Beach will undertake audits /

desk top reviews of the capabilities of these consultants to ensure that they are capable of meeting the requirements of this OPEP.

Annual reviews of contracts and service providers are completed by Beach to confirm they still meet the required standards and are able to provide the contracted services. If any existing contractors are deemed unsuitable, a like service provider will be appointed. Should it be required (as determined by EMT Leader and the EMT Environment), the environmental consultant will undertake scientific sampling and analysis to fulfil the requirements of this monitoring program as detailed in Operational & Scientific Monitoring Plan (OSMP).

Appendix C Templates and Forms

Refer to the Australian Maritime Safety Authority website for the latest forms:

- https://www.amsa.gov.au/
- https://www.amsa.gov.au/forms-and-publications/environment/
- https://www.amsa.gov.au/forms-and-publications/environment/publications/NP-Reports/index.asp

Forms from AMSA include:

- Marine Pollution Report (POLREP)
  Marine Pollution Situation Report (SITREP)

C. 1. Marine Pollution Report (POLREP)

Online via https://amsa-forms.nogginoca.com/public/ or manual below:

Marine Pollution Report (POLREP)

NOTE: Incidents to be reported are outlined on page 3

Send completed form to: **AMSA Environment Protection**
Fax: **(02) 6230 6868** Email: **rccaus@amsa.gov.au**

Date of incident

C.C.

Time of incident

Location name / Description

Incident coordinates

Format of coordinates used (select one)	Latitude of spill	Longitude of spill
Degrees & decimal degrees	. °	. °
Degrees, minutes & decimal minutes	° ‘ . ‘	° ‘ . ‘
Degrees, minutes & seconds	° ‘ . “	° ‘ . “

Description of incident

POLLUTION SOURCE

☐ Vessel ☐ Land ☐ Other ☐ Unknown — Details

Vessel Details: Type (if known): ☐ Tanker ☐ Container ☐ Bulk Cargo ☐ Fishing ☐ Defence ☐ Recreational

☐ Other vessel type (specify):

Vessel name | Flag state / callsign | Australian vessel? ☐ Yes ☐ No

POLLUTANT

☐ **Oil** → ☐ Bilge ☐ Diesel bunker ☐ HFO Bunker ☐ Crude ☐ Unknown ☐ Other — Specify

☐ **Chemical** → Name | MARPOL Cat. / UN Nos

☐ **Garbage** → ☐ **Packaged** → ☐ **Sewage** → ☐ **Other** → Details / description

EXTENT

Size of spill (length & width in metres)

Amount of pollutant, if known (litres)

ADDITIONAL INFORMATION

Has the discharged stopped? ☐ Yes ☐ No ☐ Unknown
Response action undertaken? ☐ Yes ☐ No If yes, provide details below, please include any environmental impact

Weather conditions at site

☐ Photos taken ▶	Details	Held by
☐ Video taken ▶	Details	Held by
☐ Samples taken ▶	Description	Held by
☐ Items retrieved ▶	Description	Held by

Original report source

Name	Position	Phone

Combat agency

Statutory agency

Equipment used
☐ AMSA ☐ State / NT

Possible further action
☐ Legal ☐ AMSA assistance ☐ Other

SENDER DETAILS

Name	Agency	Date
Phone	Fax	Email

PRIVACY STATEMENT

The Australian Maritime Safety Authority (AMSA) is collecting the information on this form to enable it to carry out its role as managing agency of the National Plan to Combat Pollution of the Sea by Oil and other Noxious and Hazardous Substances.

AMSA may give some or all of this information to other government bodies, non-government organisations who have responsibilities under the National Plan, and law enforcement agencies.

SUMMARY OF INCIDENTS TO BE REPORTED

All slicks, including deck washings, that can be seen trailing a vessel should be reported. The type of substance contained in the slick may not be able to be determined until further investigation has been undertaken by enforcement agencies.

REPORTABLE	NON-REPORTABLE
Oil - All slicks trailing from a vessel. All spills in the marine environment (notwithstanding the size or amount of oil or sheen). All spills where National Plan equipment is used in a response. *Note: If oil or sheen is "visible" then it is an illegal discharge MARPOL permitted oily discharges are at 15 parts of oil to one million parts of water (15ppm). Oil discharges at sea cannot be visually observed until at least 50ppm and even that may not be readily discernable depending upon the observation platform, sea state, weather conditions etc.*	• Coral spawning. • Algal bloom. • Oil spills specifically known to be from land sources (eg drains, road tanker accidents) and where there is no response using National Plan equipment or resources used. • Exploration/production associated discharges where there is no response and National Plan equipment or resources used. (these are reportable to the relevant authority eg: Mines Department or Department of Science Industry and Resources).
Chemicals – All sightings of slicks/discolourations trailing vessels. All odorous discharges from a vessel.	
Harmful Packaged Substances - All packages associated with a vessel.	
Sewage – All slicks seen trailing from a vessel.	
Garbage – All sightings of garbage being disposed from a vessel. Any type of garbage found that can be specifically tied to a specific vessel such as garbage with printing showing a vessel name (eg Quarantine bonded plastic bags with identifier tag).	• Dumping at sea that requires a permit (EPA or EA) • Dumped dredge spoil. • Floating logs.

C. 2. Marine Pollution Situation Report (SITREP)

Marine Pollution Situation Report (SITREP)

Incident name / Description					
Date		Time		Sitrep No	

Priority ☐ Urgent ☐ Immediate

Final Sitrep? ☐ Yes ☐ No Next Sitrep on: .....

Description of incident and impact	
Overall weather conditions	
Summary of response actions to date	
Current Strategies	
Summary of Resources available/ deployed	
Other information	

SITREP prepared by

Name	Agency	Role
Phone	Fax	Email

Attachments		No of pages attached	

C. 3. Oil Spill Incident Report – Level 1 Spill

Date:
Spill observer:
Report time:
Reported to:
Location of the spill:
Material spilled:
Estimate of spill quantity and description of appearance of the slick:
Particulars of damage caused as a result:
Apparent source/cause of the spill:
Action taken to control spill:
Has spill been contained? (Tick✓) ❑ Yes❑ No
Comments:

Location	**Reported by**	**Reported to**
Time	**Date**	**Phone No**

Are additional resources required to disperse/contain spill:❑Yes❑No

C. 4. Oil Spill Incident Report – Level 2/3 Spill

Date:			**Report time**:		
Spill observer:			**Reported to**:		
Time spill occurred:			**Date spill occurred**:		
Material spilled:			**API gravity**:		
Apparent source/cause:					
Location of spill:	**Latitude:**			**Longitude:**	
Is spill continuing?	**Yes**			**No**	
If yes, estimated rate of release:	**cubic metres/day:**			**bbl/day:**	
Volume of discharge: a) estimated	**cubic metres:**			**bbls:**	
Volume of discharge: b) known	**cubic metres:**			**bbls:**	
Size of spill: (plot on chart)					
Rate and direction of slick movement:					
Oil slick type:	**Continuous:**			**Windows**:	
Estimated average thickness:					
Estimated time to nearest threatened resource:	(hrs)				
Meteorological and Ocean Data					
Temperature:	**Air:o C**			**Water:o C**	
Wind speed:	**knots**			**Direction:**	
Precipitation:					
Forecast:					
Oceanographic Data	**Tide state:**		**Direction:**		
	Currents:		**Speed:**		
Direction: Sea state:	1	2	3	4	5	6+
Average wave height:	metres					
Period:	seconds					
Comments:						

C. 5. Oil Spill Trajectory Modelling Request Form (RPS APASA)

INCIDENT ☐	EXERCISE ☐

MAKING COMPLEX EASY

PROCEDURE FOR INITIATING SPILL MODELLING

1. Complete the form for all details – provide estimates and detail uncertainties.
2. Call the RPS Response duty officer on (**0408 477186**) to alert them of the requirement for spill modelling, explaining the general details and seeking clarification as required.
3. Send the form to **RPSresponse@rpsgroup.com**

If new information becomes available, inform the duty officer by telephone then email updates

Date and time of this notification: _____

Type of trajectory modelling required

☐ Oil	☐ Chemical	☐ Update request

Contact Details

Name of the Company	
Name of Contact Person	
Contact number (include country/area codes)	
Email address for return communications	

Details of spilled material (include assay or MSDS whenever available)

Oil or chemical name	
Type or Description	
CAS number, If a chemical	

Location, time of spill

Latitude of source	Degrees:	Minutes:	Seconds:
Longitude of source	Degrees:	Minutes:	Seconds:

If slicks have been observed from an unknown source, provide map information to define the bounds

Do you want forecasting forward in time from this location or back-track to an unknown source?	Forward ☐ Back-track from an area ☐ Forward and Back-track ☐	**Geographic bounds of slick area(s) and time of observation must be supplied for back-track modelling**
Date and time spill started		
Time zone (+ or - from UTC)		

Depth, type of discharge

Depth of release	☐ Surface ☐ Sub-surface. - If so, Specify the Depth (m)
If from sub-surface, describe the discharge energy	☐ Low turbulence e.g. Low-pressure leak ☐ Medium turbulence e.g. Intermediate-pressure leak ☐ High turbulence e.g. Well blow out, ruptured pipeline

Volume or rate of release

For spills that have ended	Volume:	Units:	Duration (hours):
For ongoing spills	Rate:	Units:	per hour

Documents attached

☐ Oil Assay sheet	☐ Safety data sheet	☐ Local wind measurements
☐ Spill site photos	☐ Aerial surveillance maps	☐ line drawings showing oil distribution
☐ Others (specify):		

Updated: 28/02/2020

PROCEDURE FOR REQUESTING UPDATED SPILL MODELLING

1. Revise the input form for any changes
2. If surveillance is available to define the observed location of slicks, this information should be provided to the duty officer in a form that can be translated to define the spatial distribution and relative thickness of the oil. Formats that would be useful include:
    - a GIS (shp) file defining the oil distribution (including the datum format)
    - satellite imagery that includes spatial references
    - photographs with location references
    - a line drawing marked with estimated centre and edge locations, length and width dimensions, and relative thickness contours (use the space below making sure to provide spatial references)
    - Location of tracking buoys (confirm first that these are marking the slick location)
3. Call the RPS Response duty officer on (**0408 477186**) to request an update to the spill modelling for changed details, explaining what has changed and seeking clarification as required.
4. Send the forms and any files to **RPSresponse@rpsgroup.com**

C. 6. AMOSC Service Request for Mutual Aid

Attachment 3
Available Services Request for Mutual Aid (clause 9)

Defined terms in this Available Services Request for Mutual Aid (**Services Request**) have the meaning given to them in the Master Service Contract (MSC) between AMOSC and you.

AMOSC has received a request for services from another AMOSC Member. AMOSC requests, in accordance with clause 9 of the MSC that you provide (or procure that an Affiliate provide) the following equipment, personnel or services as indicated below:

EQUIPMENT

☐ AMOSC requests Equipment

Type	Quantity	

CONSUMABLES

☐ AMOSC requests Consumables

Type	Quantity	

PERSONNEL

☐ AMOSC requests Personnel

Category or name of Personnel	Number	

AMOSC MASTER SERVICE CONTRACT – ATTACHMENT 3
PRO FORMA – AVAILABLE SERVICES REQUEST FOR MUTUAL AID page 1

PRO FORMA

Please state below:

- what equipment, consumables and/or personnel (as requested) (if any) can be provided by you or your Affiliate:

  [*Insert*]

  (being 'Available Resources'); and

- the timeframe for the provision of those Available Resources:

  [*Insert*]

Following completion please sign date and return this Request to AMOSC by email.

In returning this Request you acknowledge that the Available Resources will be provided to AMOSC on the terms of clause 9 of the MSC.

SIGNED by **[name of authorised representative]** as authorised representative for **[Member]** in the presence of:

.....
Signature of witness

.....
Name of witness (block letters)

.....
By executing this Request the signatory warrants that the signatory is duly authorised to execute this Request on behalf of **[Member]**

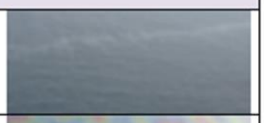
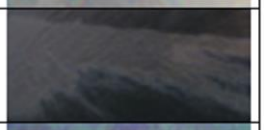
Date [insert]

PRO FORMA

C. 7. Stand down of EMT Checklist

STAND DOWN CHECKLIST / ACTIONS	
KEY ACTIONS:	
The EMT Leader is responsible for assigning personnel to commence the collation of emergency data prior to the commencement of the investigation process. On-going resources for incident control and post incident recovery (if required) should also be considered by the EMT Leader, including current/potential business continuity aspects (per Beach Energy's Business Continuity Plan).	
Final information release and/or notification should occur to some, or all, of the following:	
• All Site ERT and support personnel	• All relevant EMT and support personnel
• Contractor Management	• Regulatory authorities
• Emergency Services	• Employees (off and on duty)
• Employees families/NOK	• Third Parties
• Suppliers and/or contractors	• Joint Venture Partners and customers
• Media	• Government support agencies
• Mutual aid	• Environmental agencies
• Trade unions	• Local community and pressure groups
Initial 'hot' debrief of all personnel to include:	
• A short report by all persons of the history of the incident and their responses; • Outstanding problems with health, safety and environment; • Recovery of production; • Technical information regarding Beach's ongoing operations; and • Emotional responses to what has happened.	
Then:	
• Close additional security arrangements • Finalise additional catering and other services • Continue counselling for those involved in the incident • Compile and file all documents relating to the response • Ensure that all log entries are signed and that all call records and Sit Rep's are signed off by the person who prepared the document • Arrange for full incident investigation and analysis • Approve/comment on incident debriefing reports and recommended actions	
Carry out an After-Action Review to ascertain effectiveness of:	
Incident callout	**Site ERT functions**
• Overall emergency response	• Interface with other EMT members
Recommend revision of Emergency Plans as required.	
Schedule time for After-Action Review and if required, full debrief on the incident.	

Appendix D Bonn Agreement Oil Appearance Code

Code	Description / Appearance	Layer Thickness Interval (Microns)	Litres per km^2	Typical Appearance
1	Sheen (silver / grey)	0.04-0.30	40-300	
2	Rainbow	0.30-5.0	300-5,000	
3	Metallic	5.0-50	5,000-50,000	
4	Discontinuous True Oil Colour	50-200	50,000-200,000	
5	Continuous True Oil Colour	>200	>200,000	

Appendix E Aerial Surveillance Observer Log – Oil Spill

Survey Details											
Date		Start time		End time		Observers					
Incident						Area of survey					
Aircraft Type		Call sign				Average altitude		Remote sensing used			
Weather Conditions											
Wind speed (knots)						Wind direction					
Cloud base (feet)						Visibility (Nm)					
Time high water						Current direction					
Time low water						Current speed (Nm)					
Slick Details											
Slick grid parameters by lat/long						Slick grid parameters by air speed			Slick grid dimensions		
Length Axis		Width Axis				Length Axis		Width Axis	Length	Nm	
Start Latitude		Start Latitude				Time (seconds)		Time (seconds)	Width	Nm	
Start Longitude		Start Longitude							Length	km	
End Latitude		End Latitude				Air Speed (Knots)		Air Speed (Knots)	Width	km	
End Longitude		End Longitude							Total Grid Area	km^2	

Code	Colour	%age cover observed		Total Grid Area		Area per oil code		Factor	Oil volume	
1	Silver		%		km^2		km^2	40 – 300L/km^2		L
2	Rainbow		%		km^2		km^2	300 – 5,000L/km^2		L
3	Metallic		%		km^2		km^2	5,000 – 50,000L/km^2		L
4	Discontinuous true oil colour		%		km^2		km^2	50,000 – 200,000L/km^2		L
5	Continuous true oil colour		%		km^2		km^2	>200,000L/km^2		L
Non shaded areas to be completed on flight. Shaded areas completed on return.								TOTAL		L

Appendix F Aerial Surveillance Observer Log – Marine Mammals

Date:	Survey #
Aircraft/Pilot:	Observer:
Blue Whale Study Contact:	Enquest Contact:
Survey Start Time:	Survey Finish Time:

Event#	Waypoint #	Event time [hh:mm]	Event Position [dd.mmm]	Description of sighting and marine mammal	No. of Marine Mammal(s)	Sterling Position [dd.mmm]
			. °S			. °S
			. °E			. °E
			. °S			. °S
			. °E			. °E
			. °S			. °S
			. °E			. °E
			. °S			. °S
			. °E			. °E
			. °S			. °S
			. °E			. °E

Appendix G Shoreline Assessment

General Information			
Date	Dd/mm/yy:	Survey Time	From:To:
Weather	Sun / Cloud / Fog / Rain / Windy		
Location	Description:	LAT: LONG:	
Total Length	m		

Survey Team	
Name	Organisation

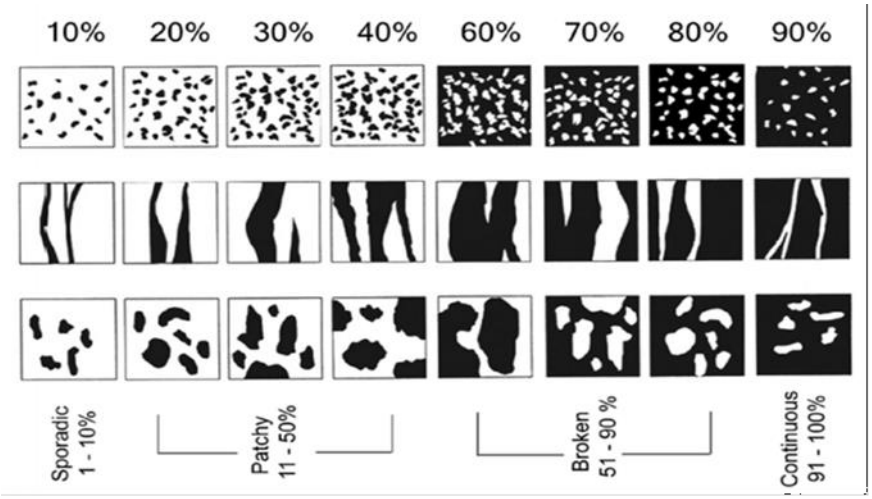
Shoreline Type			
Legend: P = Primary S = Secondary			
	Exposed Bedrock Cliff and Seawalls		Intertidal Mud/ Sand Flats
	Exposed Bedrock Platform or Reef		Mangroves
	Sheltered Bedrock Platform or Reef		Salt marshes
	Exposed Boulder/ Cobble and Rip rap		Seagrass (Shallow/Intertidal)
	Sheltered Boulder/ Cobble and Rip rap		Shallow/Intertidal Corals
	Pebble Beaches		Natural Inlets/ Channels
	Sand Beaches		Marinas/ Artificial Waterways

Operational Features	
Debris Present: Yes /No Amount: _____ m3	
Direct Backshore Access: Yes / No	Access Restrictions:
Backshore cliff: Yes / No Height _____m	Suitable Lay down Area: Yes / No

Surface Oiling Conditions

Place an X in the appropriate box

Zone #	Tidal Zone				Oil Cover			Oil Thickness					Oil Character					
	L	M	U	S	Length	Width	Cover (%)	PO	CV	CT	ST	FL	FR	MS	TB	TP	SR	AP

Legend:	
Tidal Zone L = Lower Tidal M = Middle Tidal U = Upper Tidal S = Super Tidal	
Surface Oiling Thickness PO = Pooled Oil (fresh oil or mousse > 1 cm thick) CV = Cover (oil or mousse from >0.1 cm to <1 cm on any surface) CT = Coat (visible oil <0.1 cm, which can be scraped off with fingernail) ST = Stain (visible oil, which cannot be scraped off with fingernail) FL = Film (transparent or iridescent sheen or oily film)	**Surface Oiling Character** FR = Fresh Oil (unweathered, liquid oil) MS = Mousse (emulsified oil occurring over broad areas) TB = Tar balls (discrete accumulations of oil <10 cm in diameter) TP = Tar Patties (highly weathered oil, of tarry, nearly solid consistency) SR = Surface Oil Residue (non-cohesive, oiled surface sediments) AP = Asphalt Pavements (cohesive, heavily oiled surface sediments)
Distribution Guide (% Oil Cover)  	
Sketch	**Date:**

Checklist: (Place an X once completed)			
Oiled Area		Local Features	
Orientation (North)		Access	
Scale		Survey Area (Width/Length)	

Appendix H – Testing Schedule

After pre-spud testing, the test schedule provides a 12-month program of testing. The test schedule is to be updated when testing the response arrangements when they are significantly amended. The tests are a guide, and tests may be carried out in other time periods, provided the tests are conducted within the calendar year. This table is taken from the CEM Training and Exercising Plan.

		Annual Scheduled Tests	Scheduled Jan - Mar Qtr.	Scheduled April to June Qtr.	Scheduled July to Sept Qtr	Scheduled October - Dec Qtr.
Protocol Testing **Beach to conduct a test . Announcing this is a test / exercise call only.**						
1	4.2.1 Vessel Spill / Collision	1		1		
2	4.2.2 Loss of integrity - Platform or Pipeline (L2/L3)	1			1	
3	4.2.3 Loss of Well Control (L2 / L3)	1				1
For the avoidance of doubt, all above protocols in their completeness, under all scenarios are to be tested. The above protocols can be tested in an exercise, or by individuals testing each separate action and protocol						
Notification testing - purpose ensure contact details are correct. To be titled, this is a test only.						
4	NRC	2	1		1	
5	AMSA	2		1		1
6	NOPSEMA	2	1		1	
7	Marine Duty Officer	2		1		1
8	Department of Environment & Energy	2	1		1	
9	Department of Jobs, Precincts and Regions	2		1		1
10	Radio TasPorts Vessel Traffic Services	2	1		1	
11	All relevant port authorities	2		1		1
12	DJPR EMB	2	1		1	
13	DELWP	2		1		1
14	DPIPWE	2	1		1	
15	Air surveillance	2		1		1
16	Director of National Parks via Marine Compliance Duty Officer (24-hr)	2	1		1	
17	Department of the Environment and Energy	2		1		1
18	(Victorian) Department of Jobs, Precincts and Regions – Earth Resources Regulation (DJPR ERR)	2	1		1	
19	NOPTA	2		1		1

Appendix I Internal and External Supporting Documents and Plans

Standard/CDN	Supporting Documents
Internal	
CDN 8189619	After Action Review Procedure
CDN S4810RD718250	Artisan-1 Source Control Contingency Plan (SCCP);
CDN 18386856	Business Continuity Plan
CDN 18985422	CEM Training and Exercising Plan
CDN 18331497	Crisis Communications Plan
CDN 18024233	Crisis Management Plan
CDN 18985346	Emergency and Security Management Standard
CDN 18025990	Emergency Management Plan (EMP)
CDN S4210AD718257	Geographe-4 Source Control Contingency Plan (SCCP)
CDN S4110AD718256	Geographe-5 Source Control Contingency Plan (SCCP)
CDN 4152175	Offshore Spill Response Plan (Kupe)
CDN 3972816	Oil Pollution Emergency Plan (BassGas)
CDN S4100AH717907	Oil Pollution Emergency Plan (Otway)
T-5100-35-MP-005	Otway and Bass RWP
CDN 18387076	Physical Security Manual
Element 8	Risk Management and Hazard Control
CDN S4110AD718259	Thylacine North-2 Source Control Contingency Plan (SCCP)
Matrix (via Boardwalk)	Training and Capability Matrix
CDN 8189619	After Action Review Procedure
CDN S4810RD718250	Artisan-1 Source Control Contingency Plan (SCCP);
CDN 18386856	Business Continuity Plan
CDN 18985422	CEM Training and Exercising Plan
CDN 18331497	Crisis Communications Plan
CDN 18024233	Crisis Management Plan
CDN 18985346	Emergency and Security Management Standard
CDN 18025990	Emergency Management Plan (EMP)
CDN S4210AD718257	Geographe-4 Source Control Contingency Plan (SCCP)
CDN S4110AD718256	Geographe-5 Source Control Contingency Plan (SCCP)
CDN 18630468	Health Emergency Plan
CDN 18330844	Human Resources Emergency Plan
CDN 16744575	Incident Management Directive
CDN 4152175	Offshore Spill Response Plan (Kupe)
CDN 3972816	Oil Pollution Emergency Plan (BassGas)
CDN S4100AH717907	Oil Pollution Emergency Plan (Otway)

External	
AMSA	Wildlife Response Plan for Marine Pollution Emergencies
AMSA	Bonn Agreement Oil Appearance Code
AMSA	NP–GUI–025: National Plan response, assessment and termination of cleaning for oil contaminated foreshores (AMSA 2015)
ASMA	National Response Team Policy (NP-POL-002) 10 Nov 2014
ASMA	Maritime Emergencies (NSR) Plan Wildlife Conservation Plan for Migratory Shorebirds – 2015Societal Security - Business Continuity Management systems - Requirements
ASMA	National Plan, Maritime Emergencies Non-Search & Rescue (NSR) Plan
ASMA	AMOSPlan (AMOSC, 2017); and
ASMA	National Offshore Petroleum Safety and Environmental Management Authority (NOPSEMA) Guidance note GN1488 Rev 2 – Oil pollution risk management (NOPSEMA Feb 2018)
ASMA	National Plan for Maritime Environmental Emergencies ('NatPlan') (AMSA, 2019);
ASMA	State Maritime Emergencies (non-Search and Rescue) Plan ('VicPlan') (EMV, 2016);
ASMA	Tasmanian Marine Oil Spill Contingency Plan ('TasPlan') (DPIPWE, 2011);
Australian Marine Parks	South-east Commonwealth Marine Reserves Network Management Plan 2013-23 (Director of National Parks, 2013). Planning for Emergencies in Facilities
DELWP	Wildlife Marine Mammals Regulations 2009 (Vic)Security and Resilience – Emergency Management – Guidelines for Incident Response
Department Agriculture, Water & Environment	EPBC Regulations 2000 – Part 8 Division 8.1 interacting with cetaceans Wildlife Marine Mammals Regulations 2009 (Vic)Risk Management Guidelines
Department Agriculture, Water & Environment	Conservation Advice *Balaenoptera borealis* (sei whale)
Department Agriculture, Water & Environment	Conservation Advice *Balaenoptera physalus* (fin whale)
Department Agriculture, Water & Environment	Recovery Plan for Marine Turtles in Australia (CoA, 2017), identified as acute chemical discharge (oil pollution)
Department Agriculture, Water & Environment	Wildlife Conservation Plan for Migratory Shorebirds – 2015
Department Agriculture, Water & Environment	National Recovery Plan for Threatened Albatrosses and Giant Petrels 2011-2016
Department Agriculture, Water & Environment	Conservation Listing Advice for the Neophoca cinerea (Australian sea lion)
Department Agriculture, Water & Environment	Conservation Advice *Calidris canutus* (Red Knot)
Department Agriculture, Water & Environment	Conservation Advice for *Charadrius leschenaultia* (greater sand plover)
Department Agriculture, Water & Environment	Conservation Advice *Limosa lapponica menzbieri* (Bar-tailed Godwit (Northern Siberian))

Department Agriculture, Water & Environment	Conservation Advice for *Numenius madagascariensis* (Eastern Curlew)
Department Agriculture, Water & Environment	Conservation Advice *Limosa lapponica baueri* (Bar-tailed Godwit (Western Alaskan))
Department Agriculture, Water & Environment	Conservation Advice *Limosa lapponica menzbieri* (Bar-tailed Godwit (Northern Siberian))
Department Agriculture, Water & Environment	Conservation Advice for *Numenius madagascariensis* (Eastern Curlew)
Department Agriculture, Water & Environment	Conservation Advice for *Charadrius leschenaultia* (greater sand plover)
DPIPWE	Tasmanian Oiled Wildlife Response Plan (WildPlan)
DPIPWE	Tasmanian Marine Oil Spill Contingency Plan ('TasPlan') (DPIPWE, 2011);
EMV	Emergency Management Act (Vic) EMA 2013
EMV	State Maritime Emergencies (non-Search and Rescue) Plan ('VicPlan') (EMV, 2016);
EPA Tasmania	Tasmania – Regulation 20 of the Petroleum (Submerged Lands) (Management of Environment) Regulations 2012 (herein referred to as the P(SL) (MoE) Regulations).
NOPSEMA	Australian Inter-Service Incident Management System (AIIMS) Bulletin #1 Oil spill modelling (A652993) (NOPSEMA 2019)
NOPSEMA	Offshore Victoria Operational and Scientific Monitoring Program (OSMP).
NOPSEMA	Offshore Source Control Contingency Plan (SCCP)
NOPSEMA	APPEA Memorandum of Understanding: Mutual Assistance to facilitate the transfer of alternate drilling unit and well site services from alternate Operator(s)
NOPSEMA	Offshore Victoria Operational and Scientific Monitoring Plan
NOPSEMA	National Offshore Petroleum Safety and Environmental Management Authority (NOPSEMA) Guidance note GN1488 Rev 2 – Oil pollution risk management (NOPSEMA Feb 2018)
NOPSEMA	Commonwealth - Regulation 14(8) of the Offshore Petroleum and Greenhouse Gas Storage (Environment) Regulations 2009 (herein referred to as the OPGGS(E))
NOPTA	Victoria - Regulation 17 of the Offshore Petroleum and Greenhouse Gas Storage Regulations 2011 ((herein referred to as the OPGGS Regulations)

Appendix J Testing protocols linked to Regulatory Commitments and Objectives

Protocol Testing including field deployment Beach to conduct a test. Announcing "this is a test / exercise call only".		**Annual Scheduled Tests**	**Scheduled Mar Qtr.**	**Scheduled June Qtr.**	**Scheduled Sept Qtr.**	**Scheduled Dec Qtr.**
1	4.2.1 Vessel Spill / Collision	**1**		1		
2	4.2.2 Loss of integrity - Platform or Pipeline (L2/L3)	**1**			1	
3	4.2.3 Loss of Well Control (L2 / L3)	**1**				1
For the avoidance of doubt, all above protocols in their completeness, under all scenarios are to be tested. The above protocols can be tested in an exercise, or by individuals testing each separate action and protocol						
Desktop testing schedule (note, Beach may test individually or in an exercise) Must be complete 1 Month prior to drilling and then 6-monthly (prior to drilling excluded from this test schedule)						
4	Effectiveness of OPEP & OSMP in guiding spill response and remediation based upon: · notification timing and completeness; · timeliness of response according to predicted response timing; · availability of response personnel; · training and competency of response personnel	2	1		1	
5	Test the effectiveness of Emergency Management Plan in guiding EMT to fulfil roles and responsibilities	2		1		1
6	Validate contractual arrangements with external service providers the capability of each service provider to respond according to scope of OPEP.	2	1		1	
7	Validate equipment stock levels and deployment times from AMOSC (desktop) based upon those presented within the OPEP	2		1	1	
8	Internal and external training requirements for EMT validated (desktop)	2	1			1
9	Test the effectiveness of Emergency Management Plan in guiding EMT to fulfil roles and responsibilities	2		1		1
10	Validate contractual arrangements with external service providers the capability of each service provider to respond according to scope.	2	1			1
11	Validate equipment stock levels and deployment times from AMOSC (desktop) based upon those presented within this OPEP	2		1		1

Protocol Testing including field deployment Beach to conduct a test. Announcing "this is a test / exercise call only".		Annual Scheduled Tests	Scheduled Mar Qtr.	Scheduled June Qtr.	Scheduled Sept Qtr.	Scheduled Dec Qtr.
12	Validate the capability of environmental monitoring providers to ensure they continue to meet Beach requirements based upon company spill risk profile and potential monitoring scope of work (desktop)	2	1		1	
13	Validate external and external training requirements for EMT validated (desktop)	2		1		1
14	Test Emergency communications shall be tested between ERT and EMT	2	1		1	
15	Validate Emergency notifications between EMT and Regulator(s) tested (including regulatory timeframes)	2	1	1		
16	Emergency communications between the MODU and EMT / SCIMT tested	2			1	1
17	Emergency notifications between EMT and Regulator(s) tested (including regulatory timeframes)	2	1		1	
18	Communication systems and methods between CMT / EMT Leader / SCIMT Leader / EMT members tested	2		1		1
19	OSTM arrangements tested	2			1	1
20	Beach shall test the effectiveness of Source Control Contingency Plan guiding SCIMT to fulfil roles and responsibilities	2		1		1
21	Beach shall test logistics pathways for mobilisation & deployment of L2 / L3 equipment, including support vessels and suitable MODUs validated (desktop)	2		1	1	
22	Validation Well Control Specialists capability continues to meet Beach requirements based upon company spill risk profile (desktop)	2			1	1
23	Internal and external training requirements for the SCIMT validated (desktop)	2	1		1	
24	Test readiness or arrangements to implement the relief well plan under the APPEA MoU	2		1		1
Totals		**45**	**9**	**11**	**12**	**13**

This table aligns with the schedule presented in the CEM Training and Exercising Plan.