PETREL-3 AND PETREL-4 MONITORING AND DECOMMISSIONING OIL POLLUTION EMERGENCY PLAN

IN THE EVENT OF AN OIL SPILL GO DIRECTLY TO SECTION 1 (FIRST STRIKE PLAN) AND COMPLETE THE NOTIFICATIONS AND RELEVANT ACTIONS.

ADDITIONAL SUPPORTING INFORMATION THAT MAY INFORM THE RESPONSE IS PRESENTED IN SECTIONS 2 – 8.

Validity Status / Rev. Number / Revision index	Date	Description	Prepared by	Checked by	Approved by	Contractor Approval	Company Approval
PR-OP 0	09/09/2024	Issued for submission	Xodus	JCO	LGI		
PR-OP A	21/08/2024	Issued for review	Xodus	JCO	JCO		

eni australia		Project name **Petrel-3 and Petrel-4 Monitoring and Decommissioning**	Company identification 000694_DV_ES.HSE.0285.000_00 Job N. ___
			Contractor identification Contract ___
(Vendor logo and business name)			Vendor identification …….. Order N……..
Facility Name Petrel	Location	Scale 1:1	Total no. of pages 1 / 140
Document Title **Petrel-3 and Petrel-4 Monitoring and Decommissioning Oil Pollution Emergency Plan**			Supersedes N…… Superseded by N…….. Plant Area / Plant Unit

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ACRONYMS AND DEFINITIONS

Acronym	Definition
ADIOS	Automated Data Inquiry for Oil Spills
ALARP	As Low As Reasonably Practicable
AMOSC	Australia Marine Oil Spill Centre
AMOSPlan	Australian Marine Oil Spill Centre Plan
AMSA	Australian Maritime Safety Authority (Commonwealth)
AMP	Australian Marine Park
ANZECC	Australian and New Zealand Environment Conservation Council
API	American Petroleum Institute
AusSAR	Australian Search and Rescue
Bbl	Barrels
BAOAC	Bonn Agreement Oil Appearance Code
CMT	Crisis Management Team
CMTL	Crisis Management Team Leader
Cth	Commonwealth
DBCA	Department of Biodiversity, Conservation and Attractions (Western Australia)
DCCEEW	Department of Climate Change, Energy, the Environment and Water
DEPWS	Department of Environment, Parks and Water Security (Northern Territory)
DFES	Department of Fire and Emergency Services (Western Australia)
DIPL	Department of Infrastructure, Planning and Logistics (Northern Territory)
DEMIRS	Department of Energy, Mines, Industry Regulation and Safety (Western Australia)
DNP	Director of National Parks (Commonwealth)
DPIR	Department of Primary Industry and Resources (Northern Territory)
DoEE	Department of Environment and Energy (Commonwealth) (now Department of Agriculture, Water and the Environment)
DoT	Department of Transport (Western Australia)
DPIRD	Department of Primary Industries and Regional Development (Western Australia)
DTSC	Department of Tourism, Sport and Culture (Northern Territory)
DWER	Department of Water and Environmental Regulations (Western Australia)
EAL	Eni Australia Limited
EMBA	Environment that May Be Affected
EMERG	HQ Emergency Response Department (Global)
Eni HQ	Eni Spa Headquarters, Milan
EP	Environment Plan
EPO	Environment Performance Outcome
EPS	Environment Performance Standard
EPBC Act	*Environment Protection and Biodiversity Conservation Act 1999*
ERT	Emergency Response Team

Acronym	Definition
FOB	Forward Operating Base
GDS	Global Dispersant Stockpile
HMA	Hazard Management Agency
HR	Human resources
HSE	Health, Safety and Environment
HQ	Headquarter
IAP	Incident Action Plan
IC	Incident Controller
ICM	Incident and Crisis Management
IMO	International Maritime Organisation
IMP	Incident Management Plan
IMT	Incident Management Team
IMTL	Incident Management Team Leader
ITOPF	The International Tanker Owners Pollution Federation
JRCC	Joint Rescue Coordination Centre
JSCC	Joint Strategic Coordination Committee
KSAT	Kongsberg Satellite Services
L	Litres
LO	Liaison Officer
LOWC	Loss of well control
MD	Managing Director
MDO	Marine Diesel Oil
MEE	Western Australia State Hazard Plan for Maritime Environmental Emergencies
MEER	Marine Environmental Emergency Response
MEECC	Maritime Environmental Emergency Co-ordination Centre
MC	Measurement Criteria
MODU	Mobile Offshore Drilling Unit
MOP	Marine Oil Pollution
MoU	Memorandum of Understanding
N/A	Not applicable
NEBA	Net Environmental Benefit Analysis
NatPlan	National Plan for Maritime Environmental Emergencies
NOPSEMA	National Offshore Petroleum Safety and Environmental Management Authority
NOPTA	National Offshore Petroleum Titles Administrator
NRT	National Response Team
NT	Northern Territory
NT EPA	Northern Territory Environment Protection Authority
NTOWRP	Northern Territory Oiled Wildlife Response Plan
OEPA	Office of the Environment Protection Authority (OEPA)
OIM	Offshore Installation Manager

Acronym	Definition
OIW	Oil in water
OPEP	Oil Pollution Emergency Plan
OPGGS Act	*Offshore Petroleum and Greenhouse Gas Storage Act 2006*
OPGGS (E) Regulations	Offshore Petroleum and Greenhouse Gas Storage (Environment) Regulations 2023
OSA	Offshore Services Australia
OSC	On Scene Commander
OSRA	Oil Spill Response Atlas
OSRL	Oil Spill Response Limited
OSM	Oil Spill Modelling
OSMP	Operational and Scientific Monitoring Program
POLREP	Marine Pollution Report
POS	Production Operations Supervisor
PPE	Personal Protection Equipment
PWC	NT Parks and Wildlife Commission
QA/QC	Quality Assurance / Quality Control
ROVs	Remotely Operated Vehicles
SAF	Sea Alarm Foundation
SAR	Synthetic Aperture Radar
SARO	Senior Search and Rescue Officer-Aviation
SC	Safety Case
SCAT	Shoreline Clean-up Assessment Technique
SEQ	Safety, Environment, Quality
SG	Specific gravity
SHP-HAZMAT	State Hazard Plan for Hazardous Materials
SITREP	Marine Pollution Situation Report
SMEERC	State Maritime Environmental Emergency Coordinator
SMP	Scientific Monitoring Program
SMPC	State Marine Pollution Coordinator
SMV	Surveillance, Modelling, and Visualisation
SOPEP	Shipboard Oil Pollution Emergency Plans
TEMC	Territory Emergency Management Council
TEP	Territory Emergency Plan
UAV	Unmanned Aerial Vehicle
VOCs	Volatile Organic Compounds
WA	Western Australia
WAOWRP	Western Australia Oiled Wildlife Response Plan
WC	Wildlife Coordinator
WMC	Waste Management Coordinator
WCSS	Worst Credible Spill Scenario
YGP	Yelcherr Gas Plant
ZPI	Zone of Potential Impact

1 FIRST STRIKE PLAN

QUICK REFERENCE SECTION - OIL SPILL RESPONSE

OIL SPILL RESPONSE PRIORITIES

Response priorities in the event of an oil spill are:

- PEOPLE
- ENVIRONMENT
- ASSETS
- REPUTATION.

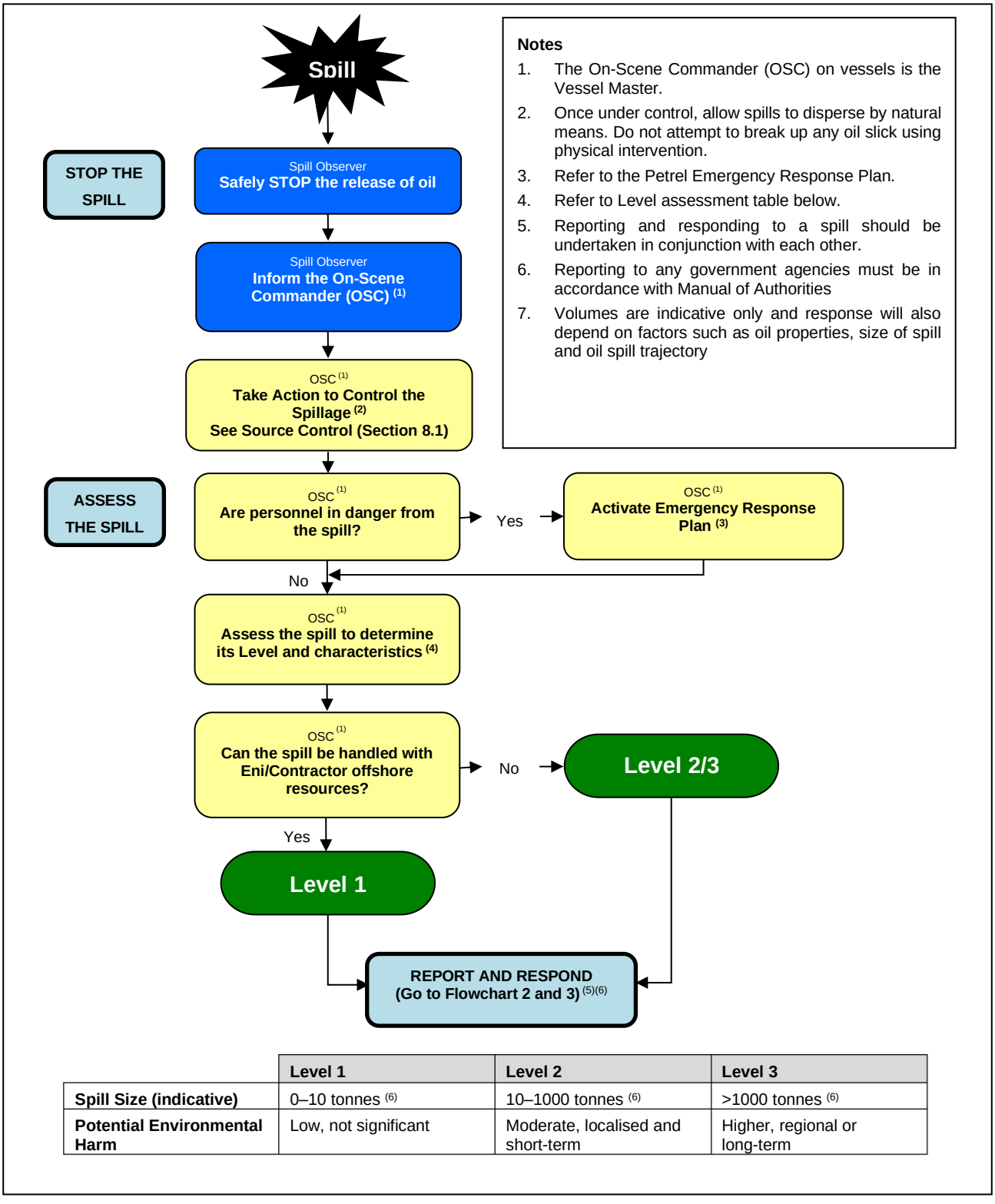
WHAT TO DO IF AN OIL SPILL OCCURS OFFSHORE?

1. Stop the Spill (Flowchart 1).
2. Assess the Spill (Flowchart 1).
3. Report the Spill (Flowchart 2).
4. Monitor the Spill (Flowchart 3).
5. Combat the Spill (Flowchart 3).

TEN QUESTIONS

1. What is it (hydrocarbon type)?
2. Where?
3. How big (quantity/size)?
4. Is the source contained?
5. Are all personnel safe?
6. What is in the way/what could it contact?
7. How long is it until it gets there?
8. Weathering?
9. Worst credible scenario?
10. What can we do?

FLOWCHART 1 – STOP AND ASSESS THE SPILL

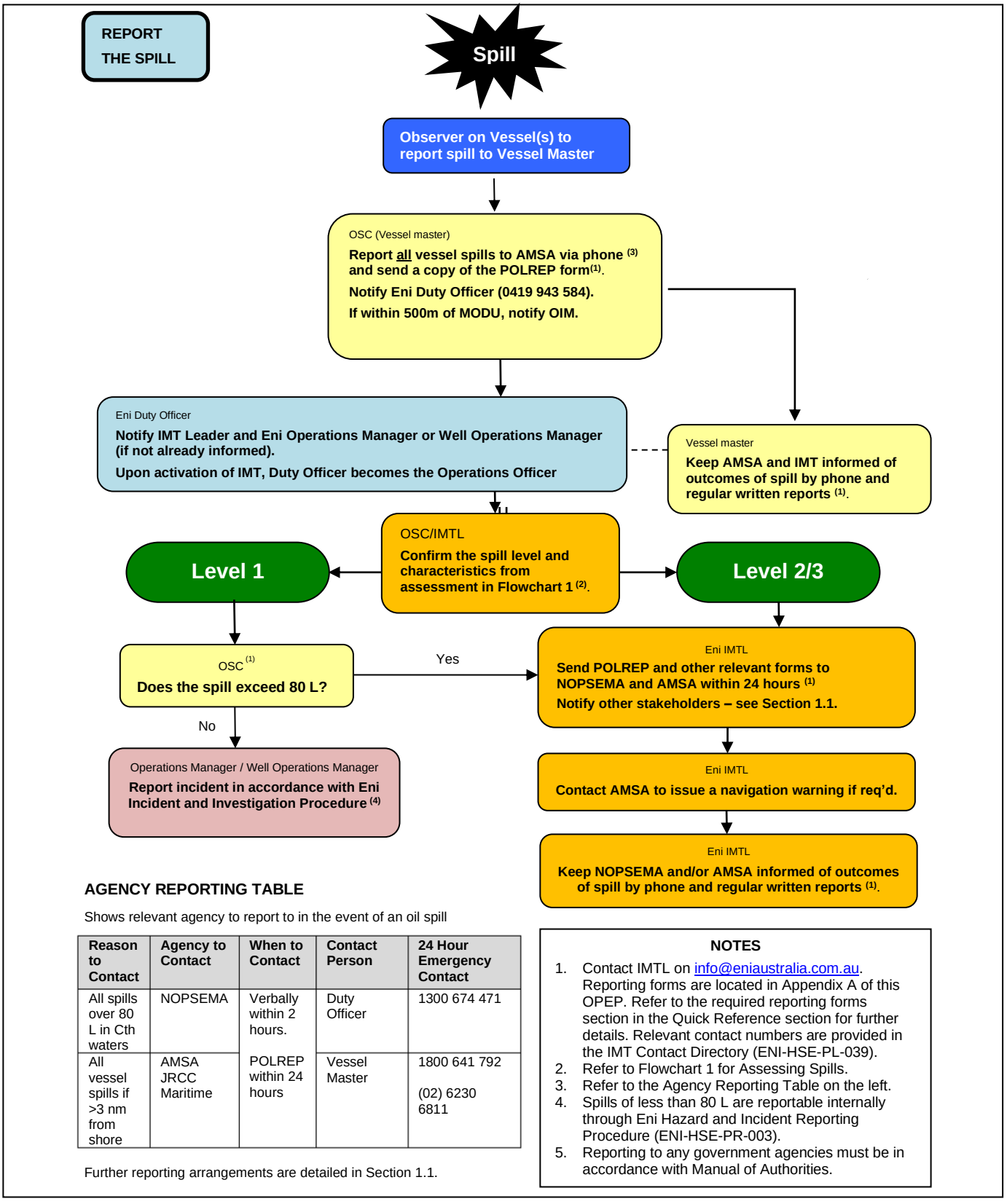


Notes

1. The On-Scene Commander (OSC) on vessels is the Vessel Master.
2. Once under control, allow spills to disperse by natural means. Do not attempt to break up any oil slick using physical intervention.
3. Refer to the Petrel Emergency Response Plan.
4. Refer to Level assessment table below.
5. Reporting and responding to a spill should be undertaken in conjunction with each other.
6. Reporting to any government agencies must be in accordance with Manual of Authorities
7. Volumes are indicative only and response will also depend on factors such as oil properties, size of spill and oil spill trajectory

	Level 1	Level 2	Level 3
Spill Size (indicative)	0–10 tonnes (6)	10–1000 tonnes (6)	>1000 tonnes (6)
Potential Environmental Harm	Low, not significant	Moderate, localised and short-term	Higher, regional or long-term

FLOWCHART 2 – REPORT THE SPILL



AGENCY REPORTING TABLE

Shows relevant agency to report to in the event of an oil spill

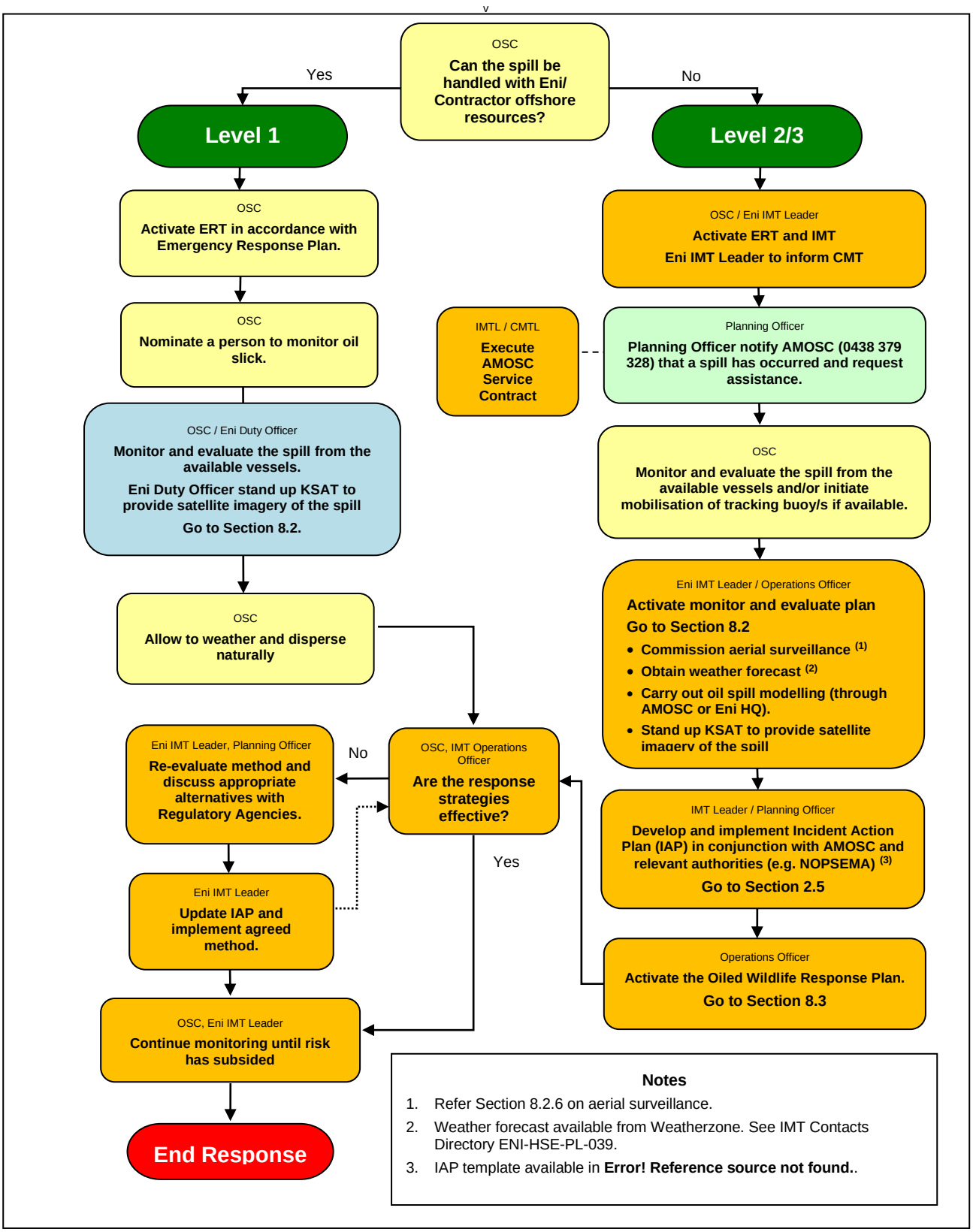
Reason to Contact	Agency to Contact	When to Contact	Contact Person	24 Hour Emergency Contact
All spills over 80 L in Cth waters	NOPSEMA	Verbally within 2 hours.	Duty Officer	1300 674 471
All vessel spills if >3 nm from shore	AMSA JRCC Maritime	POLREP within 24 hours	Vessel Master	1800 641 792 (02) 6230 6811

Further reporting arrangements are detailed in Section 1.1.

NOTES

1. Contact IMTL on info@eniaustralia.com.au. Reporting forms are located in Appendix A of this OPEP. Refer to the required reporting forms section in the Quick Reference section for further details. Relevant contact numbers are provided in the IMT Contact Directory (ENI-HSE-PL-039).
2. Refer to Flowchart 1 for Assessing Spills.
3. Refer to the Agency Reporting Table on the left.
4. Spills of less than 80 L are reportable internally through Eni Hazard and Incident Reporting Procedure (ENI-HSE-PR-003).
5. Reporting to any government agencies must be in accordance with Manual of Authorities.

FLOWCHART 3 – RESPONSE (MONITOR AND COMBAT)



IMMEDIATE NOTIFICATIONS		
Action	**Vessel spill**	
Initial evaluation by OSC	Vessel Master	
Internal Notification	**For spills during Decommissioning Activities** (MODU in the field)	**For spills during Vessel Activities** (MODU not in the field)
	Vessel Master informs the MODU OIM (decommissioning operations) of any vessel spills with 500m of the MODU	Vessel Master notifies the Duty Officer: 0419 943 584
	OIM notifies the Drilling Superintendent	
	Drilling Superintendent notifies the Duty Officer: 0419 943 584	
	Duty Officer notifies: • IMTL • Well Operations Manager	Duty Officer notifies: • IMTL • Operations Manager
	Spills of less than 80 L are reportable internally through Eni Hazard and Incident Reporting Procedure (ENI-HSE-PR-003).	
Completion of POLREP by OSC	Well Operations Manager	Vessel Master (OSC)
External Notification	All vessel spills to be reported to AMSA within 2 hours by the Vessel Master or Eni Duty Officer.	
	The Vessel Master or Well Operations Manager will report spills over 80L in Cth waters via phone to NOPSEMA within 2 hours. Send POLREP and other relevant forms (Appendix A). For ongoing response in event of Level 2/3 the IMTL will send the POLREP and SITREP. See 1.1 for all IMT notifications.	

REQUIRED REPORTING FORMS (All reporting forms are contained within Appendix A)			
Form No.	**Form Title**	**Use**	**Submit to**
028	Marine Pollution Report (POLREP)	Primarily a "first report" used to notify Government agencies, AMOSC and Eni IMT of a spill.	• AMSA (vessel spills) • AMOSC (all spills where support is required) • NOPSEMA (spills in Commonwealth waters) • WA DoT (spills in WA waters) • NT DEPWS (spills in NT waters) • Eni IMTL/Duty Officer
029	Marine Pollution Situation Report (SITREP)	For ongoing reports. Spill response activities are reported on this form.	Refer Form ENI-HSE-FR-028.
FM0831	NOPSEMA Reportable Environmental Incident Form (Part 1)	A "reportable incident" is an incident associated with the activity that has caused or has the potential to cause moderate to significant environmental damage (e.g. oil spill of greater than 80L).	NOPSEMA (within three days of incident).
FM0831	NOPSEMA Reportable Environmental Incident Form (Part 2)	A "reportable incident" is an incident associated with the activity that has caused or has the potential to cause moderate to significant environmental damage (e.g. oil spill of greater than 80L).	NOPSEMA (within 30 days of incident).
FM0928	Recordable Environmental Incident Monthly Summary Report	A monthly report used to summarise any recordable incidents. A recordable incident is an incident arising from the activity that breaches a performance objective or standard in the EP and is not a reportable incident.	NOPSEMA (not later than 15 days after the end of the calendar month).

For contact details, refer to Section 1.1: Notifications or Eni IMT Emergency Contacts Directory ENI-HSE-PL-039.

1.1 Notifications

On a vessel, the observer must notify the Vessel Master, who in turn will notify the OSC if within the 500m of the MODU.

The On-Scene Commander (OSC) is appointed by default as follows:

- Vessel Activities: Vessel Master; and
- Decommissioning Activities when MODU is in the field: MODU Offshore Installation Manager (OIM).

The OSC or Well Operations Manager shall report spills greater than 80 litres to NOPSEMA verbally within two hours. The OSC or Well Operations Manager (Level 1 spill) or IMT Leader (IMTL) (Level 2/3 spills) is responsible for written reporting to NOPSEMA and other external authorities. A written report of the event must be provided to NOPSEMA within three days. Eni shall report spills less than 80 litres to NOPSEMA within 15 days of the end of the reporting month.

All spills must be reported to AMSA, regardless of location. The OSC shall notify AMSA within two hours. A POLREP form (Appendix A) is required to be sent to AMSA in order to provide details of the spill. The OSC shall prepare the POLREP form.

For spills occurring in Commonwealth waters requiring, or potentially requiring external assistance (i.e. Level 2/3 spills), the IMTL is responsible for subsequent activations and notifications, which will depend on the circumstances of the spill (Table 1-1).

For the full list of contacts and contact details, refer to the IMT Emergency Contact Directory ENI-HSE-PL-039.

Table 1-1: Notifications by the IMT if activated (Level 2/3)

NOTIFICATIONS TO BE COMPLETED BY ENI'S INCIDENT MANAGEMENT TEAM			
Notification Timing	**Authority/ Company**	**Contact Number**	**Instruction**
As soon as practicable	AMOSC	24/7 Duty Office: 0438 379 328 (24/7)	As soon as practicable
As soon as practicable	OSRL	24/7 Duty Office: +65 6266 1566 (Singapore) 24/7 Duty Officer: +61 8 6557 8552 (Perth)	Notify OSRL that a spill has occurred, and Eni may require the stand-up of the resources and equipment.
Within 2 hours	AMSA Joint Rescue Coordination Centre (JRCC)	24/7 hotlines: Within Australia: 1800 641 792 Outside Australia: (02) 6230 6811 https://amsa-forms.nogginoca.com/public/	Verbal notification within 2 hours. Written POLREP within 24 hours on request from AMSA (Appendix A).

NOTIFICATIONS TO BE COMPLETED BY ENI'S INCIDENT MANAGEMENT TEAM			
Notification Timing	**Authority/ Company**	**Contact Number**	**Instruction**
Within 2 hours	NOPSEMA	1300 674 472 Incident reporting requirements: https://www.nopsema.gov.au/environmental-management/notification-and-reporting/	Verbal within 2 hours Written report as soon as practicable, no later than three days
As soon as practicable	Department of Climate Change, Energy, the Environment and Water (DCCEEW)	epbc.permits@environment.gov.au	Email notification as soon as practicable.
Within 7 days	National Offshore Petroleum Titles Administrator (NOPTA)	reporting@nopta.gov.au	Written report to NOPTA within seven days of the initial report being submitted to NOPSEMA. Provide same written report as provided to NOPSEMA
Incidences which occur within an Australian Marine Park (AMP) or are likely to impact on an AMP	Director of National Parks (DNP)	Director of Marine Parks: 0419 293 465 (24-hour Marine Compliance Duty Officer)	The DNP should be made aware of oil/gas pollution incidences which occur within an AMP or are likely to impact on an AMP as soon as possible.
Should impact be expected to community members including: • fishing industry; • tourism industry; • local community; and • indigenous groups.	Refer to Petrel Stakeholder Database for stakeholder representatives	Refer to Petrel Stakeholder Database for stakeholder representatives	Contact relevant stakeholder representatives as per details within the Petrel Stakeholder Database

1.2 Escalation and De-Escalation of Response Levels

Table 1-2 lists escalation and de-escalation response triggers. The OSC is responsible for de-escalation and termination of the response for Level 1 spills. The IMTL is responsible for escalation and de-escalation of Level 2 or 3 spills.

Table 1-2: Escalation and de-escalation triggers for oil spill response

Escalation Triggers	De-escalation Triggers
An incident will escalate from Level 1 to a 2 if: • Greater than 10m^3 of oil has been spilt or is predicted to spill in the near future; or • Additional support resources are required at local, regional or national level.	The incident will be de-escalated from Level 2 to 1 if the hydrocarbon source is under control and additional support resources are no longer required.
The level will escalate from Level 2 to a 3 if: • Greater than 1000m^3 of oil has been spilt or is predicted to spill in the near future; or • The surface slick is predicted to reach a shoreline; or • Significant external support (from local, regional, national and international organisations) and/or a response of an extended duration is required. Incident controller delegates all incident management functions to focus on leadership and strategy.	The incident will be de-escalated from Level 3 to 2 when: • Continued response activities will have no further improvements; or • Endpoint criteria for response strategies have been met.

1.2.1 Spill Response Levels

Eni's incident response levels broadly align with state, territory and national incident response plans including the WA MEE, NT Plan and the NatPlan. Spill response levels help to identify the severity of an oil spill incident and the level of response required to manage the incident and mitigate environmental impacts. Incident response levels are further detailed in Table 1-3 for hydrocarbon spills.

Table 1-3: Eni oil spill response levels

Level 1	
An incident which will not have an adverse effect on the public or the environment. An incident which can be controlled by the use of resources normally available on-board vessel in the case of this EP without other external assistance.	
As a guide only – spills up to 10 tonnes (0–70bbl or 0–11m^3). Oil is contained within the incident site. Spill occurs within immediate site proximity. Able to respond to the spill immediately.	Source of spill has been contained. Oil is evaporating quickly and no danger of explosive vapours. Spill likely to naturally dissipate. No media interest/not have an adverse effect on the public.
Level 2	
An incident that cannot be controlled by using onsite resources alone and requires external support and resources to combat the situation; or An incident that can be controlled onsite, but which may have an adverse effect on the public or the environment.	
All spills between 10 and 1000 tonnes (71–7000bbl or 11m^3–1113m^3). Danger of fire or explosion. Possible continuous release. Concentrated oil accumulating in close proximity to the site or vessel. Potential to impact other installations.	Level-1 resources overwhelmed, requiring additional regional resources. Potential impact to sensitive areas and/or local communities. Local/national media attention/may adversely affect the public or the environment.
Level 3	
An event capable of determining a very dangerous condition for the site and/or the surrounding area. An incident which may require the mobilisation of external state, national or international resources to bring the situation under control.	
Loss of well integrity. Actual or potentially serious threat to life, property, industry. Major spill beyond site vicinity. As a guide – spills above 1,000 tonnes (>7000bbl or >1113m^3). Significant shoreline environmental impact.	Level-2 resources overwhelmed, requiring international assistance. Level-3 resources to be mobilised. Significant impact on local communities. International media attention.

1.2.2 Initial OPEP activations for a Level 1 spill

The OSC is responsible for initial activations for a Level 1 spill. Also refer to Flowcharts 1, 2 and 3 above.

Table 1-4: Activations for Level 1 spills

When	Activation	Who
Immediate	Manage the safety of personnel on the vessel / MODU and in operational area.	OSC
Immediate	Control the source using resources as per the SOPEP and OPEP. Refer to **Source Control** – go to **Section 8.1**.	OSC
30 minutes	Make initial notifications. Activate the **Notifications Plan** – go to **Section 1.1**.	OSC
90 minutes	Monitor and evaluate the spill from the available vessels. Go to **Section 8.2**.	OSC
Ongoing	Provide updates and incident reporting in accordance with Notifications Plan – go to **Section 1.1**. For vessel spills in Commonwealth waters, Eni will act as Control Agency until such time that AMSA assumes the role of Control Agency in which case Eni will follow direction of AMSA and provide all necessary onsite resources.	OSC

1.2.3 Initial OPEP activations for a Level 2/3 spill

Following activation of the first strike plan outlined in Flowcharts 1, 2 and 3, the response will be activated as follows.

Table 1-5: Activations for Level 2/3 spills response

FOR IMMEDIATE RESPONSE ACTIVATIONS (<1 HR) REFER TO FLOW CHART 1, 2 AND 3			
When	**Objective**	**Strategy**	**Who**
90 minutes	Gain situational awareness and undertake spill surveillance.	Activate the **Monitor and Evaluate Plan** – go to **Section 8.2**.	Operations Officer Logistics Officer Environmental Advisor
3 hours	Use operational inputs to inform the response planning	Initiate the development of **Incident Action Plan** – go to **Section 2.5** and template in Appendix B**.**	Planning Officer Environment Advisor
5 hours	Prevent/mitigate impacts to wildlife.	Activate the **Oiled Wildlife Response Plan** – go to **Section 8.3**.	Environmental Advisor Operations Officer
8 hours	Manage the safety of all responders.	Initiate the development of a **Safety Management Plans**.	Safety Officer
1 day	Assess and monitor impacts from spill and response.	Activate **Scientific Monitoring Plan** – go to **Section 8.4**.	Environmental Advisor Planning Officer Logistics Officer
Ongoing	For vessel spills in Commonwealth waters, following notification of a Level 2/3 vessel spill, AMSA as the legislated Control Agency, may formally assume control of the spill response and provide direction to those activities already commenced by Eni.		N/A

1.3 Mobilisation of Response Strategies

The following response strategies have been identified in the pre-operational Net Environmental Benefit Analysis (NEBA) (Section 7). Mobilisation of response strategies is dependent on the spill level (Refer to Flowchart 1 for Spill Response Levels).

Table 1-6 and Table 1-7 present the first response actions relevant for Level 1 and Level 2/3 Marine Diesel Oil (MDO) spills. Response strategies should be re-evaluated in an Operational NEBA (Section 7).

Table 1-6: NEBA summary and operational plans for response strategies – Level 1

Strategy	Applicable	First response actions	Action by	Resource
Monitor and Evaluate	Yes	Appoint vessel crew to observe the spill area or slick	OSC	Section 8.2 (Monitor and Evaluate) 000694_DV_ES.HSE .0286.000_00 (OSMP)
		Stand up KSAT to provide satellite imagery of the spill	Eni Duty Officer	
Source control	Yes	Implement SOPEP	OSC	SOPEP See Section 8.1

Table 1-7: NEBA summary and operational plans for response strategies – Level 2/3

Strategy	Applicable	First response actions	Action by	Resource
Monitor and Evaluate	Yes	Implement OMP1 – mobilise vessel and aircraft for surveillance.	IMTL	Section 8.2 (Monitor and Evaluate) 000694_DV_ES.HSE .0286.000_00 (OSMP)
		Deployment of satellite tracking buoy	OSC	
		Implement OMP2 – sample hydrocarbon for chemical and physical properties.	IMTL	
		Source real time oil spill modelling via AMOSC.	Planning Officer	
		Stand up KSAT to provide satellite imagery of the spill.	Ops Officer	
		Depending on results of modelling and monitoring, consider OMP3. Mobilise resources for marine megafauna assessment.	IMTL	
Source control	Yes	Implement Shipboard Oil Pollution Emergency Plans (SOPEP) or equivalent.	OSC	SOPEP See Section 8.1
Shoreline clean up	No	N/A	N/A	N/A
Surface Dispersants	No	N/A	N/A	N/A

Subsea Dispersants	No	N/A	N/A	N/A
Containment and Recovery	No	N/A	N/A	N/A
Protection and Deflection	No	N/A	N/A	N/A
Oiled wildlife response	Yes	Equipment from AMOSC, OSRL, and AMSA if required. Western Australian Stockpiles and relevant personnel mobilised.	Logistic Officer	Section 8.3
Waste Management	No	N/A	N/A	N/A
Scientific Monitoring	Yes	Set up Purchase Order under Eni Environment and Social Impact Consultancy Services Panel	Logistic Officer	000694_DV_ES.HSE.0286.000_00(OSMP)
In-situ burning	No	N/A	N/A	N/A

1.3.1 Operational and Scientific Monitoring

Details on Eni's Operational and Scientific Monitoring capability and mobilization is included in the OSMP (000694_DV_PR.HSE.0286.000).

2 OIL POLLUTION EMERGENCY PLAN OVERVIEW

This OPEP has been developed specifically to respond to emergency oil spills as described and defined in the associated Petrel Environment Plan (EP):

- Petrel-3 and Petrel-4 Monitoring and Decommissioning EP (000694_DV_ES.HSE.0027.000_00).

2.1 Scope

The OPEP is an operational document and contains all information necessary for Eni to carry out a response to an emergency oil spill. This OPEP applies to all activities relating to Petrel-3 and Petrel-4 activities. It includes organisational responsibilities, actions, reporting requirements, and resources available to ensure the effective and timely management and response to an accidental oil spill.

For vessel based spills it will be the responsibility of the vessel owner to respond in accordance with the vessel specific Shipboard Oil Pollution Emergency Plan (SOPEP). This OPEP has been developed to support the individual vessel-based SOPEPs and details the interaction between contracted vessels spill response plans and Eni response arrangements in the event of an oil spill.

The coverage of this OPEP is based on the associated spill modelling and encompasses the Environment that May Be Affected (EMBA), Zone of Potential (ZPI) (moderate exposure area) presented in the Petrel-3 and Petrel-4 Monitoring and Decommissioning EP.

2.2 High-Level Objectives of OPEP

The overall aim of this OPEP is to prevent long term significant environmental impacts by safely limiting the adverse environmental effects from an unplanned release of hydrocarbons to the marine environment to a level that is as low as reasonably practicable (ALARP); this will be achieved through the implementation of the various strategies presented throughout this OPEP, each with their own objectives.

2.3 Interface with External Plans

The OPEP is integrated with a number of governments plans as well as oil industry mutual assistance plans. These are listed in Table 2-1.

Table 2-1: Associated External Plans

Jurisdiction	Plan Title	Administering Agency	Function/Application
Industry (all waters)	Australian Marine Oil Spill Centre Plan (AMOSPlan)	Australian Marine Oil Spill Centre (AMOSC)	Sets out industry arrangements for mutual aid and access to AMOSC resources.
Commonwealth of Australia (Cth waters)	National Plan for Maritime Environmental Emergencies (NatPlan)	AMSA	Sets out oil spill preparedness and response procedures under the NatPlan.

2.4 Interface with Internal Documents

This OPEP interfaces with other relevant Eni crisis and emergency plans as detailed in Table 2-2.

Table 2-2: Eni Crisis and Emergency Management Plans

Document Title	Document Number	Scope and Function
Eni HSE IMS Framework	ENI-HSE-IN-002	Describes the way in which security, safety, health and the environment are managed by Eni.
Eni Crisis Management Plan	ENI-HSE-PL-033	Company-wide plan setting out Crisis Management Team (CMT) procedures.
Eni Incident Management Plan (IMP)	ENI-HSE-PL-034	Covers company-wide emergency management. Integrated with facility and Project environmental management plans.
IMT Support Team Manual	ENI-HSE-PL-037	Covers operation and roles and responsibilities of IMT support teams, including Oil Spill Response Planning Team, Aerial Surveillance Team, and Oil Spill Response Logistics team. Provides support team checklists.
IMT Emergency Contact Directory	ENI-HSE-PL-039	Provides extensive list of government, contractor and Eni contacts and contact details.
Eni Petrel Emergency Response Plan		Covers Petrel Facility emergency response.
Vessel Shipboard Oil Pollution Emergency Plans (SOPEPs)	As per contractor document control	SOPEPs as per International Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocol of 1978 relating thereto (MARPOL) requirements.

2.5 Incident Action Plan

The Incident Action Plan (IAP) is a key step in managing any significant response, recognising that all incidents are different and will be subject to variable factors such as weather, timing (seasons), sea state, duration, size and nature of release. The purpose of the IAP is to consider all these variable and changing factors, to ensure the response continues to be suitable for the event.

The IAP will use operational monitoring inputs to inform the response planning. The IAP will detail the response mechanisms and priority areas for protection based on the actual circumstances of the event, taking into account the spill trajectory, weather conditions and safety considerations.

Given the range of potential outcomes from a release event, an IAP is a critical step identified in the response strategy. Key activities to be addressed by the IAP include a review of the Net Environmental Benefit Analysis (NEBA), oil spill modelling (OSM), and ongoing consultation with affected/ involved stakeholders. To ensure that the IAP is appropriate for the nature of the spill, Eni shall seek the advisory support of technical experts as nominated by AMSA, AMOSC, and operators with activities within the spill area.

Table 2-3 presents the steps for developing the IAP. A blank IAP template is provided in Appendix B.

Table 2-3: Incident Action Plan procedure

Task		Description	Action
1	Set Response Aim	This Response Aim is a broad statement of the overriding aim of the response, i.e. what the response is aiming to achieve. It may also set priorities. The aim may be set by the IMTL, Crisis Manager or Statutory Authority.	IMTL
2	Set Objectives	These are "goal statements" and indicate desired individual outcomes of the response (e.g. containment and recovery at location A). They are generally set by the IMTL.	Entire IMT
		Objectives may be set for all functions within the response. For example, "Delivery of equipment" might be an objective for the Logistics Officer.	
		Objectives should be ranked according to priorities, which are decided by the IMTL.	
3	Determine Response Strategies	Strategies describe how the IMT (in particular Operations) plan to achieve the stated objectives.	Relevant IMT Officers
		Strategy options may be limited by weather, availability of equipment or by a range of operational constraints.	
		The NEBA (Section 7) will present viable and appropriate strategies.	Planning Officer
		Some strategies may require regulatory approval. Obtain any permits required.	IMTL
4	Determine Tactics or Methods	Methods for implementing may be written as a series of tasks detailing the deployment of personnel and equipment.	Relevant IMT Officers
	Prepare/ Review	This may include, aerial surveillance, marine response, media, etc.	
5	Sub Plans	The Planning Officer should identify relevant plans for achieving the set objectives and coordinate the development of these plans, e.g. aerial surveillance and vessel surveillance.	Planning Officer
		The Logistics Officer should compile a list of equipment, personnel and service requirements for the planned response.	Logistics Officer

6	Collate the IAP	Collate the IAP (Aim, Objectives, Strategies, Methods and Logistics etc.) and distribute to IMT and IMT officers.	Planning Officer
7	Approve IAP	The IMTL must approve the IAP and any revisions to the IAP. The IMTL is responsible for ensuring the IAP is consistent with regulatory requirements and this OPEP.	IMTL
8	Monitor	Monitor the progress of the response and assess against objectives.	Planning Officer
		Notify IMTL of the need to revise the IAP.	
9	Revise IAP	Repeat this process during the response as the situation, objectives, strategies or tactics change.	N/A

3 RESOURCES AND MOBILISATION SUMMARY

3.1 AMOSC, OSRL and AMSA Resources Available

Table 3-1: Resource and mobilisation overview

Resource	Time period from notification to mobilise		
	<24 hours	**48-72 hours**	**> 96 hours**
AMOSC	Deploy from various stockpile locations. Transport: Aircraft	Deploy from various stockpile locations. • Transport: Aircraft/truck/boat–optimum will be chosen. • Oiled Wildlife Equipment.	Deploy from various stockpile locations. Transport: Aircraft/truck–optimum will be chosen. • Communications • Tracking Buoys • Oiled Fauna Kit.
OSRL	-	Available is 50% of the OSRL equipment (if required). Time for delivery of equipment will vary–commence receiving within 72 hours.	-
AMSA	Deploy from various locations Transport: Aircraft	Deploy from various stockpile locations. Transport: Truck/boat/aircraft–optimum will be chosen. • Oiled Fauna Kit.	Deploy from various stockpile locations. Transport: Aircraft/truck–optimum will be chosen. • Communications • Tracking Buoys • Oiled Fauna Kit.

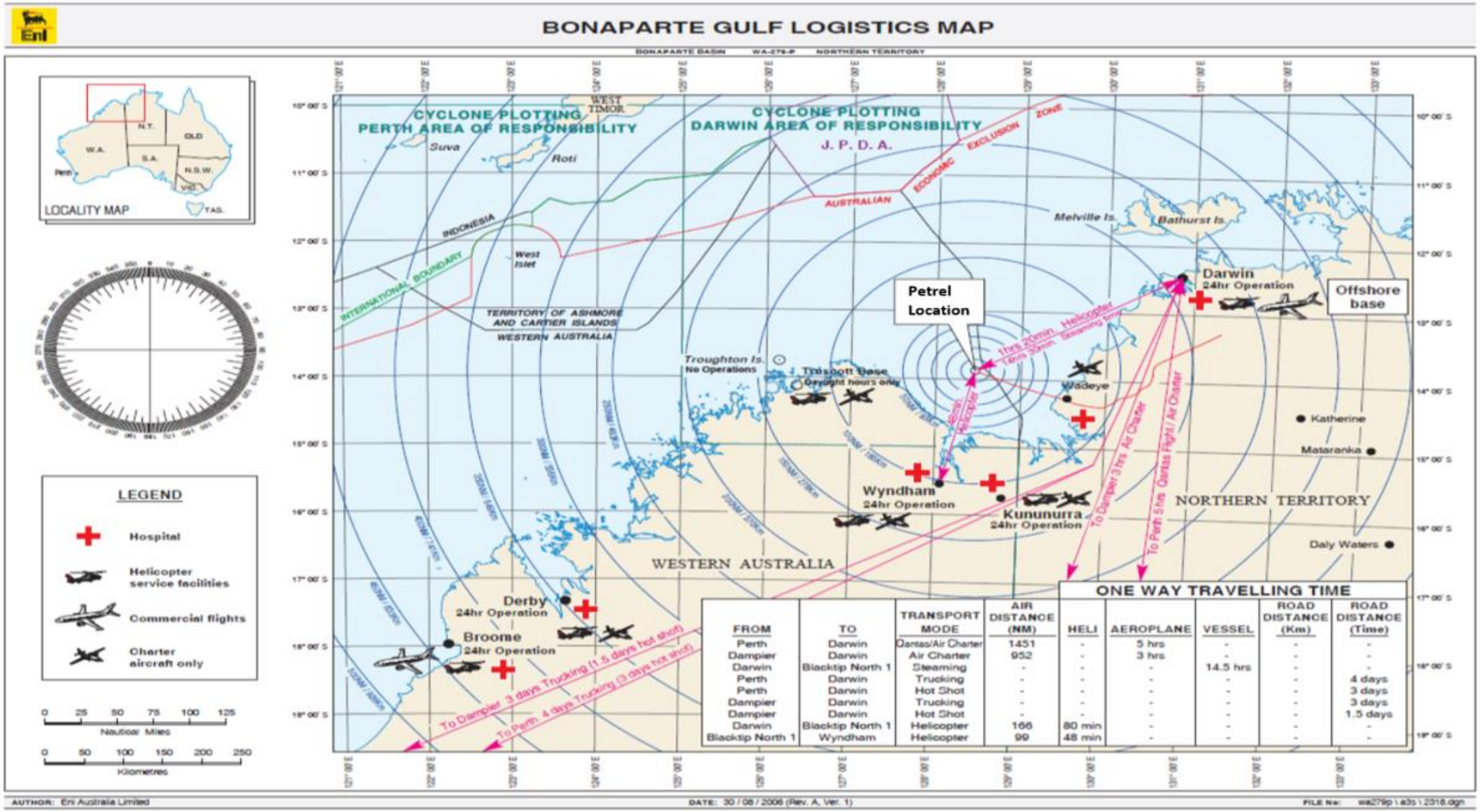


Figure 3-1: Logistics map with aerial support bases, response times

3.2 Logistics Resources

Eni's supply base in Darwin is the TOLL Supply Base. TOLL is Eni's integrated logistics provider in Australia and will support of emergency services. TOLL has contracted ISS as Toll's (Australian) national emergency responder.

TOLL can provide immediate access to maritime professionals through their personnel network in Darwin and Perth that could assist in the event of a spill.

Company	Function	Contact Details
TOLL	ISS emergency response	ISS 24/7 emergency responder: 1300 131 001 info@iss-solutions.com.au
	Reception (Eni)	+61 8 9320 1111
	Logistics – Support (Eni)	+61 488 101 637

3.3 Aircraft Resources

Eni has contracts in place with Offshore Services Australia (OSA), PHI and Hardy Aviation Solutions.

Company	Contact Details
Offshore Services Australia Truscott Operations	OSA.TSTOPS@chcheli.com +61 8 9161 4072
PHI	phibmeops@phi-int.com +61 8 9138 7719
Hardy Aviation	ops@hardyaviation.com.au + 61 427 278 110

These aircraft may be used for:

- Aerial observation duties;
- Transportation of personnel to attend to a response; and
- Transportation of equipment.

If additional aircraft are required, other helicopter and fixed wing aircraft service providers in Darwin and Broome will be contacted. Service providers include:

- Hardy Aviation.

If local aircraft are unavailable, or sources cannot be located, the IMT Logistics Officer will immediately contact the Senior Search and Rescue Officer-Aviation (SARO) Australian Search and Rescue (AusSAR) Canberra for available aircraft. The request should specify the task to be performed by an aircraft.

When implementing aerial resources, a flight exclusion is required from the Civil Aviation Safety Authority via AMSA.

The types of aircraft available to Eni in the event of a spill, and their capability is summarised in Table 3-2.

Table 3-2: Aircraft resources

Transport Type	Base	Oil Spill Response Capability	Comment
Helicopters	Truscott	OSA and PHI AMOSC and AMSA. Visual observation.	Pilot and trained observer deployed from Darwin, for visual spill observations. Search and rescue support.
Fixed wing aircraft	Darwin and Truscott.	Murin through TOLL. Visual observation. Cargo. General transport.	Additional resources may be contracted through TOLL.
Chartered fleet	Truscott, Darwin, Derby or Broome. Australia. International.	AMSA and AMOSC. Visual observation. Technical cameras.	Pilot and trained observer deployed from Darwin, for visual spill observations. Highly technical camera system to measure thickness of the oil slick - GIS mapping, to direct booms and to produce a daily chart for visual observations and to check for anomalies.

3.4 Vessel Resources

In the event of a spill, vessels may be required for assistance in any one of the response strategies for transportation of equipment or active involvement in spill response activities. Vessels may be required for:

- Marine surveillance duties;
- Transportation of personnel to attend a response;
- Oiled wildlife response; and
- Transportation of equipment.

Within 12 hours of a spill, the IMT Logistics Officer will identify any vessels within the immediate area with a capability to assist with the response if required. The Logistics Officer may identify vessel of opportunity by making contact with Shipping Agents within Darwin (as specified on the Darwin Port Handbook).[1]

Eni may also engage through TOLL all vessel operators and owners in WA, NT and Singapore to charter suitable vessels. Refer to Section 3.2 for TOLL contact details.

The IMT Logistics Officer would then make contact with other shipping agents to determine what vessels are available in the greater region, such as areas including Broome, Dampier and Exmouth. However, relevant transit times are to be considered as part of procuring vessels from distant locations. Spot hire vessel contracts will specify the requirement for use of mud/slops tanks as part of the spill response for recovered

[1] Available: https://www.darwinport.com.au/trade/port-handbook

oil, this will enable greater capacity of storage on-board the vessel. Storage capacities are expected to vary between vessels, however vessels with larger capacities will be utilised for recovery operations.

Vessels contracted to assist in the spill will be utilised to support a number of response activities such as oiled wildlife and shoreline protection, and throughout the duration of the spill the vessel role may change from one response activity to focus on another (shoreline protection to shoreline clean-up). The Logistics, Planning and Operations Officers will continually assess the vessel resources available and determine the most efficient means of use.

3.5 Labour Hire

The contract with TOLL includes provision for labour hire. Refer to Section 3.2 for TOLL contact details.

Additional response personnel can be accessed through AMOSC Core Group if required (up to 100 personnel available). See Section 4.2.3 for further details.

4 OPEP REQUIREMENTS AND LEGISLATIVE FRAMEWORK

The OPEP has been developed to meet all relevant requirements of the OPGGS(E) Regulations 2023. It is consistent with the national system for oil pollution preparedness and response, including:

- The National Plan for Maritime Environmental Emergencies (NatPlan) managed by the Australian Maritime Safety Authority (AMSA) (AMSA, 2020); and
- Australian Government Coordination Arrangements for Maritime Environmental Emergencies (AMSA, 2017)

The OPEP also provides information consistent with Appendix 5 of the Offshore Petroleum Industry Guidance Note - Marine Pollution: Response and Consultation Requirements.

This OPEP is made available to the following Regulatory agencies and stakeholders:

- National Offshore Petroleum Safety and Environmental Management Authority (NOPSEMA);
- Australian Maritime Safety Authority (AMSA);
- Australian Maritime Oil Spill Centre (AMOSC);
- Western Australia Department of Transport as the Hazard Management Authority (WA DoT); and
- NT Department of Environment, Parks and Water Security (DEPWS).

A summary of all relevant legislation is provided in Table 4-1.

Table 4-1: Relevant Commonwealth legislation

Legislation	Purpose	Authority
Environmental Protection and Biodiversity Conservation Act 1999	Protection of Australia's environment and biodiversity values	DCCEEW
Environmental Protection and Biodiversity Conservation Regulation 2000	Protection of Australia's environment and biodiversity values	DCCEEW

4.1 Jurisdictional Authorities and Control Agencies

During a spill response there will be both a Jurisdictional Authority and a Control Agency assigned to the oil spill incident for all spill response levels depending on the location and spill origin. The National Plan for Maritime Environmental Emergencies (AMSA, 2020) sets out the divisions of responsibility for an oil spill response.

Definitions of Control Agency and Jurisdictional Authority are as follows:

- Control agency: the organisation assigned by legislation, administrative arrangements or within the relevant contingency plan, to control response activities to a maritime environmental emergency. Control agencies have the

operational responsibility of response activities but may have arrangements in place with other parties to provide response assistance under their direction.

- Jurisdictional authority: the agency which has responsibility to verify that an adequate spill response plan is prepared and, in the event of an incident, that a satisfactory response is implemented. The Jurisdictional Authority is also responsible for initiating prosecutions and the recovery of clean-up costs on behalf of all participating agencies.

Table 4-2 provides guidance on the designated Jurisdictional Authority and Control Agency for all hydrocarbon spills in Commonwealth and State/Territory waters.

Table 4-2: Marine oil pollution arrangements for spills in Commonwealth waters

Role	Spill Level	Commonwealth waters	
		Petroleum activities[1]	Vessel[2]
Control Agency	1	Eni	AMSA
	2/3	Eni	AMSA
Jurisdictional Authority	1/2/3	NOPSEMA	AMSA

[1]Includes a 'facility', such as a fixed platform, FPSO/FSO, MODU, subsea infrastructure, or a construction, decommissioning and pipelaying vessel. As defined by Schedule 3, Part 1, Clause 4 of the OPGGS Act 2006

[2]Vessels are defined by Australian Government Coordination Arrangements for Maritime Environmental Emergencies (AMSA, 2017) as a seismic vessel, supply or support vessel.

In all instances, Eni will act in the role of Control Agency, and implement a first-strike response, until such time that another Control Agency (referred to in Table 4-2) takes control if required.

The provision of resources for any level of oil spill event response will be coordinated by Eni IMT when Eni are the Control Agency.

Support agencies may be requested to join the Eni IMT at the commencement of an incident. Triggers for inviting the support agencies into the IMT are provided in Table 4-3.

Table 4-3: Triggers for Jurisdictional Authorities and support organisations to join the Eni IMT

Support	Trigger to join the IMT
AMSA	Spill response activated or requiring NatPlan Resources. An event which has, in the opinion of the IMTL, the potential to escalate into a Level 2 or Level 3 spill.
AMOSC and OSRL	Level 2 or Level 3 spill requiring AMOSC support and Core Group members or specialist OSRL resources. An event which has, in the opinion of the IMTL, the potential to escalate into a Level 2 or Level 3 spill.

Note: Based on spill modelling undertaken for the Worst Credible Spill Scenario (WCSS) scenarios identified in the Petrel-3 and Petrel-4 Monitoring and Decommissioning EP, it is expected that spill response will take place primarily, and potentially completely, within offshore Commonwealth waters. Therefore, the arrangements for State/Territory waters response have not been included.

4.2 Relevant Authorities

4.2.1 Response to Vessel spills in Commonwealth Waters

For a vessel incident originating in Commonwealth waters, the Jurisdictional Authority and Control Agency is AMSA. AMSA is the national shipping and maritime industry regulator and was established under the Australian Maritime Safety Authority Act 1990. AMSA manages the NatPlan on behalf of the Australian Government, working with State

and the Northern Territory governments, emergency services and private industry to maximise Australia's marine pollution response capability.

Eni is required to have adequate preparedness arrangements for spills from vessels undertaking Petroleum Activities within Commonwealth waters under OPGGS Act 2006 and OPGGS(E) Regulations.

Eni will be responsible for coordinating a first-strike response to a vessel-based spill in Commonwealth waters until such time as AMSA takes over the role as Control Agency, at which time Eni would provide all available resources as a Supporting Agency.

4.2.2 NOPSEMA

The function of the NOPSEMA includes regulation of environmental management of offshore petroleum activities in the Commonwealth offshore areas and in coastal waters where WA State and NT powers have been conferred.

NOPSEMA is the National Authority for offshore petroleum activities and a Statutory Authority under the NatPlan. In these roles, NOPSEMA is responsible for the oversight of response actions to pollution events from offshore petroleum operations (excluding vessel-only spills) in areas of Commonwealth jurisdiction.

4.2.3 AMOSC

Industry assistance is available through the Australia Marine Oil Spill Centre (AMOSC), an industry funded response facility based in Fremantle, WA and Geelong, Victoria. As a member company of AMOSC, Eni has access to AMOSC's oil spill recovery and response equipment, training, technical capabilities along with those resources held by member companies as outlined in the AMOSPlan.

AMOSC has contracts with all its member companies to enable the immediate release of Core Group personnel to be made available for any Eni requirements, as outlined in Eni's *Master Service Contract and Principle and Agency Agreement* with AMOSC.

The IMTL has authorisation to request the mobilisation of AMOSC resources. AMOSC support is facilitated through the AMOSPlan using various legal instruments signed by all members. The AMOSPlan also provides a link into the NatPlan (AMSA) resources. To avoid delays in accessing critical resources, AMOSC will continue preparing for mobilization of requested resources but the mobilization of resources can only be confirmed by the Nominated Call-Out Authorities (Table 4-5).

Upon activation, AMOSC provides an immediate response service.

AMOSC Core Group of over 100 personnel re-validate their competencies every two years through additional training and exercises at AMOSC and relies on competence-based training for its skill-base. This ensures personnel have appropriate training and competency for oil spill response to ensure tasks, for example offshore containment and recovery, shoreline protection and deflection can be completed effectively. AMOSC Core Group personnel provide the surge capability in response to a Level 2 or 3 spill.

AMOSC will supply a liaison person directly to the IMT to assist the IMTL and Planning and Operations Officers.

4.2.4 AMSA

AMSA will be the control agency for all vessel based spills in commonwealth waters, and Eni will provide any support as per arrangements outline in this OPEP where required.

AMSA manages the NatPlan, which has been developed in consultation with State/ Territory government, the shipping, oil and gas exploration and production companies, chemical industries and emergency service organisations to maximise Australia's marine pollution response capability.

A master services agreement is in place between AMOSC and AMSA, enabling AMSA to hire equipment and personnel from AMOSC in accordance with the National Plan. These resources include both AMOSC's own resources and those that may be available from Participating Companies. The agreements in place with AMOSC allow resources from these companies to be hired through AMOSC by AMSA on behalf of the NatPlan (including DoT for WA State/NT waters).

4.2.5 OSRL

Eni has access to additional oil spill resources through Oil Spill Response Ltd (OSRL), which is based in Singapore and Southampton. An outline of the OSRL Service Level Agreement is provided in Table 4-4.

Anyone from Eni Australia can notify OSRL of an incident on the 24/7 Emergency Numbers detailed in Table 4-4. To avoid delays in accessing critical resources, OSRL will continue preparing for mobilization of requested resources but the mobilization of resources can only be confirmed by the Nominated Call-Out Authorities (Table 4-5).

Table 4-4: OSRL Service Level Agreement

Service	Service Standard
Response Notification Service / Advice	Available 24 hours a day, 365 days a year using contact details below. • During normal office hours, calls will be transferred directly to the OSRL Duty Manager; or • Out of hours, the switchboard will immediately make contact with the OSRL Duty Manager. The OSRL Duty Manager will call back within 10 minutes of receiving notification of the call. The DM will guide the caller to complete the Notification forms and Mobilization forms (see attached) as necessary, which can be sent to OSRL by fax or email.
	Emergency Contact TELEPHONE Singapore +65 6266 1566 **Emergency Contact FAX** Singapore +65 6266 2312
Guaranteed Response	OSRL retains sufficient types and quantities of response equipment to meet a wide range of oil spill scenarios. Access to this equipment is on a first come first served basis regardless of membership level.

Service	Service Standard
Dedicated Resources: Personnel	Personnel are on standby and available 24 hours a day, 365 days a year with equipment and logistics support to initiate, mobilise and sustain a response comprising of up to 18 fully trained and competent response personnel. A second team is also available in the event of a further incident from another Member. The response team will be mobilised from within OSRL's global pool of expertise by applying reasonable endeavours to provide the most appropriate competence and experience as determined by the Member requirements. Due consideration will be given to response travel time, initial availability and continuity of response. **Technical Advice** On request and at its discretion, OSRL will dispatch a technical advisory and response expertise to support response to an incident or potential incident. This resource of up to five personnel will be provided at no cost for the initial period normally of up to 5 days from arrival in-country. A confirmatory exchange of emails will be sufficient to mobilise this team. If these personnel are retained after the free (5 day) period, a signed Mobilisation form will be required, and these personnel will form part of the 18 person SLA entitlement. The skill set of the team will be determined by the specifics of the incident and needs. Typical initial roles of the team may include, but are not limited to the following tasks: • Technical advice and incident management coaching within the command centre; • Development of an Incident Management Plan; • Tier 1 / 2 equipment readiness and training of contractors; • In-country logistics planning and support for inbound equipment; • Impact assessment and advice on response strategy selection; • SCAT and aerial surveillance / quantification surveys; and • Tactical response planning. In the event that a full response is subsequently initiated, terms and conditions, including rates, will be as per the mobilising party's Participant or Associate Member Agreement. OSRL maintains a minimum pool of 80 dedicated response staff. Members are entitled to the number of response staff shown above, however, in the event that more are required, this may be approved on a case by case basis. If additional staffs are provided, it is on the condition that they may be recalled by OSRL in the event of a further incident response.

Service	Service Standard
Dedicated Resources: Equipment	Response equipment is housed in secure facilities, customs cleared where required, ready for deployment. Equipment will be mobilised from the most appropriate location to provide the most timely and effective response. Wide range of pre-packaged equipment suited to a range of spill scenarios, including access to stocks of various dispersant types stored throughout OSRL's main response bases. These stocks are separate to those accessed through individual supplementary agreements, such as the GDS (Global Dispersant Stockpile). Global aerial dispersant coverage is provided through a range of aerial platforms and application systems: • Senai, Malaysia: Hercules L-382 equipped with Rapid Installation Dispersant Delivery System; and • Doncaster, UK: Boeing 727-252F jet aircraft with built in aerial dispersant spray system. Logistics support including: • Access to global cargo network via contracted broker for aircraft of opportunity or access to OSRL's dedicated dispersant aircraft, the most appropriate option will be agreed with the member; • Vehicles and vessels for local equipment mobilisation; and • Access to aircraft of opportunity for passenger charter services through a contracted broker. For an up-to-date list of OSRL equipment stocks, refer to www.oilspillresponse.com Access to equipment is restricted to 50% of the equipment by type available at the time of the request per member company. Additional equipment can be considered for release on request that is highly specialised or applicable to very specific response scenarios but may be subject to recall in the event of a further incident. An OSRL member may access 50% of the SLA dispersant stockpile. Access to more than 50% will be considered on a case by case basis and subject to the resupply of SLA dispersant stocks.
Oil Spill Trajectory and Tracking	3D and 2D modelling available on request providing trajectory, stochastic and backtrack modelling.
Satellite Surveillance	Access to satellite imagery on a global basis through the agreement with our dedicated satellite provider.
Oiled Wildlife Advice	Access to expert oiled wildlife advice via OSRL's contracted provider Sea Alarm Foundation (SAF).
Unmanned Aerial Vehicles	Access to unmanned aerial vehicles (UAVs) through strategic partnerships on a best endeavour basis.

Table 4-5: OSRL and AMOSC mobilisation & nominated call-out authority

Name	Position	Phone	Email
Denis Palermo	Managing Director	**0061 893201129** 0061 473801597	denis.palermo@eni.com
Luigi Gini	Operations Manager	**0061 893202639** 0061 492165693	luigi.gini@eni.com
Joe Covic	HSEQ Manager	**0061 893202611** 0061 419833760	joe.covic@eni.com

5 ENI INCIDENT AND CRISIS MANAGEMENT STRUCTURE

5.1 ICM Organisational Structure

Eni's Incident and Crisis Management (ICM) organisation will be activated in the event of a Level 2/3 hydrocarbon spill regardless of the type of spill or jurisdiction. The ICM consists of the three core levels: CMT, IMT and Site Response. The principal duties of each level are shown in Figure 5-1.

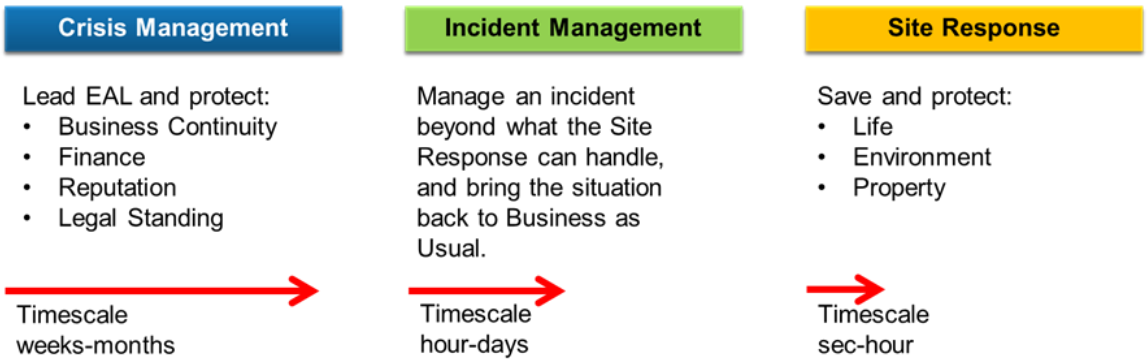


Figure 5-1: The ICM organisation's principal duties and timescales

5.2 Chain of Command

Eni Australia's ICM Chain of Command is a three-level structure. This is represented in Figure 5-2.

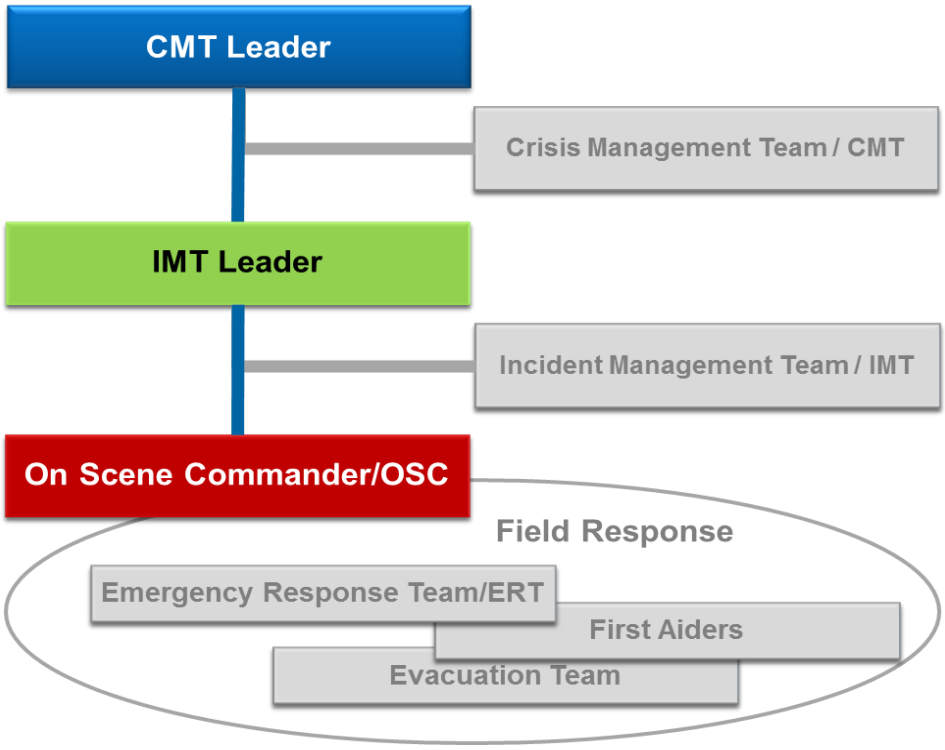
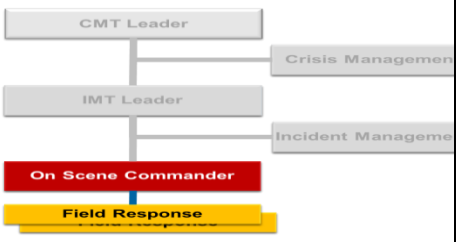
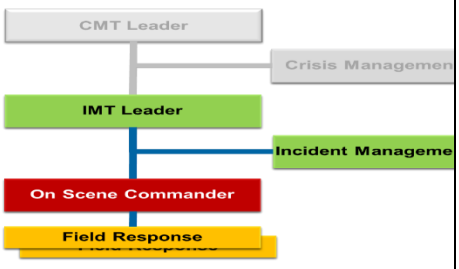
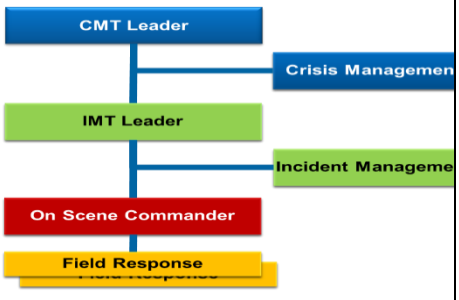


Figure 5-2: Incident and crisis management organisation chain of command

5.3 Activation

Activation of the ICM organisation is to be executed in the following steps (Table 5-1).

Table 5-1: Activation of levels in the ICM organisation

Severity Level	Activation & Notification	Illustration (Activated parts of the organisation in colour)
Pre-alarm Any event, strictly defined as a process safety event or event generated on the equipment by natural risks, which does not lead to an emergency but is visible, audible or in any case noticeable by the population, Institutions, Administrations and Bodies responsible for health, safety and the environment and which may have a significant media impact at local or national level.	Operational response only IMT Informed	
Level 1 An event that can be managed at site level with the personnel and equipment available on site, under the responsibility of the Employer.	Planned tactical response only IMT informed	
Level 2 An event that can be managed at Subsidiary level under the responsibility of the Employer with assistance from the EAL IMT and from Authorities and public administrations at a local and regional level.	Planned tactical response IMT mobilised. Managing Director Eni Australia Limited informed CMT mobilised (MD Discretion)	
Level 3 An event that can be managed at Subsidiary level under the responsibility of the Employer with assistance from the EAL IMT, CMT, Eni Upstream Head Quarter ERT and from Authorities and public administrations at a local, regional and national level.	Planned tactical response IMT mobilised CMT mobilised Eni Headquarter (HQ) mobilised	

5.4 Site Response

Site or field response conducts the mitigation work and can involve Emergency Response Teams (ERTs), first aiders, evacuation team and oil spill response teams. OSCs is appointed by default as follows:

- Vessel Activities: Vessel Master; and
- Decommissioning Activities when the MODU is in the field: MODU OIM.

All Eni staff and contractors must report spills or observations of oil or oily substances on the sea immediately to the OSC, who in turn will notify the Offshore Representative (MODU or vessels) and Duty Officer.

If a vessel spill is within 500m of the MODU the Vessel Master will notify the OIM.

Additional forward facilities may be established in the field to:

- On site response management;
- Deployment of equipment or personnel; or
- Provision of services.

5.5 Location of the Incident Management Team

The IMT shall normally operate from the IMT room at Level 5; in the Perth Office. The team shall be able to operate with some of its members on remote locations.

The IMT shall also be equipped, trained and ready to operate from an alternative location as advised by the IMTL.

5.6 Incident Management Team

The structure of the IMT, including oil spill response support teams if required, is shown in Figure 5-3.

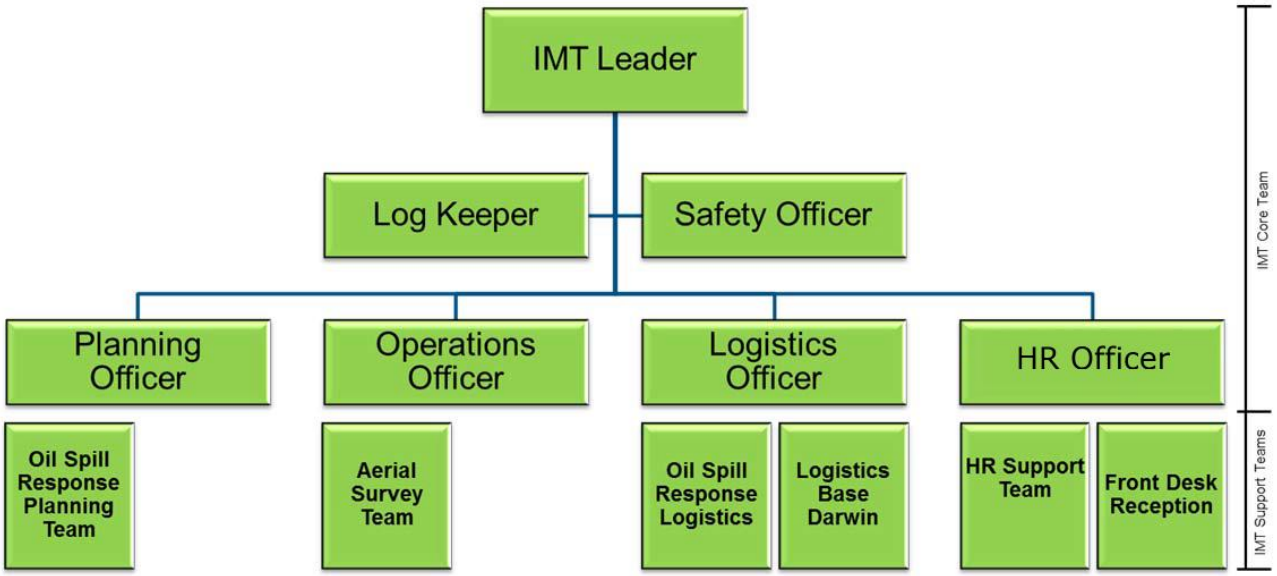


Figure 5-3: IMT and Support Teams for Oil Spill Response operation

5.6.1 IMT and Support Resourcing

Should an incident occur, the IMT Duty Officer would be notified immediately. This rostered role is on-call, 24 hours/day and 7 days/week. The IMT Duty Officer would then inform the IMTL who in turn will decide to activate the IMT or not depending on the nature and scale of the spill incident.

Eni manages its IMT resourcing through a range of arrangements including internal Eni Australia personnel, Eni Natural Resources and external support. Eni internal capability includes competent personnel available for IMT from various departments in Australia.

The personnel required for an oil spill incident, by order of importance is provided from the following sources:

- Eni Australia: the team will be partly or wholly involved in the incident. Currently, 14 engineers are working in the well operations department. The operations team, including decommissioning, will be added to this team;
- Eni Natural Resources: the Eni headquarter has a stablished ERT in place for managing the incidents globally (EMERG). Upon initiation of IMT in Eni Australia, EMERG will be notified and will be active involved from hour one of the incident. Depending on the extent of the incident, additional personnel will be mobilised to the country;
- AMOSC: the organisation has a pool of experienced personnel in the area of spill prevention and combat. AMOSC has expressed their capacity and readiness to assist operators, where required. Eni's master services contract with AMOSC gives access approximately 100 oil spill trained personnel through industry core group (refer Section 4.2.3);
- OSRL: OSRL has approximately 150 oil spill technical personnel available across their global bases. Eni has guaranteed access to 18 Response Specialists from OSRL for any incident under the Associate Membership Agreement (refer Section 4.2.5). Eni may request for additional resources from OSRL for major oil spill events and the resources will be available on a best endeavour basis; and

- Other operators in Australia; under the MOU agreement which has been re-signed by the majority of the operators in offshore Australia.

5.6.2 IMT Capability

Eni has an internal capability of up to 16 trained oil spill responders who can be deployed in the field in a spill response. Eni also has access to 18 Eni trained responders located at the Indonesian Natural Resources Headquarters. All IMT roles identified within Figure 5-3 will be filled with Eni personnel in first instance.

Eni also has additional redundancy in numbers to fill IMT functional positions by having access to external, trained spill responder resources, such as AMOSC and the AMOSC Core Group personnel (total of 50 personnel guaranteed), AMOSC mutual aid agreements (up to 100 personnel) and OSRL personnel (18 guaranteed). If required, additional personnel can be obtained via local resource agencies.

A IMT Resourcing Plan was developed (Appendix F) to demonstrate Eni's capacity to respond to a worst-case Level 2/3 oil spill. Eni will have access to sufficient incident management personnel to meet its IMT requirement for Petrel-3 and Petrel-4 activities. Refer to Table 5-2 for the key responsibilities of the main IMT roles anticipated for this OPEP and refer Table 9-1 for IMT training requirements.

5.6.3 Roles and Responsibilities

Table 5-2: Main responsibilities of key roles involved in an oil spill response

Role	Main Responsibility
Non IMT/CMT	
On Scene Commander (OSC) - MODU OIM (Decommissioning) - Vessel Master (Vessel Activities)	• Assess situations/incidents and develop the IAP; • Single point of communications between site/MODU and IMT; • Communicate the incident action plan and delegates actions to the Incident Coordinator; • Manage the incident in accordance with Petrel Emergency Response Plan, Third Party Incident Response Plan; • Coordinate medical evacuations as required; • Make initial verbal notifications about incident; • Prepare POLREP form; and • Submit POLREP form (Level 1 spills).
Vessel Master (note, may also have role of OSC)	• Make an initial evaluation of vessel-based spill, establish its level and assesses whether the incident has the potential to escalate; • Prepare and submit POLREP form; • Notify and report vessel-based spills to AMSA JRCC; and • Notify the OIM on spill if observed within 500m of the MODU.
Offshore Representative (vessel activities and petroleum activities)	• Advise Duty Officer of spill incidents.
HSEQ Manager	• Ensuring annual oil spill response drills are undertaken • Ensuring the OPEP is maintained
Environment Advisor	• Oversight of operational and scientific monitoring; • Support IMT in implementing this OPEP; and • Maintain the OPEP and communicating the requirements of the OPEP.
Role	**Main Responsibility**
IMT	
Duty Officer / Operations Officer	• Stand up satellite monitoring (KSAT); • Manage all activities and response to resolve the incident; and • Point of communications between IMT and OSC/ERT.
IMT Leader (IMTL)	• Coordinate all onshore support in accordance with the OPEP; • Submit POLREP form (Level 2/3 spills); • Set the response objectives and strategic direction; • Oversee the development and implementation of Incident Action Plans; • Oversee implementation of MoUs and contracted support for 'mutual aid'; • Ensure coordination with external organisations/policies, etc; • Prepare and review strategic and tactical objectives with the CMT; and • Liaise with the CMT and provide factual information.

Role	Main Responsibility
Planning Officer	• Lead the Planning Team in interpreting existing response plans and the development of incident action plans and related sub plans; • Collect and document situational awareness information of the incident; • Develop, document, communicate and implement Incident Action Plans to achieve incident objectives; • Determine the status of action/s or planned activities under the Incident Action Plans and assess and document performance against the objectives; and • Assess long term consequences of incident and plan for long term recovery.
Logistics Officer	• Lead the Logistics Team in relation to the provision of supplies to sustain the response effort; • Mobilise response equipment, helicopters, vessels, supplies and personnel; • Provide transport and accommodation for evacuated personnel; • Liaise with the Procurement Department to activate supply contracts and arrange procurements; and • Coordinate authorities for search and rescue.
Log Keeper	• Ensure the IMT can communicate and operate; • Keep the IMT room sufficiently manned; • Distribute manuals, contact lists and supporting information to IMT personnel; • Record and collect all information associated with the response to the incident; and • Maintain filing system for Incident Response.
Safety Officer	• Manage notification to Designated Safety Authorities and liaise as required; • Assist in the development of Incident Action Plans; and • Oversee the development and implementation of incident Safety Management Plans as required.
HR Officer	• Health and wellbeing of Eni personnel; • Coordinating labour hire; and • Areas of management include Security, Health, Relative Response, HR Support Services, HR Planning and Next of Kin.

5.6.4 Verification of IMT Resourcing and Training

A number of means of IMT resourcing and training verification methods are in place to ensure that the IMT remains in a state of readiness, these include:

- Maintenance of the Eni IMT registers (Australian and Indonesian), including personnel names and level of training;
- Review of the Eni IMT registers (Australian and Indonesian) approx. 2 months prior to activity commencement to ensure that mobilisation and personnel requirements are available to meet the resourcing requirements;
- Periodic testing (including approx. 2 months prior to activity commencement) of the IMT key contacts (on duty) to ensure that the IMT can be mobilised;
- Periodic IMT contact directory reviews (including approx. 2 months prior to activity commencement) for contact currency; and
- IMT testing arrangements, as per Section 9.5.

5.6.5 Environmental Performance Outcomes, Environmental Performance Standards and Measurement Criteria

IMT		
EPO: Maintain resourcing for the IMT pre-mobilisation and during mobilisation		
Control	**EPS**	**MC**
IMT resourcing and maintenance	Maintenance of numbers of personnel with the minimum training for the IMT roles (refer Table 9-1).	Audit of personnel against training requirements showing IMT personnel are trained to the levels in Table 9-1
	Eni will maintain access to additional IMT mutual aid capability, via contracts with AMOSC and OSRL.	Memberships/contractual arrangements with AMOSC and OSRL
	Maintenance of the Eni IMT registers (Australian and Indonesian), including personnel names and level of training.	Eni IMT registers (Australian and Indonesian) include personnel names and level of training. Registers show availability of personnel.
	Review of the Eni IMT registers (Australian and Indonesian) approx. 2 months prior to activity commencement to ensure that mobilisation and personnel requirements are available.	Eni IMT registers (Australian and Indonesian) include personnel names and level of training. Registers show availability of personnel.
	Periodic testing (including approx. 2 months prior to activity commencement) of the IMT key contacts (on duty) to ensure that the IMT can be mobilised	Records show that periodic testing of the IMT duty phone is occurring (including approx. 2 months prior to activity commencement)
	Periodic IMT contact directory reviews (including approx. 2 months prior to activity commencement) for contact currency	Records show that the IMT contact directory is reviewed periodically (including approx. 2 months prior to activity commencement).

5.7 Coordination with Other Organisations

Contact and coordination with other organisations and public authorities shall be managed in accordance with the HSE EAL Incident Management Plan ENI-HSE-PL-034. A summary is provided below.

5.7.1 Advisory Capacity

Technical advisors from AMOSC, AMSA and or OSRL would be embedded in the IMT in an advisory capacity (unless where specifically engaged to fill an IMT role).

Where appropriate, technical advisors may also be embedded within the Planning or Operations function.

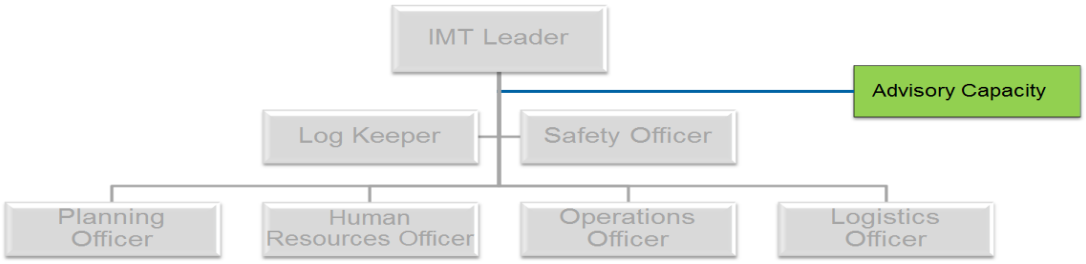


Figure 5-4: Advisory capacity to IMT

5.7.2 Off Scene Liaison

Liaison officers may be mobilised to third party ICM systems of Contractors or Government Agencies where required/requested.

The CMTL and IMTL will appoint Liaison Officers (LO) (not one of the CMT/IMT members), who will be embedded within the third party CMT/IMT and act as the point of contact between Eni and third party CMT/IMTs.

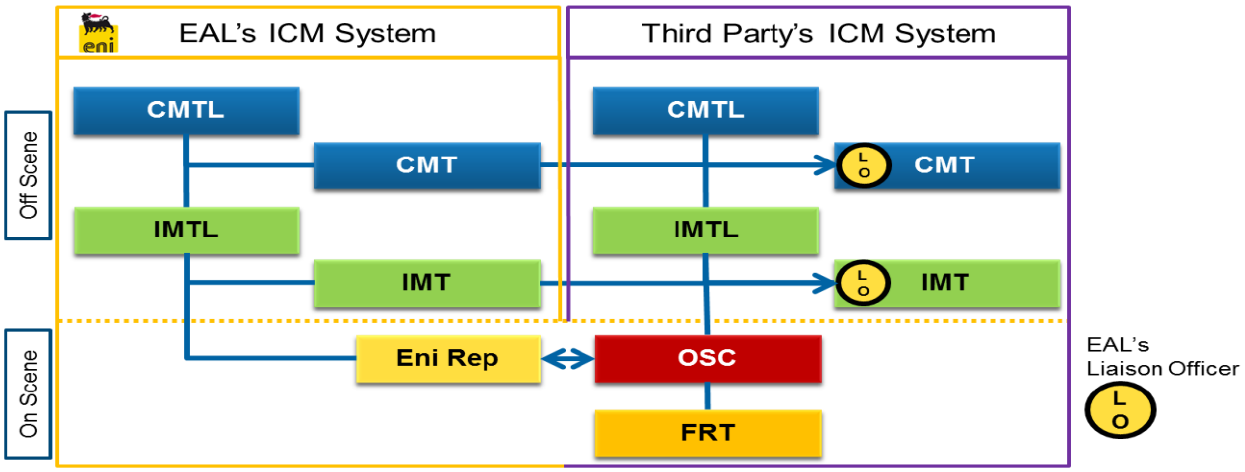


Figure 5-5: Principle of liaison when another organisation is the Controlling Agency

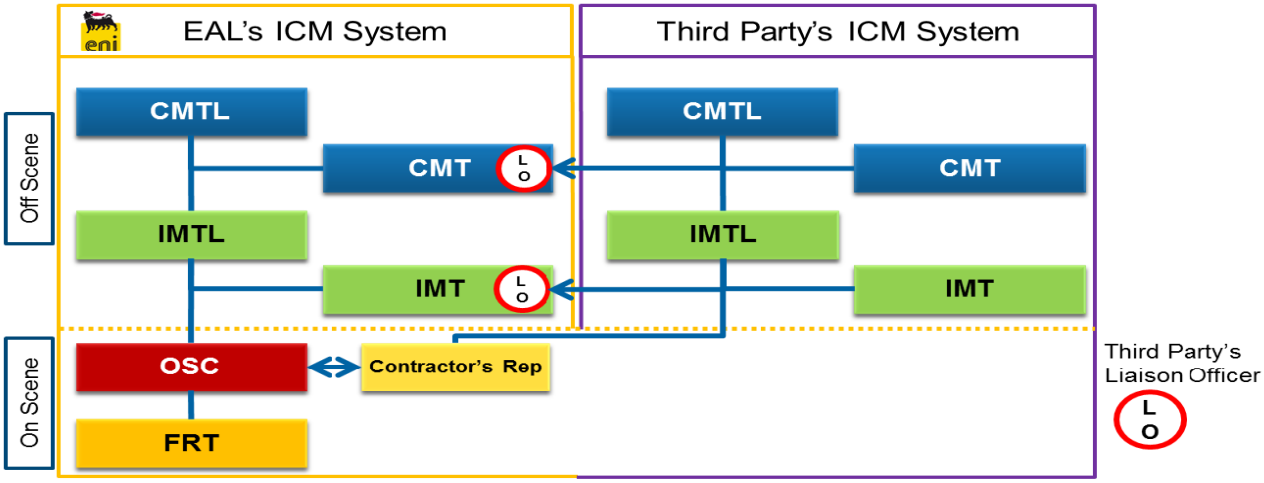


Figure 5-6: Principle of liaison when EAL is the Controlling Agency

5.8 Management of Public Information

Public information will be managed in accordance with the EAL Incident Management Plan ENI-HSE-PL-034 and Eni's Press Release Process.

Decision on Information Strategy as well as all media contacts, whether active or passive contacts, and all press releases shall be determined in the CMT, if CMT is activated, and if not, by HSEQ Manager.

6 IDENTIFIED SPILL RISKS

6.1 Credible Spill Scenario

Unplanned loss of containment events for Petrel-3 and Petrel-4 have been identified during risk assessments of monitoring and decommissioning activities. Table 6-1 presents the WCSS identified for Petrel-3 and Petrel-4 monitoring and decommissioning. Further details including spill modelling are presented in the Petrel-3 and Petrel-4 Monitoring and Decommissioning EP.

Response strategies detailed in Section 8 encompass response to the WCSS detailed in Table 6-1 and are also applicable to all other scenarios of a lesser scale and extent.

Table 6-1: Petrel-3 and Petrel-4 Monitoring and Decommissioning Worst Credible Spill Scenarios

Scenario	Volume	Release duration	EP Section	Modelled
An instantaneous surface spill of marine diesel oil (MDO) of 300m^3 from a vessel incident at Petrel-4 (NT/RL1).	300m^3	instantaneous	EP Section 8.6	Yes

6.2 Marine Diesel Oil

Marine Diesel Oil (MDO) is categorised as a group II oil (light-persistent) according to the International Tankers Owners Pollution Federation (ITOPF 2020) and US EPA/USCG classifications. The classification is based on the specific gravity of hydrocarbons in combination with relevant boiling point ranges. It is important to note that some of the heavier components contained in the MDO (i.e. low volatile and persistent portions) will have a strong tendency to physically entrain into the upper water column in the presence of moderate winds (i.e. >12knots) and breaking waves but can re-float to the surface if these energies abate. The low viscosity (14cP) indicates that this oil will spread quickly when released and will form a thin to low thickness film on the sea surface, increasing the rate of evaporation.

Generally, about 4% of the MDO mass should evaporate within the first 12 hours (Boiling point (BP) < 180°C); a further 32.0% should evaporate within the first 24 hours (180°C < BP < 265°C); and an additional 54.0% should evaporate over several days (265°C < BP < 380°C). Approximately 10% (by mass) of MDO will not evaporate, though will decay slowly over time.

Table 6-2 and Table 6-3 show the physical characteristics and boiling point ranges for MDO.

Table 6-2: Physical properties MDO

Properties	Value
Density (kg/m^3)	890 (at 25ºC)
API	27
Dynamic viscosity (cP)	14 (at 25 ºC)
Pour point (°C)	-9
Hydrocarbon property category	Group II
Hydrocarbon property classification	Light persistent

Table 6-3: Boiling point ranges for MDO

Name	Volatiles (%)	Semi-Volatiles (%)	Low Volatiles (%)	Residual (%)
Boiling point (°C)	< 180	180-265	265-380	> 380
	Non persistent			Persistent
MDO	4.0	32.0	54.0	10.0

6.3 Hydrocarbon Spill Modelling

To inform the risk assessment process, a 300 m³ MDO surface release was modelled by RPS (2024). The modelling was conducted at Petrel-4 for summer, winter and transitional seasons and is considered appropriate, although conservative, for informing the approximate spatial extent of potential impacts from a vessel collision event during the Petrel-3 and Petrel-4 monitoring and decommissioning activities.

Table 6-4 presents the parameters and justifications used in the modelling.

Table 6-4: Summary of parameters and justifications for marine diesel spill modelling

Parameter	Description
Description	MDO vessel spill in Commonwealth waters
Number of spill simulations	300 total (100 per season)
Seasons	Summer (January, February, December) Transitional (March, September to November) Winter (April to August)
Spill volume	300m^3
Oil type	Marine diesel oil
Release depth	Surface
Release duration	Instantaneous
Simulation length	30 days

6.4 Weathering and Fate

A series of weathering tests were conducted to illustrate the potential behaviour following a 50m^3 instantaneous surface release of MDO. The tests included a model under calm wind conditions (5knots) and under variable weather conditions (2-24knots), assuming seasonal water temperature (27°C) and ambient tidal and drift currents. The first case is indicative of the potential weathering rates under calm conditions that would not generate entrainment, while the second case would be more representative of the moderate winds experienced over the region.

The mass balance forecast for the constant wind case shows that 36.1% of the diesel is predicted to evaporate within 24 hours. The remaining MDO on the water surface will weather at a slower rate and be subject to more gradual decay through biological and photochemical processes (Figure 6-1).

In the variable wind speeds test (Figure 6-2), characterized by stronger average winds and breaking waves, there is an increased entrainment of MDO into the water column. Approximately 24 hours into the spill, the forecast indicates that 80.5% of the MDO will have entrained, with an additional 15.0% expected to have evaporated. Hence, only a <1% of floating oil remains on the water surface. The low volatile and residual compounds are anticipated to entrain beneath the surface under conditions generating wind waves (winds approximately >6m/s).

While the MDO is entrained, it is forecast to decay at a higher rate of 3% per day or 21% after 7 days, attributed to biological and photochemical degradation. This is in contrast to a rate of 0.14% per day and a total of approximately 1% after 7 days for the constant wind case. Given the proportion of entrained MDO and its tendency to remain mixed in the water column, the remaining hydrocarbons are expected to undergo decay over several weeks.

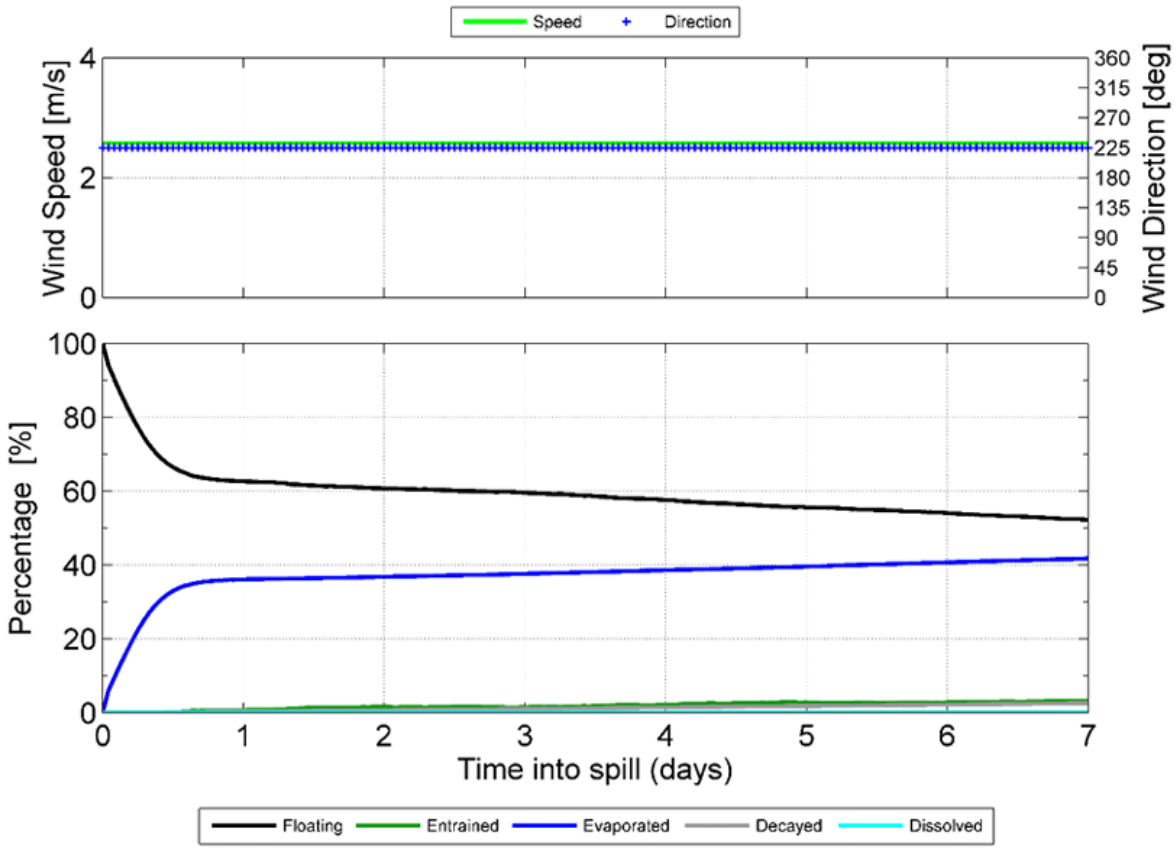


Figure 6-1: Mass balance plot for an instantaneous 50m³ surface release of MDO subjected to a constant 5 knot (2.6m/s) wind, currents and 27°C water temperature (RPS 2024).

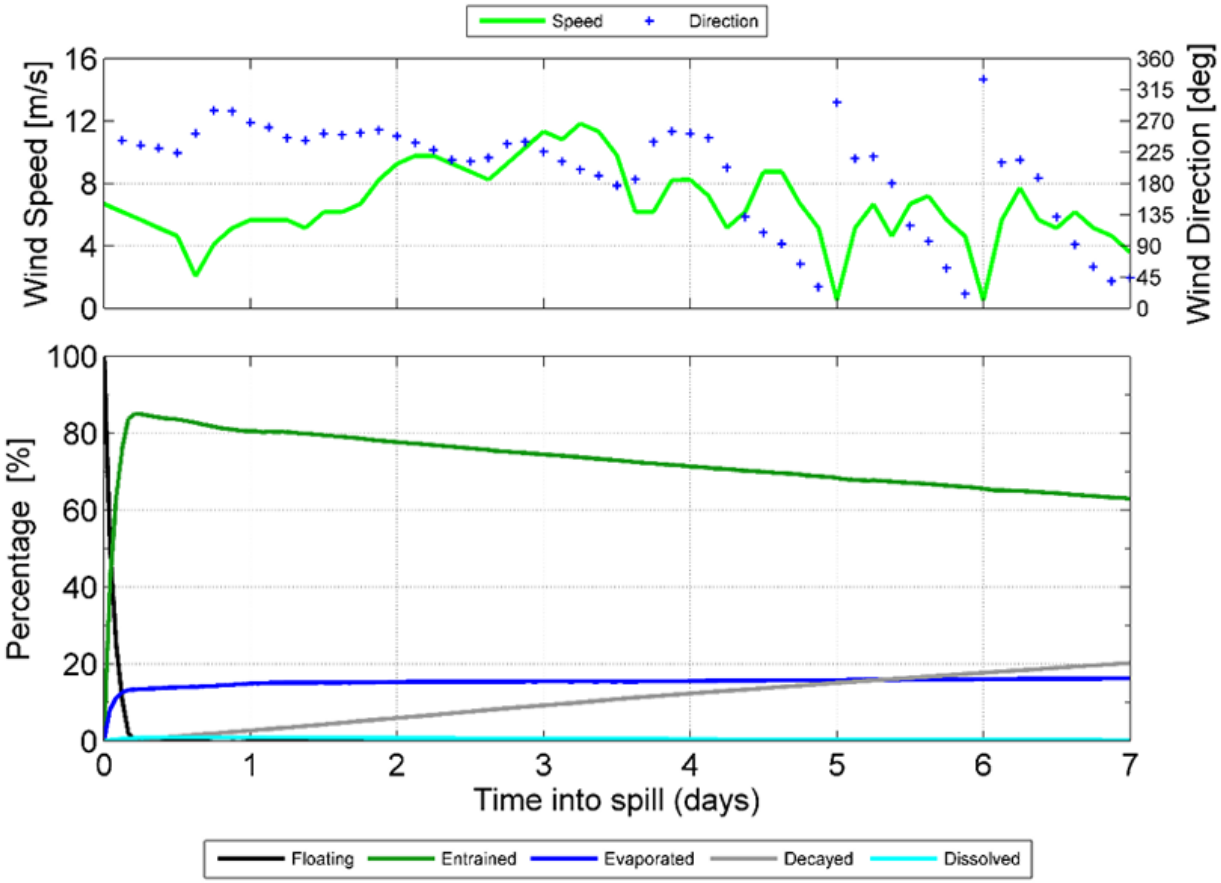


Figure 6-2: Mass balance plot for an instantaneous 50m³ surface release of MDO subjected to variable wind speeds (1–12m/s or 2-24knots), currents and 27°C water temperature (RPS 2024).

6.5 Response Planning Thresholds

Environmental exposure thresholds are addressed in Section 8.6 of the EP. In addition to the environmental exposure thresholds, response thresholds have been developed for response planning to determine the conditions that response strategies would be effective. The relevant response planning thresholds for this spill scenario are shown in Table 6-5.

Table 6-5: Hydrocarbon thresholds for response planning

Hydrocarbon threshold (g/m²)	Description
>10	Estimated minimum threshold for commencing some scientific monitoring components (refer to Section Table 8-4).
>50[1]	Estimated minimum floating hydrocarbon threshold for containment and recovery and surface dispersant application. *Note: Containment and recovery and surface dispersant are not applicable spill response strategies under this OPEP (see Table 1-6).*

Hydrocarbon threshold (g/m²)	Description
>100	Estimated floating hydrocarbon threshold for effective containment and recovery and surface dispersant application. Estimated minimum shoreline accumulation threshold for shoreline clean-up. *Note: Containment and recovery, surface dispersant and shoreline clean-up are not applicable spill response strategies under this OPEP (see Table 1-6).*

6.6 Hydrocarbon Spill Modelling Results

For the purpose of spill response preparedness, outputs relating to floating hydrocarbons and hydrocarbons accumulated on the shoreline are the most relevant (i.e. oil that can be diverted, contained, collected or dispersed through the use of spill response strategies) for the allocation and mobilisation of spill response resources.

Modelling results for dissolved and entrained oil for the worst-case scenarios have not been included in this OPEP given there are limited response strategies that will reduce subsurface impacts. Refer to Section 8.6.2.5 of the EP for dissolved and entrained thresholds and Section 8.6.3 for impacts to receptors.

No hydrocarbon accumulation on was predicted to occur on any shorelines at or above the low threshold of 10g/m^2 from the 300 spill simulations (RPS, 2024).

Table 6-6 summarises the maximum distances from the release location to floating hydrocarbon exposure zones. Floating oil concentrations exceeding 1g/m^2 could extend up to 99 km from the release location. The distances reduced to 43km and 12km as the thresholds increase to 10g/m^2 and 50g/m^2, respectively.

Table 6-6 presents the predicted floating oil exposure to receptors for each season.

Figure 6-3 to Figure 6-5 illustrates the extent of floating oil exposure zones for each season.

Table 6-6: Maximum distances from the release location to floating hydrocarbon exposure thresholds for surface spill of MDO (RPS 2024).

Season	Distance and direction travelled	Floating oil exposure thresholds		
		Low (1g/m²)	Moderate (10g/m²)	High (50g/m²)
Summer	Maximum distance (km) from release location	40	28	17
	Direction	Northwest	South	Southeast
Transitional	Maximum distance (km) from release location	99	43	15
	Direction	West	West	Southeast
Winter	Maximum distance (km) from release location	46	33	12
	Direction	Northeast	Southwest	West

Table 6-7: Summary of the stochastic modelling results of floating hydrocarbon exposure to receptors for a MDO spill during each season. Results were calculated from 100 spill simulations per season (RPS 2024).

Receptor		Summer						Transitional						Winter					
		Probability (%) of floating oil			Minimum time before floating oil exposure (hours)			Probability (%) of floating oil			Minimum time before floating oil exposure (hours)			Probability (%) of floating oil			Minimum time before floating oil exposure (hours)		
Category	Name	1 g/m^2	10 g/m^2	50 g/m^2	1 g/m^2	10 g/m^2	50 g/ m^2	1 g/m^2	10 g/m^2	50 g/m^2	1 g/m^2	10 g/m^2	50 g/m^2	1 g/m^2	10 g/m^2	50 g/m^2	1 g/m^2	10 g/m^2	50 g/m^2
IMCRA	Oceanic Shoals	1	-	-	68	-	-	-	-	-	-	-	-	-	-	-	-	-	-
KEF	Carbonate bank and terrace system of the Sahul Shelf	-	-	-	-	-	-	2	-	-	126	-	-	-	-	-	-	-	-
	Pinnacles of the Bonaparte Basin	-	-	-	-	-	-	1	-	-	101	-	-	-	-	-	-	-	-

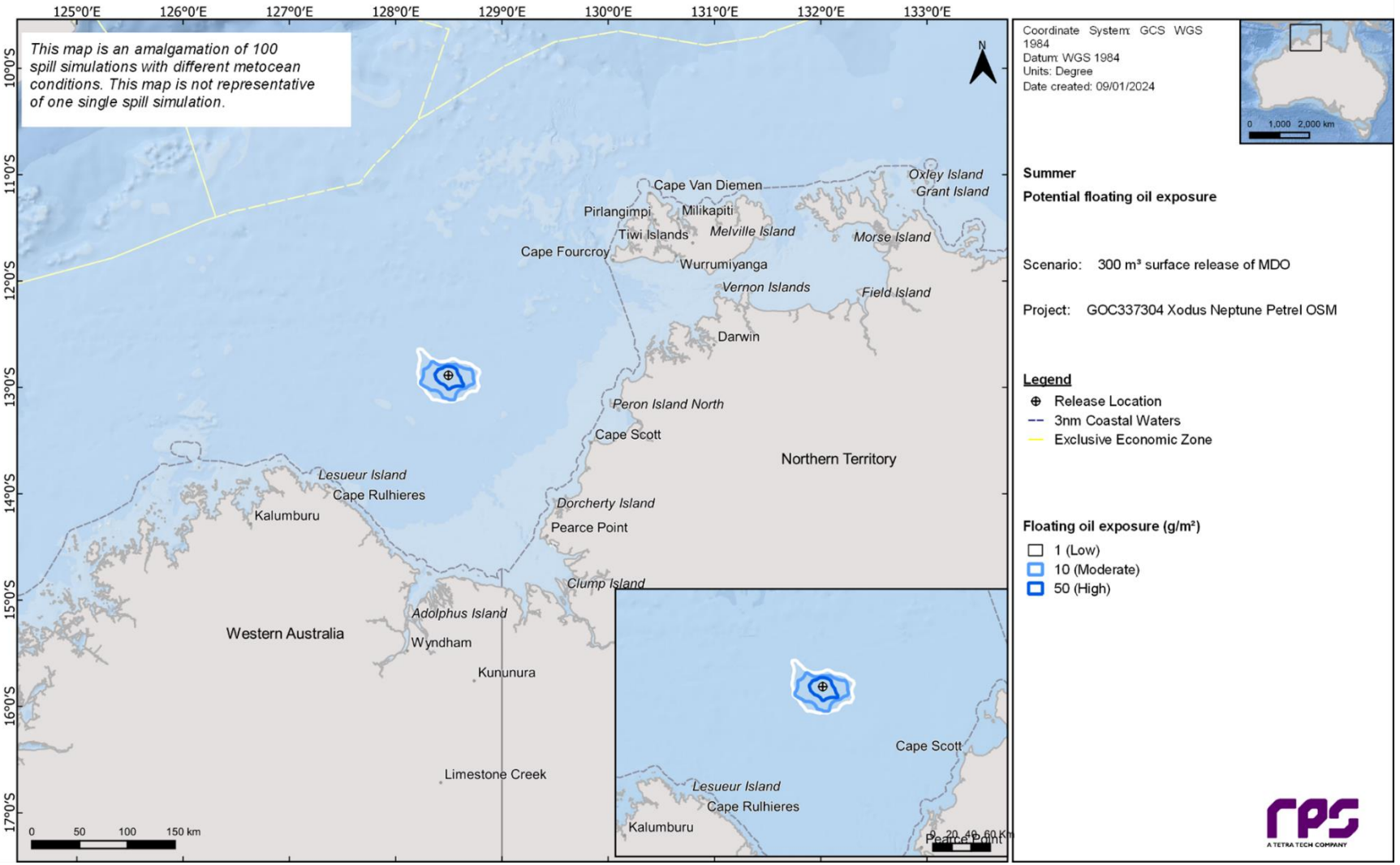


Figure 6-3: Stochastic modelling results of floating hydrocarbons exposure from a surface vessel spill during summer conditions at Low, Moderate and High exposure thresholds. Source: RPS 2024.

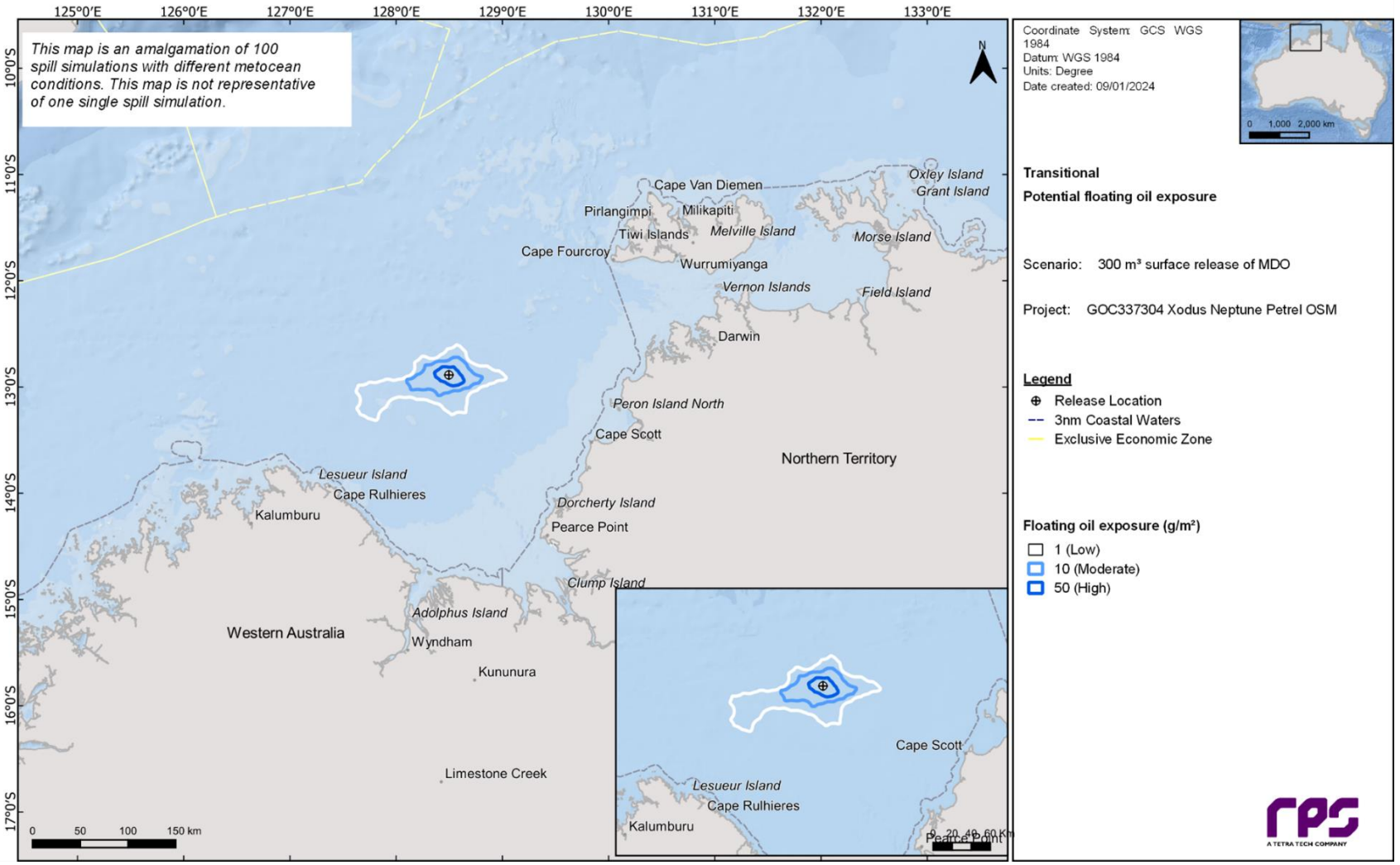


Figure 6-4: Stochastic modelling results of floating hydrocarbons exposure from a surface vessel spill during transitional conditions at Low, Moderate and High exposure thresholds. Source: RPS 2024.

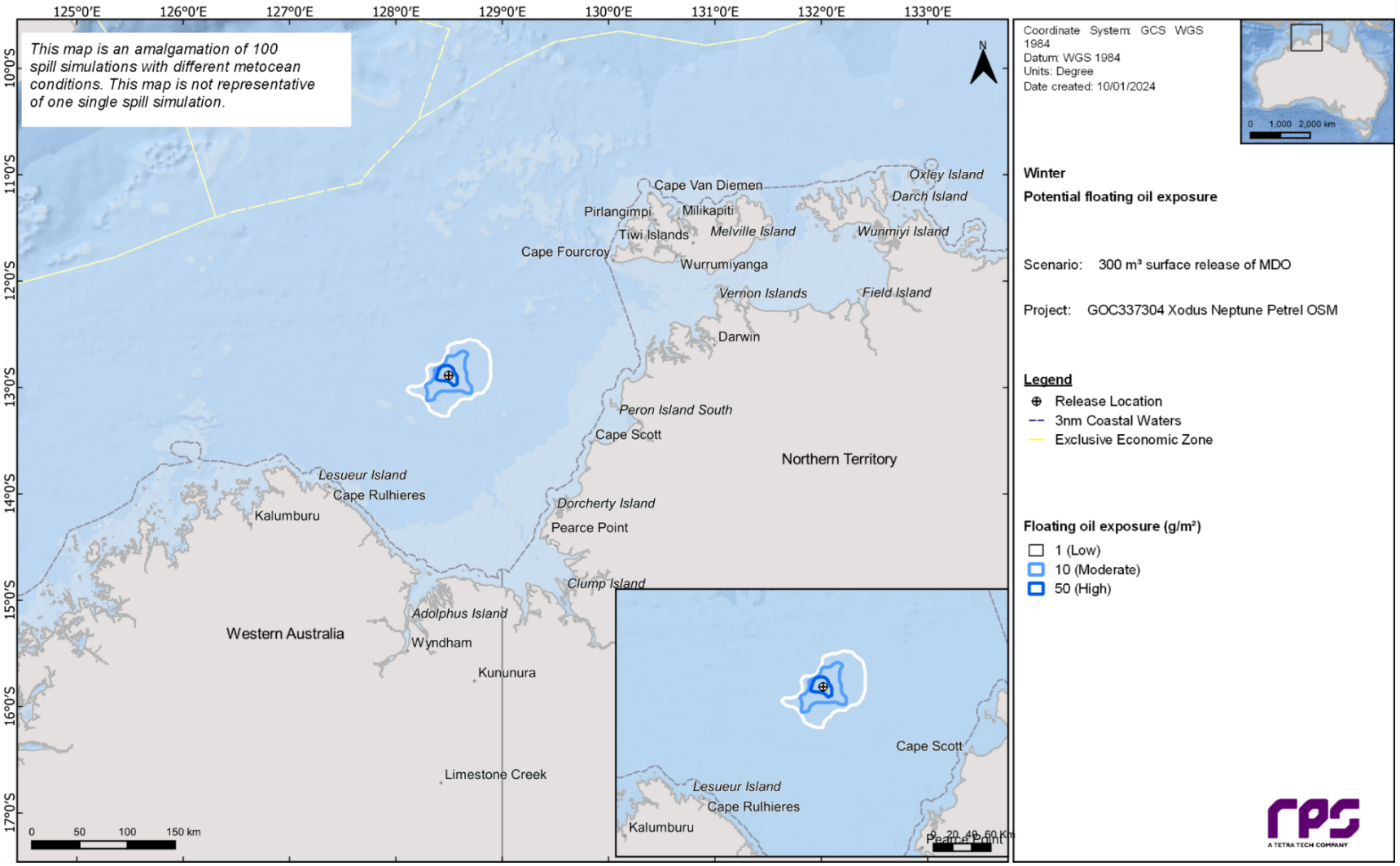


Figure 6-5: Stochastic modelling results of floating hydrocarbons exposure from a surface vessel spill during winter conditions at Low, Moderate and High exposure thresholds. Source: RPS 2024.

7 NET ENVIRONMENTAL BENEFIT ANALYSIS

7.1 Pre-operational NEBA

A pre-operational NEBA has been conducted to assess the net environmental benefit of different response strategies for spill during the at the Petrel-3 and Petrel-4 monitoring and decommissioning activities. Strategy identification is based on strategies which have been implemented in the past or considered to be good industry practice.

Table 7-1 was used to determine the net benefit of each response strategy and presents an evaluation on the implementation of these strategies based on their suitability for the spill scenarios identified for Petrel-3 and Petrel-4 (refer Section 6.1).

The key considerations taken into account in the assessment were:

- Properties and weathering profile of the MDO;
- Nature and scale of the WCSS; and
- Safety and environmental risks and impacts involved with the response.

Based on the identified spill risks for the Petrel-3 and Petrel-4 monitoring and decommissioning activities, the available oil spill response strategies have been adopted or rejected through assessment of hydrocarbon type and WCSS, as summarised in Table 7-1 below.

Table 7-1: NEBA summary and response option considerations

Strategy	Description	Applicability and Environmental Benefit	Adopted/ Reject
Source Control	Vessel SOPEP.	Applicable to MDO spills from vessel. The SOPEP is the procedure for responding to a vessel spill.	Adopt
Monitor and evaluate	Monitor and evaluate is used to predict and monitor the trajectory and fate of the spill, to determine the effectiveness of response strategies and to identify and report on any potential/actual contacts to flora, that occurs.	Primary response strategy. There are various specific techniques (vessel/aerial surveillance, oil spill modelling) within this response strategy which may be suitable. Use will be based on the spill fate / loss volumes as well as other considerations such as access to locations and environmental / metocean conditions. Monitor and evaluate is used to inform further response planning and execution and the operational NEBA.	Adopt
Surface chemical dispersion	Chemical dispersant is applied to break down the hydrocarbons and allow/enhance dispersion into the water column, thereby preventing/reducing potential shoreline contact and increasing biodegradation.	MDO is not conducive to chemical dispersion due to rapid evaporation and low surface concentrations. A weathering study on MDO by RPS in 2024 showed that the rate of evaporation of MDO is rapid with 36.1 – 80.5% of the volume of the MDO is lost within the first 24 hours depending on the wind speeds (see Figure 6-1 and Figure 6-2). In general, only 10% is predicted to remain at the surface as residual hydrocarbons (RPS, 2024).	Reject
Physical dispersion	Physical dispersion is undertaken by running vessels through the hydrocarbon plume and using the turbulence developed by the propellers or hydro-blasting from vessel hydrants to break up the slick. The process enhances dispersion.	MDO is not conducive to physical dispersion due to rapid evaporation and low surface concentrations. Physical dispersion is typically only effective on surface oil concentrations >50g/m^2. Surface hydrocarbons in the event of a vessel spill are only expected to exceed 10 g/m^2 in the immediate vicinity of the well for a very short period. A weathering study on MDO by RPS in 2024 showed that the rate of evaporation of MDO is rapid with 36.1 – 80.5% of the volume of the MDO is lost within the first 24 hours, depending on the wind speeds (see Figure 6-1and Figure 6-2). In general, only 10% is predicted to remain at the surface as residual hydrocarbons (RPS, 2024).	Reject

Strategy	Description	Applicability and Environmental Benefit	Adopted/ Reject
Containment and recovery	Containment and recovery of hydrocarbons can offer a preventive form of protection to sensitive receptors. Skimmers (mechanical) and booms will be used at sea. This strategy is only effective in calm conditions.	MDO is generally not conducive to containment and recovery strategies due to their rapid evaporation and low surface concentrations. Containment and recovery is effective on oil concentrations >50g/m^2. Surface oil concentrations from a MDO release is not predicted to exceed 10g/m^2 and/or 50g/m^2 surface oil thresholds (see Table 6-7). Containment and recovery is therefore not effective.	Reject
Protection and deflection	Protection and deflection activities involve the use of booms to deflect spills away from sensitive receptors and deflect spills to an area that provides increased opportunity for recovery activities.	MDO not conducive to protection and deflection strategies due to their rapid evaporation and low surface concentrations. Protection and deflection is effective on oil concentrations >10g/m^2. Surface oil concentrations from a MDO release is not predicted to exceed 10g/m^2 and/or 50g/m^2 surface oil thresholds (see Table 6-7). The modelling did not predict exposure of hydrocarbons at any threshold to any shoreline receptors. Protection and recovery is therefore not effective.	Reject
Shoreline Clean-up	Shoreline Clean-up activities involve the use personnel or machinery to remove hydrocarbons from impacted shorelines.	The hydrocarbon modelling did not predict exposure of hydrocarbons at any threshold to occur at any shoreline.	Reject
Oiled wildlife response (OWR)	Oiled wildlife response aims at preventing wildlife from becoming oiled and/or the treatment of animals that do become oiled.	Significant offshore OWR is not applicable due to the low concentrations of surface hydrocarbons expected and hydrocarbon types. However, as a precaution OWR is included as a response strategy. This response has the potential to cause negative impacts to wildlife if undertaken if not executed properly (with only trained personnel) Activities such as hazing (dispersing) of birds will not be undertaken given the low likelihood of a spill of a size presenting a significant risk of oiling wildlife unless at the direction of, and under direct supervision of trained personal from the Control Agency.	Adopt

Strategy	Description	Applicability and Environmental Benefit	Adopted/ Reject
		Capture and rehabilitation may be undertaken under the National Plan.	
In-situ burning	Technique involves the controlled burning of oil that has spilled (from a vessel or a facility). On conducive hydrocarbons, and when conditions are favourable and conducted properly, in situ burning will reduce the amount of oil on the water.	For in-situ burning to be undertaken oil has to be thicker than 1-2 mm. MDO is not conducive to in-situ burning due to rapid evaporation and low surface concentrations.	Reject
Scientific Monitoring	This is the main tool for determining the extent, severity, and persistence of environmental impacts from an oil spill and allows operators to determine whether their environmental protection outcomes have been met (via scientific monitoring activities). This strategy also evaluates the recovery from the spill.	Scientific monitoring is especially beneficial for the purpose of monitoring entrained and dissolved oil impacts. Response strategies are generally targeted to manage the surface oil impacts. For information on scientific monitoring refer to the Petrel-3 and Petrel-4 Monitoring and Decommissioning Operational and Scientific Monitoring Plan (000694_DV_PR.HSE.0286.000).	Adopt

7.2 Operational NEBA

The Control Agency IMT will use the pre-operational NEBA process to inform the development and refinement of IAPs.

As a component of the incident action planning process, an operational NEBA is conducted by the Control Agency with responsibility for the spill response activity.

Operational monitoring data would be used to help support the decision-making process for the Operational NEBA with specific consideration of:

- Identified sensitivities within the area potentially affected as informed by trajectory modelling;
- Potential effects of response strategies on each sensitivity are assessed in terms of their benefit or otherwise to the socioeconomic sensitivities; and
- All persons involved and data inputs have been considered for the analysis.

8 RESPONSE STRATEGIES

This section details the priorities, equipment, resources and response strategies that would be deployed in the event of a spill from the Petrel-3 and Petrel-4 monitoring and decommissioning activities.

Response strategies may be implemented concurrently depending on the location and characteristics of the spill. The viability of implementing response strategies will be dependent on a number of factors including but not limited to environmental conditions, resources available and distance from sensitivities. Development of an IAP (Appendix B) will assess these various factors. A NEBA (as detailed in Section 7; Appendix C) will be undertaken for each operational period to determine which response strategies will provide a net environmental benefit to the environmentally sensitive locations that may be impacted.

8.1 Source Control

8.1.1 Overview

In the event MDO is released from a vessel due to a tank rupture, source control procedures for a vessel collision are detailed in the vessel SOPEP, as applicable under MARPOL.

For support vessel collisions, the vessel's SOPEP will be followed to control the source, reduce the loss of hydrocarbons and prevent escalation of the incident.

The sections below provide an outline of source control activities noting that the Vessel SOPEP, where applicable, will provide a higher level of detail for specific incidents.

8.1.2 Response

Depending on the vessel-specific procedures for source control, the following activities could be evaluated immediately for implementation, providing it is safe to do so:

- Reduce the head of fuel by dropping or pumping the tank contents into an empty or slack tank;
- Consider pumping water into the leaking tank to create a water cushion to prevent further fuel inventory loss;
- If the affected tank is not easily identified, reduce the level of the fuel in the tanks in the vicinity of the suspected area if stability of the vessel will not be compromised;
- Evaluate the transfer of fuel to other vessels;
- Trim or lighten the vessel to avoid further damage to intact tanks; and/or
- Attempt repair and plugging of hole or rupture.

8.1.3 Termination Criteria

The source control response strategy will terminate once all the following criteria are satisfied:

- Release of hydrocarbon to the marine environment has ceased and the workplace environment is deemed environmentally safe and free of hydrocarbon.
- For refuelling spills, release of hydrocarbon into the marine environment has ceased and the workplace environment is deemed environmentally safe and free of hydrocarbons.
- For vessel tank rupture, the cargo in the ruptured fuel or storage tank is secured and release to the marine environment has ceased.

8.1.4 Environmental Performance Outcomes, Environmental Performance Standards and Measurement Criteria

SOURCE CONTROL		
EPO: Stop the release of hydrocarbons into the marine environment		
Control	**EPS**	**MC**
Vessel Spill Response Plan (emergency management plan/SOPEP)	Vessel has and implements a vessel emergency management plan or SOPEP pursuant to MARPOL Annex I.	Approved vessel emergency management plan or SOPEP
	Vessel emergency management plan or SOPEP spill response exercises conducted prior to activity commencement to ensure personnel are prepared.	Spill exercise records or evidence of a spill exercise

8.2 Monitor and Evaluate

8.2.1 Overview

The following sections summarise the key methods used, more detail is provided in the Petrel OSMP (000694_DV_PR.HSE.0286.000) (operational monitoring programs 1 and 2 [OMP1 and OMP2]).

The ongoing monitoring and evaluation of the oil spill is essential to maintaining situational awareness. Situational awareness based on the likely fate and trajectory of the spilt oil is fundamental to putting in place an oil spill response that will be efficient and effective.

Based on the potential impact area, Eni will use a variety of methods to gain and maintain situational awareness of the spill. Monitoring and evaluation will be undertaken for any level size to monitor the location of the spill and state of natural weathering.

There are five key methods for monitoring a spill:

1. Oil spill trajectory modelling (OSTM);
2. Satellite tracking buoys;
3. Vessel surveillance;
4. Aerial surveillance; and
5. Satellite surveillance.

The use of these techniques will be based on the spill fate / volumes as well as other considerations such as access to locations and environmental / metocean conditions.

If criteria are triggered, monitoring programs in the Petrel-3 and Petrel-4 OSMP (000694_DV_PR.HSE.0286.000) shall also be undertaken as part of the monitoring and assessment response. Through AMOSC, Eni has access to the NatPlan environmental mapping resource, the Oil Spill Response Atlas (OSRA). OSRA utilises a Geographic Information System platform and maps sensitive habitats and areas in Australian waters that could be potentially impacted by an oil spill and will be used to supplement environmental data on potentially affected sites as described in the EP and relevant baseline studies.

8.2.2 Capability and Resources

This strategy is summarised in Table 8-1, highlighting the minimum time standard for deployment upon activation.

Table 8-1: Monitor and evaluate strategy summary

Task	Outcome	Resources	Location	Resource owner	Minimum standard
Visual observation	Identify extent and direction of oil, visual characteristics. Manual calculations estimating likely spill trajectory and time scales to contact environmental sensitivities.	1 x on-site observer	On-site	Eni	Immediate (visual observations). Within 3 hours (spill trajectory calculations).
Oil spill trajectory modelling	Forecast the behaviour of the surface slick. Identify and assess risks to environmental sensitivities within the moderate exposure area. Inform development of the IAP.	APASA, via AMOSC	Fremantle, WA	AMOSC	Within 24 hours
		HSE Panel consultants	Perth, WA	Eni	
Determination of surface and dispersed oil trajectory and fate	Identify the likely trajectory and fate of the spill and dispersed oil, timeframes for the oil (surface or dispersed) to interact with environmental sensitivities.	One person with oil spill assessment training.	Fremantle, WA	AMOSC	Within 24 hours of OSTM being undertaken.
Satellite tracking buoys deployed	Follow the trajectory of the spill front.	Satellite tracking buoys available from AMOSC	On-site	Eni to keep buoys on support vessels or the MODU during monitoring and decommissioning activities	Within 96 hours of spill event
Visual observation – from vessels of opportunity	Identify extent and direction of oil, visual characteristics.	As available	On-site	As available	Within 24 hours

Task	Outcome	Resources	Location	Resource owner	Minimum standard
Visual observation – from chartered vessels	Identify extent and direction of oil, visual characteristics.	One Vessel One Observer	On-site	Eni May also engage through TOLL	Within 72 hours
Visual observation – from aircraft/ helicopter	Identify extent and direction of oil, visual characteristics.	One trained observer	Fremantle, WA	AMOSC, AMSA or OSRL	Within 24 hours
		One Aircraft (Eni approved aviation providers)	Darwin, NT Perth, WA	Eni contractors	
		One Aerial support base	Perth, WA	To be confirmed between AMOSC and Eni	
Satellite imagery	High fidelity photographs using different spectrums to identify the trajectory of the oil.	KSAT	N/A	Eni or AMOSC	Within 24 hours and every 24 hours thereafter.

8.2.3 Oil Spill Trajectory Modelling

Real time oil spill modelling will be used to estimate the likely movement and behaviour of the spill and will be verified by field observations. The modelling will be sourced, via AMOSC, within 24 hours using their 24/7 emergency capability. The location of the slick predicted by oil spill modelling will be verified by field observations. Preliminary estimations using visual observations from the field and manual calculations will be available within approximately three hours to inform the mobilisation of equipment and resources in preparation for potential response strategies.

8.2.4 Satellite Tracking Buoys

Satellite tracking buoys will be deployed in the event of a Level 2 or 3 spill. Deployment will be made from the support vessel at the leading edge of the spill plume to:

- Monitor movement of surface oil; and
- Qualify and assist surveillance monitoring.

Tracking buoys are available internally and through AMOSC, 96 hours after mobilisation, see Table 3-1.

8.2.5 Vessel Surveillance

Vessel surveillance will involve visual monitoring from vessels of opportunity, which may be engaged immediately in the event of a spill. Vessel surveillance may assist in determining if additional response actions are required.

Within 12 hours of a spill, the IMT Logistics Officer will identify any vessels within the immediate area with a capability to assist with the response and determine if weather conditions are suitable for vessel surveillance. The IMT will also determine whether there are any unacceptable safety risks that may preclude vessel surveillance, such as the presence of gas and Volatile Organic Compounds on the sea surface and continue to monitor for these risks.

The IMT Logistics Officer may identify vessel of opportunity by making contact with Shipping Agents within Darwin (as specified on the Darwin Port Handbook).[2]

Eni may also engage through TOLL all vessel operators and owners in WA, NT and Singapore to charter suitable vessels. TOLL has contracted ISS as Toll's (Australian) national emergency responder. Contact details below:

[2] Darwin Port Handbook is available at: <https://www.darwinport.com.au/trade/port-handbook>

Company	Function	Contact Details
TOLL	ISS emergency response	ISS 24/7 emergency responder: 1300 131 001 or 1800 639 621 or +61 (03) 8545 1000
	Reception (Eni)	+61 8 9320 1111
	Logistics – Support (Eni)	+61 488 101 637

Visual observations from chartered vessels occur within 72 hours of mobilisation.

Vessel surveillance will incorporate operational monitoring studies as outlined in the Petrel-3 and Petrel-4 OSMP (000694_DV_PR.HSE.0286.000), this will involve various monitoring and sampling methodologies of water to determine the extent of surface, entrained and dissolved hydrocarbons in the water column and near sensitive receptors. Guidelines on how to estimate spill volumes at sea are provided in Appendix E.

8.2.6 Aerial Surveillance

Eni has contracts in place with Offshore Services Australia, PHI and Hardy Aviation.

Contact for aerial surveillance is provided below:

Company	Contact Details
Offshore Services Australia Truscott Operations	OSA.TSTOPS@chcheli.com +61 8 9161 4072
PHI	phibmeops@phi-int.com +61 8 9138 7719
Hardy Aviation	ops@hardyaviation.com.au + 61 427 278 110

Aerial surveillance will be undertaken for Level 2 and 3 spills. Visual observations may be undertaken from specially mobilised aircraft. Procedures for visually tracking the movement and behaviour of the spill are provided in Appendix E. Trained observers are to be present on the surveillance aircraft. Trained observers will be sourced from AMOSC, AMSA and OSRL to undertake the required aerial surveillance in the event of a spill.

Aerial surveillance may assist in determining if additional response actions are required. Minimum requirements are:

- One visual observer;

- One aircraft (helicopter or fixed wing); and
- One aerial support base (Darwin airfield).

If aerial surveillance is required, an over-flight schedule is developed by the IMT. The frequency of flights will be sufficient to ensure that the information collected during each flight (i.e., observer log and spill mapping) meets the information needed to direct response activities.

During each flight a photographic record and marine fauna sighting record sheet is completed for each marine fauna sighting made and recorded on the observer log.

Aerial surveillance would be used at the start of a spill to assess its trajectory (in conjunction with revised real-time oil spill modelling); data collected is vital to developing operational IAPs and deciding on appropriate initial and ongoing responses.

It would also be used during the response to monitor ongoing oil spill modelling, changes to spill and visual effectiveness and assessment of response strategies used.

Initial reconnaissance may be basic, whilst later observations may require more skill/calculations to estimate behaviour, therefore trained observers are critical.

For surveillance tasks, aircraft will have:

- Good downward visibility (e.g. helicopters or fixed wing aircraft with an over-fuselage wing);
- Space for observers, excluding pilot(s);
- Visibility from both sides;
- Pilot-observer and pilot to vessel communications; and
- Navigational aids to follow proposed flight path.

If acting in support of marine response, aircraft should be equipped with radios that allow direct communication with the vessels or other aircraft.

8.2.7 Satellite Monitoring

Eni has contracted Konsberg Satellite Services (KSAT) to provide satellite monitoring for its operations. Eni may also access KSAT through AMOSC.

KSAT provide high fidelity photographs using different spectrums to identify the trajectory of the oil. In case of a spill reported to KSAT by Eni, KSAT will activate its Emergency Response Team that is targeted to be assembled within 24 hours. The first image will be received within 24 hours of acceptance of the proposed acquisition plan.

KSAT can be contacted as below:

Company	**Contact Details**
KSAT	Direct phone: +47 77 60 02 51 Switchboard: +47 77 60 02 50

	Fax: +47 77 60 02 99

8.2.8 Termination Criteria

Vessel-based surveillance is undertaken at scheduled intervals during daylight hours, and continues for 24 hours after the source is under control and a surface sheen is no longer observable, or

- Until no net environmental benefit is being achieved, or
- As directed by the Control Agency.

Aerial surveillance undertaken at scheduled intervals during daylight hours and continues for 24 hours after the source is under control and a surface sheen is no longer observable, or

- Until no net environmental benefit is being achieved; or
- As directed by the Control Agency.

Tracking buoy deployment will continue for 24 hours after the source is under control and a surface sheen is no longer observable, or

- Until net environmental benefit is no longer being achieved; or
- As directed by the relevant Control Agency.

Satellite monitoring will continue until no further benefit is achieved from continuing; or as advised by relevant Control Agency.

The 'monitor and evaluate' response strategy will terminate once all the following criteria are satisfied:

- The source of the spill is contained, and no more hydrocarbons are being leaked to the environment;
- Water and sediment quality monitoring demonstrates there are no longer any hydrocarbons above baseline levels (as determined from baseline/reactive monitoring data and/or control sites);
- Oil spill modelling indicates the coastline will not/no longer be impacted by surface or entrained oil; and
- Surveillance following cessation of the spill reports no visible sheen (daylight), i.e. a 'silvery/grey' sheen as defined by the BAOAC is not observable.

8.2.9 Environmental Performance Outcomes, Environmental Performance Standards and Measurement Criteria

MONITOR AND EVALUATE		
EPO: Gain situational awareness from monitor and evaluate techniques and predict the fate of the spill		
Control	**EPS**	**MC**
Oil spill trajectory modelling	Detailed modelling service available for the duration of the incident upon activation through AMOSC.	AMOSC Participating Member Contract
	Modelling can be sourced, via AMOSC, within 24 hours of activation. using their 24/7 emergency capability	AMOSC Participating Member Contract IAP documentation
Tracking Buoys	Tracking buoys are available internally and through AMOSC within 96 hours	Detailed in IAP documentation. AMOSC Participating Member Contract
Vessel surveillance	Visual observations from chartered vessels occur within 72 hours of mobilisation.	IAP documentation
	Vessel surveillance shall continue until termination criteria detailed in Section 8.2.5 have been met.	Criteria have been met prior to termination of the response strategy. Detailed in IAP documentation.
Aerial surveillance	Visual observation – from aircraft/ helicopter are made within 24 hours of mobilisation.	IAP documentation
	Trained observer is mobilised and making visual observations within 24 hours of mobilisation.	IAP documentation
	Aerial surveillance shall continue until termination criteria detailed in Section 8.2.6 have been met.	Criteria have been met prior to termination of the response strategy. Detailed in IAP documentation.
Satellite imagery	Contract in place with satellite provider to enable access and analysis of satellite imagery.	Contract with KSAT (satellite imagery provider)
	First image received with 24 hours.	IAP documentation
	Satellite Imagery services available during response.	Contract with KSAT (satellite imagery provider) IAP documentation

8.3 Oiled Wildlife Response

8.3.1 Overview

In Commonwealth waters, DCCEEW has the jurisdictional authority for wildlife, with AMSA (vessel spills) as Control Agency.

The modelling conducted by RPS for this project did not predict any hydrocarbon exposure to either State/Territory waters (RPS 2024).

Due to the characteristics of the MDO and the offshore open water environment OWR response is not anticipated to be required.

8.3.2 Capability and Resources

Eni would implement an oiled wildlife response that is appropriate to the nature and scale of the spill event. Due to the characteristics of the MDO, large numbers of oiled wildlife is unlikely. The below sections detail Eni's capability if oiled wildlife were encountered.

Table 8-3 presents a summary of the oiled wildlife response resources and availability timelines that Eni has access to if a OWR is required. Regional transport times are shown in Figure 3-1. Oiled wildlife equipment available to Eni and the time to mobilise are presented in Table 8-2.

The equipment in Table 8-2 can treat up to 600 wildlife per day by day 6 once mobilised.

Oiled wildlife response containers and kits which can be activated are located in Fremantle, Dampier, Darwin, Townsville, Sydney and Geelong.

The AMOSC oiled wildlife response equipment is based in Fremantle and comprises an Oiled Wildlife Container for washing up to 50 oiled birds per day.

OSRL OWR equipment is stored in Singapore.

Additional personnel can be accessed through a labour hire contract with TOLL.

Each oiled fauna kit provides the capability to treat approximately 100 wildlife. Each containerised washing station can treat up to 250 wildlife for a five-day period.

Table 8-2: Oiled wildlife stockpiles available to Eni

Resource Owner	Type of Equipment and Number	Available to be mobilised
AMOSC	1 x oiled fauna kit (Dampier)	Day 1
	1 x portable containerised washing station (Fremantle) 1 x oiled fauna kit (Karratha) 1 x oiled fauna kit (Exmouth)	Day 2
	1 x oiled fauna kit	Day 3

Resource Owner	Type of Equipment and Number	Available to be mobilised
	1 x portable containerised washing station 2 x oiled fauna kits	Day 5
OSRL	Equipment to support intake and triage; cleaning and rehabilitation and a wildlife rehabilitation unit.	Day 6

Table 8-3: Oiled wildlife strategy summary

Task	Outcome	Resources	Location	Resource Owner	Minimum Standard
Assessment	Assessment of wildlife at risk.	Aircraft and vessels Eni contractor	Various	Eni	As part of the Operational and Scientific Monitoring Programs (OSMP) operational monitoring.
NEBA	Determine if response strategy will have a net environmental benefit. Inform development of the IAP.	Eni IMT	Perth, WA	Eni	Within 24 hours of spill being detected (ongoing NEBA every 24 hours and as required).
Oiled Wildlife Response Team	Oiled Wildlife Commander in IMT. Oiled wildlife coordinators onsite. Trained wildlife response personnel mobilised to site as required and lead teams of volunteers at staging centres. Establish treatment or rehabilitation centre for oiled wildlife.	Oiled Wildlife Advisor to provide assistance to the IMT.	Various	AMOSC	Oiled Wildlife Advisor notified within 24 hours of spill being detected. Assist with operational monitoring.
		Ability to provide labourers to assist in wildlife response	Various	Eni AMOSC	Notified within 24 hours of spill being detected.

Task	Outcome	Resources	Location	Resource Owner	Minimum Standard
Equipment	Equipment required for oiled wildlife response	Oiled fauna kits Portable containerised washing station	Karratha, WA Exmouth, WA Dampier, WA Fremantle, WA	AMOSC AMSA	1 kit available to be mobilised within 24 hours. See Table 8-2
Vessels	Vessels can be utilised to support oiled wildlife response activities. Such as hazing, pre-emptive capture	Vessels through existing contracts with providers such as TOLL (see Section 8.2.5)	Darwin, NT Exmouth, WA	Eni	Within 72 hours
Rehabilitation	Move the oiled fauna to a rehabilitation centre if deemed necessary.	Transportation to a rehabilitation centre.	Various	AMOSC	Within 4 days of being captured.
	Resources to assist at staging centres.	Recruitment agencies to provide a sustainable supply of resources during the response.	Various	AMOSC	Onsite within 7 days.

8.3.3 Response Activities

Oiled Wildlife Response activities may include:

Stage 1: Wildlife first strike response;

Stage 2: Mobilisation of resources;

Stage 3: Wildlife reconnaissance;

Stage 4: Incident Action Plan wildlife subplan development;

Stage 5: Wildlife rescue and staging;

Stage 6: Oiled wildlife response facility;

Stage 7: Wildlife rehabilitation; and

Stage 8: Oiled wildlife response termination.

Oiled wildlife response core group first mobilises to the vessel(s) to the spill location, it may be some time before they can rely on the IMT supply chain for delivery of specialised equipment (for fauna capture, stabilisation, containment and transport to an oiled wildlife response facility). Oiled Wildlife Coordinators will mobilise with sufficient PPE and fauna triage equipment to last for at least 72 hours. This will enable larger quantities of equipment to be procured and mobilised aligned with the scale of the response.

8.3.4 Termination Criteria

The oiled wildlife response strategy will cease when:

- Collection forays fail to find any new oiled fauna;
- Oiled wildlife recovery operations have ceased; and
- All recovered animals have been cleaned and rehabilitated

As advised by an appropriately qualified panel of experts and directed by Control Agency.

8.3.5 Response Required and Adequacy

The capability detailed in Section 8.3.2 provides the capacity for a level 5 OWR (ability to treat approximately 600 wildlife by day 6 of mobilisation), with additional capacity available through the National Plan. Materials for holding facilities, portable pools, enclosures and rehabilitation areas would be sourced as required.

Hydrocarbons are not predicted to reach shorelines and volumes released will be low (see Section 6.2), therefore, an offshore oiled wildlife response is not anticipated.

8.3.6 Environmental Performance Outcomes, Environmental Performance Standards and Measurement Criteria

OILED WILDLIFE		
EPO: Conduct Oiled Wildlife Response to ensure impacts to wildlife are minimised.		
Control	**PS**	**MC**
Wildlife response equipment	Contracted capability for one fauna kit for immediate mobilisation, which can treat up to 100 individual fauna.	AMOSC Participating Member Contract
Wildlife responders	Wildlife responders to be accessed through existing contracts.	AMOSC Participating Member Contract

8.4 Operational and Scientific Monitoring Program

Eni has prepared the Petrel-3 and Petrel-4 OSMP (000694_DV_PR.HSE.0286.000) to ensure capability required for activities covered in this OPEP are met. The Petrel-3 and Petrel-4 OSMP (000694_DV_PR.HSE.0286.000) provides guidance on how and when monitoring data will be collected in the event of a Level 2 or 3 hydrocarbon spill.

The data generated will be used to:

- Determine the magnitude of short and long term environmental impacts associated with the spill (and its response), including the extent, severity and persistence of the impacts;
- Support the planning and execution of the hydrocarbon spill response activities set out in the OPEP;
- Inform remediation efforts; and if required
- Determine whether environmental performance outcomes have been achieved.

The Petrel-3 and Petrel-4 OSMP conservatively covers the complete capability that Eni has to conduct operational and scientific monitoring programs. This capability was developed for the accepted Blacktip OSMP (000036_DV_PR.HSE.0860.000) in response to a more significant hydrocarbon release. The specific operational monitoring programs (OMPs) and scientific monitoring programs (SMPs) that are anticipated to be relevant to a spill during Petrel-3 and Petrel-4 Monitoring and Decommissioning activities covered are summarised below.

8.4.1 Operational Monitoring Programs

The OMPs presented in Table 8-4 have been developed to obtain and process information regarding the nature and scale of the hydrocarbon spill and the resources at risk. The OMPs shown below are those that may be implemented in the event of a MDO spill during Petrel-3 and Petrel-4 monitoring and decommissioning activities.

Refer to the Petrel-3 and Petrel-4 OSMP (000694_DV_PR.HSE.0286.000) for further details on the OMP capability of these studies.

Table 8-4: Operational Monitoring Programs

Study	Study Title	Description
OMP1	Monitoring of Surface Hydrocarbon Distribution at Sea and Visual Observation of Megafauna	The study monitors the distribution of hydrocarbons at sea, including the extent and possible exposure to environmental receptors. The study includes: • Aerial and vessel observations; • Oil spill trajectory modelling; • Satellite imagery; and • Opportunistic observations of Marine Megafauna. Opportunistic observations of marine mammals, large cartilaginous fish or marine reptiles will be recorded to help inform the oiled wildlife response and SMP1.
OMP2	Monitoring of Hydrocarbons: Weathering and Behaviour in Marine Waters	The study obtains data on the physical and chemical properties of the hydrocarbon that is released. Data is used to inform the selection of response strategies and predict the potential impacts on the environment. The study may include in situ hydrocarbon and water sampling and analysis. Data from this study is used to assist in the determination of the extent of floating, entrained and dissolved hydrocarbons.

8.4.2 Scientific Monitoring Programs

The SMPs presented in Table 8-5 provides qualitative or quantitative data for the assessment of short term and longer-term impacts and recovery of sensitive receptors. The SMPs shown below are those that may be implemented in the event of a MDO spill during Petrel-3 and Petrel-4 monitoring and decommissioning activities.

Refer to the Petrel-3 and Petrel-4 OSMP (000694_DV_PR.HSE.0286.000) for further details on the SMP capability of these studies.

Table 8-5: Scientific Monitoring Programs

Study	Study Title	Description
SMP1	Wildlife Impact Monitoring and Sampling	The study includes determination of cause of death for wildlife carcasses (i.e. tissue analysis) (if any).
SMP3	Assessment of Fish for the Presence of Hydrocarbons	The study obtains data to determine the presence of hydrocarbons in fish, including species caught by commercial and subsistence fishermen. This includes in-field collection of fish species and lab analysis of the fish caught.
SMP4	Fisheries Assessment	The study collects data to assess the effects on fish and fisheries in the Joseph Bonaparte Gulf (JBG) arising from the hydrocarbon spill. This will involve desktop and in-field studies.
SMP6	Hydrocarbon Fate and Effects Assessment	The study obtains data to better understand the physical and chemical weathering of the hydrocarbon. This is used to understand and inform the assessment of impacts on the environment and will follow on from OMP2.

Study	Study Title	Description
SMP8	Socio-economic and heritage Assessment	The study assesses the potential socio-economic and heritage impacts and subsequent recovery pathways following a Level 2/3 hydrocarbon spill. This may include impacts and recovery of cultural and heritage features, indigenous heritage features, underwater cultural heritage features (e.g., shipwrecks), socioeconomic features (e.g., tourism and recreational activities, commercial shipping, other marine users).

8.4.3 Mobilisation

Operational Monitoring is activated in accordance with the Activation criteria within each of the individual Operational Monitoring Plans (OMPs), as defined in the Petrel-3 and Petrel-4 OSMP (000694_DV_PR.HSE.0286.000).

8.4.4 Environmental Performance Outcomes, Environmental Performance Standards and Measurement Criteria

Refer to the Petrel-3 and Petrel-4 OSMP (000694_DV_PR.HSE.0286.000), Section 1.8.

8.5 Spill Response Termination

Upon conclusion of the spill response activity, Eni will complete the following tasks:

- Prepare detailed reports and collate all documents;
- Report on the performance objectives of each individual spill response that was mobilised;
- Undertake an inventory of consumables and prepare accounts;
- Arrange for the return of equipment;
- Arrange for the refurbishment of consumed equipment;
- Conduct an investigation into the cause of the incident and report to relevant authorities; and
- Assess long-term environmental monitoring requirements.

Response termination of the OMP and SMPs are described in the Petrel-3 and Petrel-4 OSMP (000694_DV_PR.HSE.0286.000).

9 TRAINING, EXERCISE AND AUDIT

9.1 CMT/IMT Training

All personnel nominated to the IMT, must be trained to an appropriate level and in appropriate procedures relevant to their role. Training specific to each IMT role is identified in the HSE Training Needs Analysis.

Predetermined IMT members shall endeavour to attend at least one IMT training event per year. Training activities consist of:

- Basic IMT training, comprising role specific training and team training, during which at least two scenarios shall be included;
- Refresher IMT training, during which at least one scenario shall be included, which may include oil spill;
- Relevant IMO or ICS training courses or refresher sessions;
- Project specific briefings, prior to the commencement of operation or if major changes take place to a project; and
- Level 2 and 3 emergency drills as per the 4YR Planning and Execution of HSE Emergency Exercises (ENI-HSE-PL-050).

Classroom training will be supported by regular exercises to ensure that acquired competencies are maintained. In addition, the minimum oil spill response training levels required for each Eni oil spill response related IMT positions are summarised below.

Table 9-1: Minimum oil spill response training requirements for Eni

Position	**Minimum Training Level**				
	IMT and oil spill response training*	**Oil spill response IMO2**	**Oil spill response IMO3**	**Exercises and drills**	**Environment Scientific and Technical training**
Frequency	Annual	Every 3 years	Every 3 years	Every 4 years	Every 3 years
IMT positions					
IMTL	✓		✓	✓	
Planning Officer	✓	✓		✓	
Operations Officer	✓	✓		✓	
Logistics Officer	✓	R		✓	
Safety Officer	✓	R		✓	R
Liaison Officer	✓	R		✓	
Non IMT position					
HSEQ Manager	✓	✓	R	✓	
Operations Manager	✓	✓	R	✓	
Well Operations Manager	✓	✓	R	✓	
Emergency Co-Ordinator	✓	✓	R	✓	R

Position	Minimum Training Level				
	IMT and oil spill response training*	**Oil spill response IMO2**	**Oil spill response IMO3**	**Exercises and drills**	**Environment Scientific and Technical training**
HSE Advisor	✓	✓	R	✓	R
Environment Advisor	✓	✓	R	✓	✓

R = recommended
*Includes Basic IMT training, project briefings, IMT workshops, lunch and learns and other oil spill response training

The objective of training these personnel is to provide knowledge on the safe and efficient response to oil spills, initial assessments of spill risk, how to initiate response to an oil spill, protection priorities, correct response options, limitations of response options and equipment, and the needs of the media.

Predetermined IMT members shall endeavour to attend at least one IMT training event per year.

All members of the IMT are required to periodically participate in drills and oil spill response training workshops, which typically include:

- Scenario workshops;
- Overview to oil spill response;
- Overview of emergency response and IMT roles;
- Familiarisation with OPEP; and
- Toolboxes.

A toolbox upon implementation of an OPEP revision and also prior to activity commencement with the IMT members with the aim of informing them of any changes and familiarising them with the OPEP contents.

Verification of the IMT training and competency of personnel is included in Section 5.6.4.

9.2 Oil Spill Responders

In a spill, all response operations will be led by trained response personnel (AMOSC Core Group, AMSA National Response Team, OSRL). These lead personnel as a minimum are to have IMO Level 1 in Oil Spill Response (operations) training (as specified by the NatPlan and AMOSPlan competency requirements). Before undertaking a response operation (wildlife clean-up), the lead person will provide additional training for the crew of responders that will specify:

- The response aims and objectives;
- Equipment/components involved;
- Practicalities of the response (deployment of equipment if required); and
- Safety aspects of the operations.

These arrangements are appropriate to ensure all IMT personnel and vessel crews have the suitable level of training and competencies to perform their roles in an oil spill response.

Eni has access to external trained spill responder resources:

- National Plan: National Response Team (NRT) – Trained oil spill response specialists including aerial observers, containment and recovery crews deployed under the direction of AMSA and IMT in a response. The NRT is trained and managed in accordance with the National Response Team Policy, approved by the National Plan Strategic Coordination Committee (AMSA, 2014).
- Workforce Labour Hire companies capable of supplying > 2000 personnel at short notice. Personnel will take up roles within Oiled Wildlife Response Teams.

9.3 Competency of Vessel Contractors

All contractors will attend relevant project specific briefings and project inductions, which will include oil spill awareness and guidance regarding visual observation.

Field response activities by vessel contractors will be limited to surveillance and activities related to their normal position (e.g. logistics). Therefore, no other specialised spill response training is anticipated for vessel contractors.

9.4 Oil spill response organisations

AMOSC undergoes annual audits of its oil spill preparedness and ability to respond according to the service level agreement. The reports are available on the AMOSC online member portal.

OSRL maintains assurance of its oil spill preparedness and capabilities through regular external and internal organisational audits, equipment audits, weekly checks, and a global programme of exercises to confirm personnel readiness.

9.5 Testing Arrangements

Emergency response drills may be either desktop exercises or field-based response exercises. Testing of OPEP response arrangements will be conducted annually in accordance with the Eni 1Y and 4Y Emergency Exercise Plan.

Eni maintains a high standard of oil spill response preparedness through:

- Training Eni personnel, particularly those nominated to IMT or CMT (See Section 9.1);
- Compliance with the Eni Incident Management Plan (ENI-HSE-PL-034);
- Ensuring Contractors can respond as required (e.g. that they have sufficient levels of trained personnel and response equipment);

  Conducting exercises and drills in accordance with the Eni 4YR Planning and Execution of HSE Emergency Exercises (ENI-HSE-PL-050); and
- Completing ongoing audits to review that the above are being effective.

The HSEQ Manager is responsible for ensuring annual oil spill response drills and assessment of the performance of the IMT is undertaken. In addition, regular audits of oil spill response preparedness is undertaken.

Testing will also ensure that the timings presented in the OPEP are able to be met, that contracts are in place and contractors have maintained their response capabilities as per the contract.

Specific to the Petrel-3 and Petrel-4 activities the following exercises / tests occur (refer to Table 9-2):

- A level 2/3 desktop exercise in accordance with the Eni 4YR Planning and Execution of HSE Emergency Exercises (ENI-HSE-PL-050);
- Testing of the OSMP (000694_DV_PR.HSE.0286.000), OSR provider arrangements, specific response strategies in line with the 4YR Planning and Execution of HSE Emergency Exercises (ENI-HSE-PL-050); and
- One exercise with AMOSC every 2 years.

Testing is organized in accordance with the Professional Operating Instruction for Planning and Execution of Emergency Drills, including setting an objective for the emergency drill, debriefing and preparation of an emergency drill report to summarise the evaluation of the drill and highlight strength and improvement areas.

On completion of testing, a drill/exercise report is produced to demonstrate the outcomes achieved against the tested objectives (defined prior to testing). The drill report typically includes:

- Lessons learned;
- Any improvement actions; and
- List of the participants.

The drill reports may also be used to issue action plans that will identify corrective actions needed and assign responsibilities, roles and schedules for their implementation. The drill report will identify the action tracking register used to track improvement/actions.

Table 9-2 summarises the exercise and testing arrangements and objectives.

Table 9-2: Testing arrangements plan and objectives

Arrangement	Schedule/frequency	Objective	Measurement criteria
IMT			
Oil spill exercises (scenario specific)	The IMT will conduct annual oil spill exercise, using NOPSEMA accepted Eni OPEPs. Oil spill exercises will be scheduled in the Eni 4YR Planning and Execution of HSE Emergency Exercises (ENI-HSE-PL-050).	IMT exercise objectives will include the IMT's ability to: • Identify and notify relevant stakeholders within timeframes specified in the OPEP; • Develop an incident action plan, including: – appropriate use of data to inform response decision making; – identification of sensitive receptors and protection priorities; – determine secondary response strategies; and – activation of relevant operational and scientific monitoring programs. • Activate mechanisms/arrangements within timeframes specified in the OPEP and OSMP	4YR Planning and Execution of HSE Emergency Exercises (ENI-HSE-PL-050) Exercise reports Confirmation of equipment and response personnel provision from service providers
Other			
National Plan Exercises	As determined by AMSA	Participate as required to ensure alignment between National Response and Eni Response.	Exercise reports.
Notification exercises	At least annually and prior to activity commencement	Test/check all communication and notification processes to service providers and regulatory agencies defined within the OPEP.	Documented communication test/check
IMT exercise in conjunction with AMOSC	Every 2 years.	The objectives of this joint exercise will be to: • practice the Eni IMT activation of the AMOSC IMT; and • practice the interface between the Eni IMT and AMOSC IMT personnel	Exercise reports.

9.6 Environmental Performance Outcomes, Environmental Performance Standards and Measurement Criteria

OPEP Testing		
EPO: Spill arrangements are maintained and tested to respond to worst-case spill events		
Control	**PS**	**MC**
Maintain a state of readiness to respond to oil spill events	The IMT will conduct annual oil spill exercises, using NOPSEMA accepted OPEPs. Oil spill exercises will be scheduled in the Eni 4YR Planning and Execution of HSE Emergency Exercises (ENI-HSE-PL-050). IMT exercise objectives will include the IMT's ability to: • Identify and notify relevant stakeholders within timeframes specified in the OPEP; and • Develop an incident action plan, including: – appropriate use of SMV data to inform response decision making; – identification of sensitive receptors and protection priorities; – completion of an Operational SIMA to determine secondary response strategies; – assessment and activation of relevant operational and scientific monitoring programs; and – identify relevant (scenario specific) response strategy capabilities and practice mechanisms/arrangements to activate them, within timeframes specified in the OPEP.	4YR Planning and Execution of HSE Emergency Exercises (ENI-HSE-PL-050) Exercise reports.
	A minimum of one IMT exercise will be conducted in conjunction with AMOSC every 2 years. The objectives of this joint exercise will be to: • Practice the Eni IMT activation of the AMOSC IMT; and • Practice the interface between the Eni IMT and AMOSC IMT personnel	Exercise reports
	Exercise findings and improvement opportunities will be recorded in the exercise report. The exercise report will identify the action tracking register used	Exercise reports and action tracking register

OPEP Testing		
EPO: Spill arrangements are maintained and tested to respond to worst-case spill events		
Control	**PS**	**MC**
	to track improvement opportunities to closure, to ensure the test objective can be achieved in the future.	
	All communication and notification processes to service providers and regulatory agencies defined within the OPEP are checked/tested annually and prior to activity commencement.	Documented communication test/check

10 OPEP REVIEW AND AUDITS

The HSEQ Manager is responsible for ensuring that the OPEP is regularly revised and updated as required and for ensuring that any revisions are distributed. This OPEP will be kept up to date and will be reviewed:

- At least every two years;
- When major changes which may affect the oil spill response coordination or capabilities have occurred;
- A change in the availability of equipment stockpiles;
- Following routine testing of the plan (to incorporate, where relevant, lessons learned), or
- The introduction of a new or improved technology that may be considered in a response for this activity
- Change in the availability of personnel that reduces or improves preparedness and the capacity to respond; and
- After an actual emergency.

If national or state response frameworks and integration with these frameworks changes.

The deployment readiness and capability of AMOSC's oil spill response equipment and resources in Geelong and Fremantle is audited every two years by AMOSC member companies on behalf of AMOSC member companies, including Eni. In the intervening year between Audits the progress of Audit Actions will be followed up. The intent of this audit is to provide assurances to Eni and associated members of AMOSC's ability to respond to an oil spill incident as per the methods and responsibilities defined in Eni's Oil Pollution Emergency Plans.

The deployment readiness and capability of OSRL's oil spill response equipment and personnel in Singapore is audited every two years by the Emergency & Oil Spill Coordinator or other Australian member company (Petroleum Titleholder) through agreement. The intent of this audit is to provide assurances to Eni of OSRL's ability to respond to an oil spill incident as per the methods and responsibilities defined in Eni's Oil Pollution Emergency Plans.

10.1 OPEP Consultation

Consultation, agreements or contracts that support Eni's oil spill response strategies and tactics have been put into place with agencies and organisations throughout the development of the OPEP so that roles and responsibilities are understood and accepted.

The OPEP will be revised and updated should a stakeholder's position change after acceptance of this OPEP.

11 REFERENCES

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MSG-HSE-ENI-SPA-ENG-R04; HSE MSG

ALL. MSG-HSE-ENI-SPA-H_EN_R03; Managing emergencies

opi-hse-005-eni-spa-nr-EN-r01; Planning and Execution of HSE Emergency Exercises

opi-hse-009-eni-spa-nr-EN-r01; Emergency Response Strategy and Plan

pro-hse-001-eni-spa-nr-EN-r01; Communication flows for pre-alarms or emergencies - Natural Resources

opi-hse-031-eni spa_EN_r02; Planning and Management of natural events

pro-hse-005-eni-spa-r02; Management of fuel supply and combustible materials in emergencies

ENI-HSE-PL-050 4YR Planning and Execution of HSE Emergency Exercises

ENI-HSE-PL-032_05 - Incident and Crisis Management Strategy

APPENDICES

APPENDIX A

SPILL RESPONSE FORMS

APPENDIX A: SPILL RESPONSE FORMS

eni australia

Marine Pollution Report Form
ENI-HSE-FR-028
Rev 00

POLREP

MARINE POLLUTION REPORT

INCIDENT DETAILS

Date of Incident: _____ Time of Incident *(24 hr format)*: _____

Location name/description: _____

_____

Incident Coordinates Latitude of spill _____ **Longitude of spill** _____

Format of coordinates used *(select one)*

☐ *Degrees & decimal degrees* ☐ *Degrees, minutes & decimal minutes* ☐ *Degrees, minutes &seconds*

Description of Incident:

_____

_____

POLLUTION SOURCE

☐ Vessel ☐ Land *(Specify)* _____ ☐ Other *(Specify)* _____ ☐ Unknown

Vessel type *(if known)* ☐ Tanker ☐ Container ☐ Bulk ☐ Cargo ☐ Fishing ☐ Defence ☐ Recreational ☐ Other

(Specify) _____

Vessel name: _____ Flag State / Callsign: _____ Australian vessel? ☐ Yes ☐ No

POLLUTANT

☐ **Oil** *(type)* ☐ Bilge ☐ Diesel ☐ HFO bunker ☐ Crude ☐ Unknown ☐ Other

(Specify) _____

☐ **Chemical** Name: _____ MARPOL cat / UN Nos: _____

☐ **Garbage** Details/description: _____

☐ **Packaged** Details/description: _____

☐ **Sewage** Details/description: _____

☐ **Other** Details/description: _____

EXTENT

Size of spill ***(length & width in metres):*** _____

Amount of pollutant, if known ***(litres):*** _____

Has the discharge stopped? ☐ Yes ☐ No ☐ Unknown

Weather conditions at site: _____

_____

☐ **Photos taken** Details: _____ held by: _____

☐ **Video taken** Details: _____ held by: _____

☐ **Samples taken** Details: _____ held by: _____

☐ **Items retrieved** Details: _____ held by: _____

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Marine Pollution Report Form
ENI-HSE-FR-028
Rev 00

ADDITIONAL INFORMATION

Response action undertaken? ☐ Yes ☐ No

If yes, provide details below, please include any environmental impact.

Equipment used? ☐ AMSA ☐ State / NT ☐ Industry

Is assistance for an investigation required from DPI ☐ Yes ☐ No

ORIGINAL REPORT SOURCE

Name: _____ Position: _____ Phone: _____

Combat agency: _____ Statutory agency: _____

SENDER DETAILS

Name: _____ Agency: _____ Date: _____

Phone: _____ Fax: _____ Email: _____

Eni Duty Manager to be informed on 0419 943 584

This form is to be completed with as much information as possible (regardless of the size of the spill) and emailed to:

Eni Duty Manager/IMT Leader at <info@eniaustralia.com.au

For any additional information please add extra pages as required.

eni australia

Marine Pollution Situation Report Form
ENI-HSE-FR-029
Rev 00

SITREP

MARINE POLLUTION SITUATION REPORT

Incident Name: _____ Ref. No. _____

Priority ☐ Urgent ☐ Immediate ☐ Standard

Final SITREP? ☐ Yes ☐ No Next SITREP on: _____

Date: _____ Time: _____

POLREP Reference: _____

Incident location Latitude _____ Longitude _____

Brief description of incident and impact: _____

Overall weather conditions: _____

Summary of response actions to date: _____

Current Strategies: _____

Summary of resources available/deployed: _____

Expected developments: _____

Other Information: _____

This form is to be completed with as much information as possible (regardless of the size of the spill) and emailed to:

Eni IMT Leader at <info@eniaustralia.com.au>

For any additional information please add extra pages as required

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GUIDANCE NOTE

Notification and reporting of environmental incidents

Document No: N-03300-GN0926 A710941

Date: 10/01/2024

1. General

- The titleholder has a duty to notify and report environmental incidents to the National Offshore Petroleum Safety and Environmental Management Authority (NOPSEMA) under Regulations 47, 48, 49 and 50 of the Commonwealth Offshore Petroleum and Greenhouse Gas Storage (Environment) Regulations 2023.
- Regulation 47 requires the titleholder to notify NOPSEMA orally of a **reportable** environmental incident as soon as practicable but not later than two (2) hours after the first occurrence of the incident or after the time that the titleholder becomes aware of the incident.
- Regulation 47(3) requires the titleholder to give a written record of the notification to NOPSEMA, the Titles Administrator and the Department of the responsible State or Northern Territory Minister as soon as practicable after the oral notification.
- Regulation 48 requires the titleholder to give NOPSEMA a written report of a **reportable** incident as soon as practicable but not later than three (3) days after the first occurrence of the incident.
- Regulation 48(3) requires titleholders to give a copy of the written report to both the Titles Administrator and the Department of the responsible State or Northern Territory Minister within seven (7) days of giving the written report to NOPSEMA.
- Regulation 50 requires the titleholder to submit a **recordable** environmental incident report not later than 15 days after the end of each calendar month.
- Failure to notify and report environmental incidents to NOPSEMA are ***offences of strict liability***.
- The titleholder remains responsible for making notifications and other reports to other persons or organisations as may be required.

To make an oral notification to NOPSEMA of a reportable environmental incident call:

1300 674 472

A **reportable** environmental incident is defined in Regulation 5 as:

*"**Reportable incident**, for an activity, means an incident relating to the activity that has caused, or has the potential to cause, moderate to significant environmental damage."*

The potential of an incident to cause moderate to significant environmental damage is determined during the preparation of an Environment Plan (EP). An EP should contain clear definitions of what is considered to be a reportable incident for a particular activity and should be referred to prior to notification of a reportable incident to NOPSEMA.

If in doubt, notify NOPSEMA.

A **recordable** environmental incident is defined in Regulation 5 as:

> **"Recordable incident,** for an activity, means a breach of an environmental performance outcome or environmental performance standard, in the EP that applies to the activity, that is not a reportable incident."

This Guidance Note and others on the NOPSEMA website are intended to provide general guidance to the industry as to the approach that NOPSEMA takes in carrying out its regulatory functions and exercising powers under the Commonwealth *Offshore Petroleum and Greenhouse Gas Storage Act 2006* and Regulations under that Act. The Guidelines should not be relied on as advice on the law, nor treated as a substitute for legal advice in any relevant situation.

2. Information Required for Environmental Incident Reporting

1. Material facts and circumstances must be described, including:

a. The activity name, site/facility name or location where the incident occurred.

b. Name and business address of the titleholder of the petroleum activity.

c. Time and date of incident.

d. Names and contact details of any witnesses.

e. Name/position/telephone number of person submitting these details.

f. Brief description and cause (if known) of the incident.

g. Work/activity being undertaken at time of incident.

h. For a fluid and/or gas escape:

   i. Estimated quantity and duration of escape; and
   ii. Composition of fluids or gases that escaped (including known toxicity information)

i. Environment Plan that this incident is being reported against.

j. Details of the extent of the impact – including type of any environmental damage and/or areas at risk.

k. Any impacts to Part 3 protected matters under the *Environment Protection and Biodiversity Conservation Act 1999*.

2. Action taken to avoid or mitigate impact:

   Immediate actions taken to avoid or mitigate adverse environmental impacts of the reportable incident.

3. Corrective actions:

   Corrective actions taken, or proposed, to stop, control or remedy the reportable incident.

4. Action to prevent a similar incident:

   Actions taken, or proposed, to prevent a similar incident occurring in the future.

3. Notification of Reportable Environmental Incidents

3.1. Notification of Reportable Environmental Incident within 2 hours

When notifying NOPSEMA of a reportable environmental incident the titleholder must provide all the details that it knows or is able, by reasonable search or enquiry, to find out, as listed above in items 1 to 4. It is understood details might be limited at this early stage.

The NOPSEMA notification phone line is available to titleholders 24 hours a day. It will either be answered directly or the caller can leave a voice message, following which they will receive a call back.

Titleholders should **not** make notifications via the NOPSEMA general switchboard or their focal point specialist.

Titleholders are also required to give a written record of the notification to NOPSEMA, as well as the Titles Administrator (NOPTA) and the Department of the responsible State or Northern Territory Minister as soon as practicable after the oral notification.

4. Reporting of Reportable and Recordable Environmental Incidents

4.1. Written Reportable Incident Reports required within 3 days

A written report must be provided to NOPSEMA as soon as practicable, but in any case, within 3 days of a reportable environmental incident unless otherwise agreed by NOPSEMA. The 3-day written report must include items 1 to 4. Titleholders may wish to utilise the NOPSEMA report form (N-03300-FM0831) available from the NOPSEMA Website: www.nopsema.gov.au

If NOPSEMA is not satisfied that the written report meets the requirements of the Regulations NOPSEMA may request, by notice in writing, additional written reports from the titleholder. The notice must identify the information to be contained in the report or matters to be addressed and specify when the report must be given to the Regulator.

4.2. Written Recordable Incident Reports required each calendar month

A written report of all recordable incidents that occurred during any calendar month must be provided to NOPSEMA as soon as practicable but not later than 15 days after the end of the calendar month. The written report must contain a record of all recordable incidents during that month including details of items 1 to 4.

A Titleholder may wish to utilise the Recordable Environmental Incident Monthly Report template (N-03300-FM0928) available from the NOPSEMA Website: www.nopsema.gov.au

If no recordable incidents have occurred during any particular month, a nil incident report should be submitted to NOPSEMA.

All written notifications and reports to NOPSEMA must be submitted to submissions@nopsema.gov.au or via secure file transfer at https://securefile.nopsema.gov.au/filedrop/submissions
[NOTE: This guidance note relates to the Environment Regulations in place from 28 February 2014. For environment plans accepted under the old regulations, refer to the previous incident reporting requirements.]

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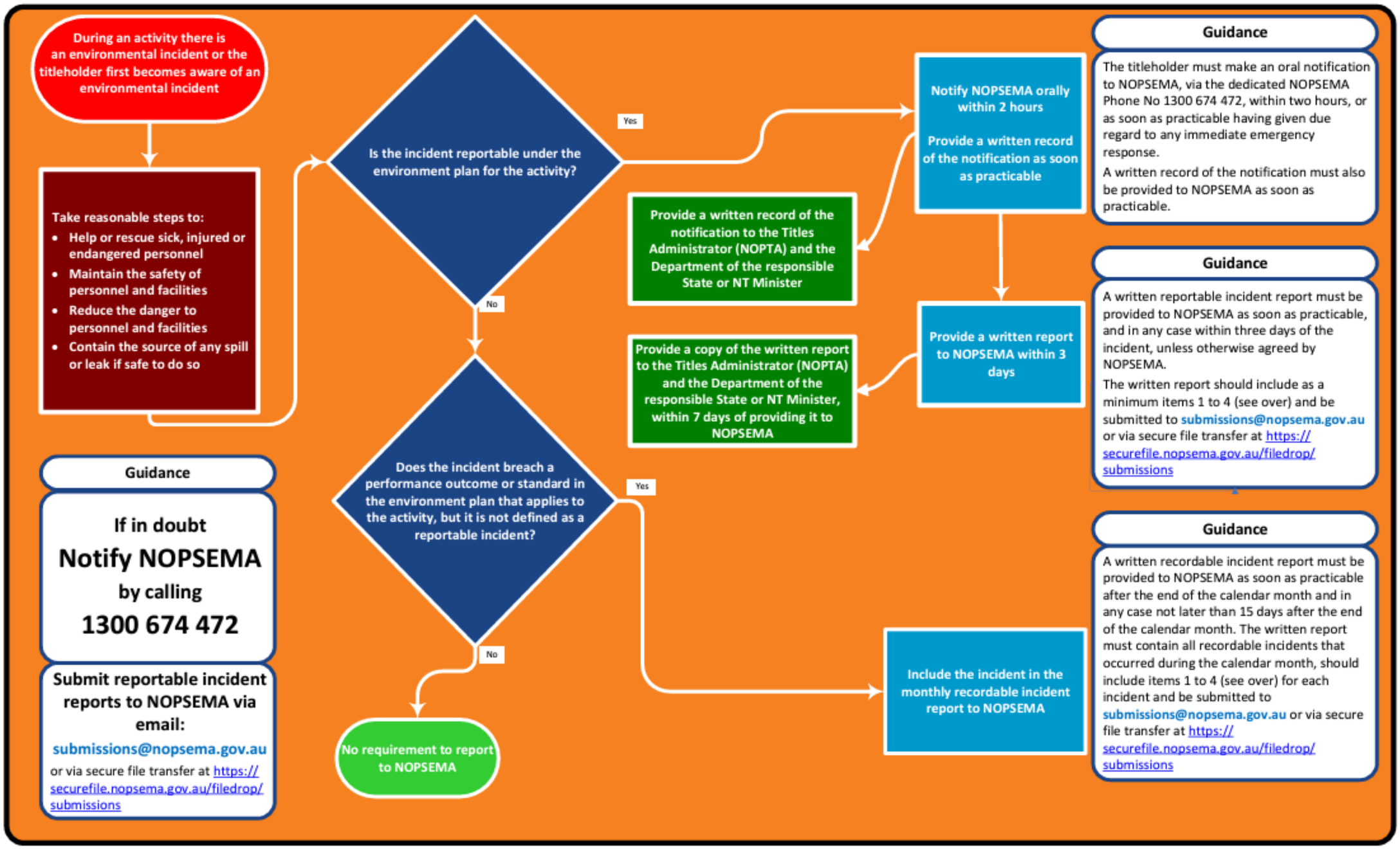
GUIDANCE NOTE



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FORM

Report of an accident, dangerous occurrence or environmental incident

Document No: N-03300-FM0831 A159980

Date: 07/09/2023

For instructions and general guidance in the use of this form, please see the last page.

Part 1 is required within 3 days of a notified incident.
Part 2 is required within 30 days of notified incident.

What was the date and time of the initial verbal incident notification to NOPSEMA?			
Date		**Time**	

NOTE: It is a requirement to request permission to interfere with the site of an accident or dangerous occurrence. Refer OPGGS(S)R, Reg. 2.49.

What is the date and time of this written incident report?			
Date		**Time**	

What type of incident is being reported?	*Please tick appropriate incident type*	
Accident or dangerous occurrence	☐	Complete parts 1A, 1B & part 2
Environmental Incident	☐	Complete parts 1A, 1C
BOTH (Accident or dangerous occurrence AND environmental incident)	☐	Complete ALL parts (1A, 1B, 1C, 2)

Please tick all applicable (one or more categories) — *To use electronically: MS Word 2007-10 – click in check box*

Categories *Please select one or more*	Accidents	Death or Serious injury Lost time injury ≥3 days	☐ ☐
	Dangerous occurrences	Hydrocarbon release >1 kg or ≥80 L (gas or liquid) Fire or explosion Collision marine vessel and facility Could have caused death, serious injury or LTI Damage to safety-critical equipment Unplanned event – implement ERP Pipeline incident Well kick >50 barrels Other _____	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐
	Environmental incidents	Hydrocarbon release Chemical release Drilling fluid/mud release Fauna Incident Other _____	☐ ☐ ☐ ☐ ☐

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Report of an accident, dangerous occurrence or environmental incident Form

Part 1A – Information required within 3 days of an accident, dangerous occurrence or environmental incident				
General information – all incidents				
1.	**Where did the incident occur?**	Facility / field / title name		
		Site name and location *Latitude/longitude*		
2.	**Who is the registered operator/titleholder or other person that controls the works site or activity?**	Name		
		Business address		
		Business phone no.		
3.	**When did the incident occur?**	Time and time zone		
		Date		
4.	**Did anyone witness the incident?**	Yes or No *If yes, provide details below*		
	Witness details	Witness no. 1	Witness no. 2	Witness no. 3
	Full name			
	Phone no. (Business hours)			
	Phone no. (Home) (Mobile)			
	Email (Business) (Private)			
	Postal address			
	NB: If more witnesses, copy and insert this section (4) here, and add extra witness numbers appropriately			
5.	**Details of person submitting this information**	Name		
		Position		
		Email		
		Telephone no.		
6.	**Brief description of incident**			
7.	**Work or activity being undertaken at time of incident**			

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Report of an accident, dangerous occurrence or environmental incident Form

Part 1A – Information required within 3 days of an accident, dangerous occurrence or environmental incident

General information – all incidents

8.	**What are the internal investigation arrangements?**					
9.	**Was there any loss of containment of any fluid (liquid or gas)?**	Yes or No *If Yes, provide details below*				
		Type of fluid (liquid or gas) *If hydrocarbon release, please complete item no.15 as well*	Hydrocarbon *Please specify*_____ Non-hydrocarbon *Please specify*_____	☐ ☐		
		Estimated quantity *Liquid (L), Gas (kg)*				
		Estimation details	Calculation	☐	Measurement	☐
			*Please specify*_____			
		Composition *Percentage and description*				
		Known toxicity to people and/or environment	Toxicity to people			
			Toxicity to environment			
		How was the leak/spill detected?	F&G detection CCTV	☐ ☐	Visual Other	☐ ☐
		Did ignition occur?	No Yes	☐ ☐	Immediate Delayed	☐ ☐
			If yes, what was the likely ignition source		Hotwork Spark electrical source Spark metallic contact Hot surface Other	☐ ☐ ☐ ☐ ☐
10.	**Has the release been stopped and/or contained?**	Yes or No				
		Duration of the release *hh:mm:ss*				
		Estimated rate of release *Litres or kg per hour*				
11.	**Location of release**	What or where is the location of the release?				
		What equipment was involved in the release?				
		Is this functional location listed as safety-critical equipment?				

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Report of an accident, dangerous occurrence or environmental incident Form

Part 1A – Information required within 3 days of an accident, dangerous occurrence or environmental incident

General information – all incidents

12.	**Weather conditions** *Please complete as appropriate*	Ambient temperature C°				
		Relative humidity %				
		Wind speed m/s *NB: for enclosed areas use* Air change per hour				
		Wind direction e.g. from SW				
		Significant wave height m				
		Swell m				
		Current speed m/s				
		Current direction e.g. from SW				
13.	**Hydrocarbon release details** *If hydrocarbon fluid (liquid or gas) was released, please complete this section as well*	System of hydrocarbon release	Process ☐ Drilling ☐ Subsea / Pipeline ☐		Utilities ☐ Well related ☐ Marine ☐	
		Estimated inventory in the isolatable system *Litres or kg*				
		System pressure and size of piping or vessel *diameter (d in mm)* *length (l in m)* *or volume (V in L)*	Pressure MPag			
			Size Piping (d) and Piping (l) or Vessel (V)			
		Estimated equivalent hole diameter *d in mm*				

Part 1B - Complete for accidents or dangerous occurrences

Accidents and dangerous occurrences information

	Was NOPSEMA notified through the dedicated notification phone line? *Phone No.* 1300 674 472		Yes	☐	No	☐
15.	**Action taken to make the work-site safe**	Was permission given by a NOPSEMA inspector to interfere with the site? OPGGS(S)R 2.49.	Yes	☐	No	☐
		Action taken				
		Details of any disturbance of the work site				

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Report of an accident, dangerous occurrence or environmental incident
Form

Part 1B - Complete for accidents or dangerous occurrences

Accidents and dangerous occurrences information

16.	**Was an emergency response initiated?**			Yes	☐	No	☐	
		Type of response		Manual Automatic alarm	☐ ☐	Muster Evacuation	☐ ☐	
		How effective was the emergency response?						
17.	**Was anyone killed or injured?** *Provide details below*			Yes	☐	No	☐	
	Injured persons (IP)		**Casualty no. 1**					
	If different from item 2. Employer name			Employer address				
	Employer phone no.			Employer email				
	IP full name							
	IP date of birth			Sex	M	☐	F	☐
	IP residential address							
	IP phone no. (Work)			IP phone no. (Home) (Mobile)				
	IP occupation/job title			Contractor or core crew				
	Details of injury							
	Based on TOOCS (refer last page) Nature of injury	a. Intracranial injury b. Fractures c. Wounds, lacerations, amputations, internal organ damage	☐ ☐ ☐	d. Burn e. Nerve or spinal cord injury f. Joint, ligament, muscle or tendon injury g. Other _____	☐ ☐ ☐ ☐			
	Part of body	G1. Head or face G2. Neck G3. Trunk G4. Shoulder or arm	☐ ☐ ☐ ☐	G5. Hip or leg G6. Multiple locations G7. Internal systems G8. Other _____	☐ ☐ ☐ ☐			
	Mechanism of injury	G0. Falls, stepping, kneeling, sitting on object G1. Hitting object G2. Being hit or trapped	☐ ☐ ☐	G3. Exposure to sound or pressure G4. Muscular stress G5. Heat, cold or radiation G6/7 Chemical, biological substance G8. Other _____	☐ ☐ ☐ ☐ ☐			
	Agency of injury	1. Machinery or fixed plant 2. Mobile plant or transport 3. Powered equipment 4. Non-power equipment	☐ ☐ ☐ ☐	5/6. Chemicals, materials, substances 7. Environmental agencies 8. Human or animal agencies 9. Other _____	☐ ☐ ☐ ☐			

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Report of an accident, dangerous occurrence or environmental incident Form

Part 1B - Complete for accidents or dangerous occurrences

Accidents and dangerous occurrences information

	Details of job being undertaken				
	Day and hour of shift	Day *e.g. 5th day of 7 (5 / 7)*		Hour *e.g. 3rd hour of 12 (3 / 12)*	
	NB: If more casualties, please copy/paste this section (19) for each additional casualty and insert here				
18.	**Was there any serious damage?** *Provide details below*		Yes ☐		No ☐
	Details	**Item 1**		**Item 2**	**Item 3**
	Equipment damaged				
	Extent of damage				
19.	**Will the equipment be shut down?** *Yes or No*				
	If yes, for how long?				
	NB: If more equipment seriously damaged, please copy/paste this section as required				
20.	**Will the facility be shut down?**	Yes or No *If yes provide details below*			
	Facility shutdown	Date			dd/mm/yyyy
		Time			24-hour clock
		Duration			days / hours / minutes
21.	**Immediate action taken/intended, if any, to prevent recurrence of incident.**	**Action**		**Responsible party**	**Completion date** *Actual or intended*
22.	**What were the immediate causes of the incident?**				

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Attachments

Are you attaching any documents?			Yes or No *If yes, provide details below*	
No.	**ID**	**Revision**	**Date**	**Title/description**

Insert or delete rows as required

Part 1C – Complete for environmental incidents

Environmental Impacts

23.	**What is the current environment plan for this incident?**	Environment plan		
24.	**Has the incident resulted in an impact to the environment?**	Yes or No *If yes, provide details below*		
		Incident details *e.g. estimated area of impact, nature/significance of impact*		
		ENVIRONMENTAL RECEPTORS		
		Open ocean ☐ Shoreline ☐ Population centre ☐ Stakeholders ☐ Other sensitivity ☐ *e.g. conservation area, nesting beach*	Macroalgae ☐ Coral Reef ☐ Benthic invertebrates ☐ Seagrass ☐ Mangrove ☐	
		Further details		

	Details	**Environment 1**	**Environment 2**	**Environment 3**
	Location of receiving environments *Lat/Long*			
	Date & time of impact			
	Action taken to minimise exposure			
	Specify each matter protected under Part 3 of the EPBC Act impacted			

NB: If more environments were damaged, please copy/paste this section (Item E3) and add extra data

25.		Yes or No *If yes, provide details*	

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Form

Part 1C – Complete for environmental incidents

Environmental Impacts

	Are any environments at risk? *Including as a result of spill response measures*	Details *e.g. zone of potential impact*		
		AT RISK ENVIRONMENTS		
		Open ocean ☐ Shoreline ☐ Population Centre ☐ Stakeholders ☐ Other sensitivity ☐ *e.g. conservation area, nesting beach*	Macroalgae ☐ Coral Reef ☐ Benthic Invertebrates ☐ Seagrass ☐ Mangrove ☐	
	Details	**Environment 1**	**Environment 2**	**Environment 3**
	Estimated location of 'at-risk' environments			
	Estimated impact date & time			
	Action required to minimise exposure			
	Specify each matter protected under Part 3 of the EPBC Act at risk			
	NB: If more environments at risk of damage, please copy/paste this section (Item E2) and add extra data			
26.	**Was an oil pollution emergency plan activated?**	Yes or No		
		If yes, what action has been implemented /planned?		
		If yes, how effective is/was the spill response?		
27.	**Was an environmental monitoring program initiated?**	Yes or No		
		If yes, what actions have been implemented and/or planned?		
28.	**Did the incident result in the death or injury of any fauna?**	Yes or No (If yes provide details of species in the table below)		
	Injured fauna	**Species 1**	**Species 2**	**Species 3**
	Species name (common or scientific name)			
	Number of individuals killed or injured	Killed: Injured:	Killed: Injured:	Killed: Injured:
	NB: If more species were injured or killed, please copy/paste this section (Item E4) and add extra data			
29.	**Actions taken to avoid or mitigate any adverse**	**Action**	**Responsible party**	**Completion date** *Actual or intended*

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Part 1C – Complete for environmental incidents

Environmental Impacts

	environmental impacts of the incident.			
	NB: If more actions, please add extra rows as required			
30.	Corrective actions taken, or proposed, to stop, control or remedy the incident.	**Action**	**Responsible party**	**Completion date** *Actual or intended*
	NB: If more actions, please add extra rows as required			
31.	Actions taken, or proposed, to prevent a similar incident occurring in the future.	**Action**	**Responsible party**	**Completion date** *Actual or intended*
	NB: If more actions, please add extra rows as required			

Attachments

Are you attaching any documents?			Yes or No *If yes, provide details below*	
No.	**ID**	**Revision**	**Date**	**Title/Description**
Insert or delete rows as required				

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Report of an accident, dangerous occurrence or environmental incident Form

Part 2 – Information required within 30 days of accident or dangerous occurrence

NOPSEMA acknowledges that in many circumstances an operator may not have completed an investigation within 3 days of an accident or first detection of a dangerous occurrence and agrees that these items must be provided within 30 days unless otherwise agreed, in writing with NOPSEMA. In circumstances where an investigation has been completed within 3 days, and these items are available (supplemented, as required by any attachments) this part should also be completed at that time.

32.	**Has the investigation been completed?**	Yes or No	
	Root cause analysis *What were the root causes?*	Root cause 1	
		Root cause 2	
		Root cause 3	
		Other root causes	
	Full report *Describe investigation in detail, including who conducted the investigation and in accordance with what standard/procedure with reference to attachments listed in the 'attachments table' (following) as applicable*		

33.	**Actions to prevent recurrence of same or similar incident**	**Action**	**Responsible party**	**Completion date** *Actual or intended*

NB: Add or delete rows as appropriate

Attachments (Insert/delete rows as required)

Are you attaching any documents?			Yes or No *If yes, provide details below*	
No.	**ID**	**Revision**	**Date**	**Title/description**

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Report of an accident, dangerous occurrence or environmental incident Form

Instructions and general guidance for use:

1. The use of this form is voluntary and is provided to assist operators and titleholders to comply with their obligations to give notice and provide reports of incidents to NOPSEMA under the applicable legislation.
2. Accidents, dangerous occurrences or environmental incidents can all be reported using this same form.
3. The applicable legislation for incident reporting is:
    a. Offshore Petroleum and Greenhouse Gas Storage (Safety) Regulations 2009 [OPGGS(S)R]; and
    b. Offshore Petroleum and Greenhouse Gas Storage (Environment) Regulations 2009 [OPGGS(E)R], for facilities located in Commonwealth waters; or
    c. for facilities located in designated coastal waters, the relevant State or Territory Act and associated Regulations where there is a current conferral of powers to NOPSEMA.
4. In the context of this form an incident is a reportable incident as defined under:
    a. OPGGSA, Schedule 3, Clause 82.
    b. OPGGS(E)R, regulation 4.
5. This form should be used in conjunction with NOPSEMA Guidance Notes available on the NOPSEMA website:
    a. N-03300-GN0099 Notification and Reporting of Accidents and Dangerous Occurrences
    b. N-03300-GN0926 Notification and Reporting of Environmental Incidents
6. Part 1 requires completion for all incidents; then ALSO complete part 2 if the incident is an accident or dangerous occurrence.
7. NOPSEMA considers that a full report will contain copies of documentary material referenced and/or relied on in the course of completing this form, which may include (but not be limited to) as appropriate: witness statements, management system documents, drawings, diagrams and photographs, third party reports (audit, inspection, material analysis etc.), internal records and correspondence.
8. This form is intended to be completed electronically using Microsoft Word by completing the unshaded cells which will expand as required to accept the information required and the check boxes where relevant (NB: check boxes may appear shaded and have reduced functionality in MS Word versions prior to 2010).
9. The completed version of this form (and any attachments, where applicable) should be emailed to:

    submissions@nopsema.gov.au

    or submitted via secure file transfer at: https://securefile.nopsema.gov.au/filedrop/submissions as soon as practicable, but in any case, within three days of the incident.

References

NOPSEMA website: www.nopsema.gov.au

TOOCS – Type of Occurrence Classification System.
The *Type of Occurrence Classification System, Version 3.0* (TOOCS3.0) was developed to improve the quality and consistency of data. This system aligns with the International Classification of Diseases – Australian Modification (ICD10-AM). Type of occurrence classification system (TOOCS) 3rd Edition May 2008 | Safe Work Australia

OPGGS(S)R. Offshore Petroleum and Greenhouse Gas Storage (Safety) Regulations 2009. Select Legislative Instrument 2009 No. 382 as amended and made under the *Offshore Petroleum and Greenhouse Gas Storage Act 2006*.Commonwealth of Australia.
OPGGS(E)R. Offshore Petroleum and Greenhouse Gas Storage (Environment) Regulations 2009. Statutory Rules 1999 No. 228 as amended and made under the *Offshore Petroleum and Greenhouse Gas Storage Act 2006*. Commonwealth of Australia.

Privacy Notice

NOPSEMA collects your personal information for the purpose of investigating accidents, dangerous occurrences and environmental incidents under the *Offshore Petroleum and Greenhouse Gas Storage Act 2006*.

NOPSEMA will not use or disclose your personal information for any other purpose without your consent, unless it is required or authorised by law, or relates to NOPSEMA's enforcement activities. Your personal information may be disclosed to the following organisations, entities or individuals:

- individuals who make a request under the *Freedom of Information Act 1982*
- the Australian National Audit Office and other privately appointed auditors
- other law enforcement bodies (for example, the police or the coroner)
- NOPSEMA's legal advisors.

NOPSEMA may occasionally be required to disclose information to overseas recipients in order to discharge its functions or exercise its powers, or to perform its necessary business activities.

Information about how you can access, or seek correction to, your personal information is contained in NOPSEMA's APP Privacy Policy at www.nopsema.gov.au/privacy. If you have an enquiry or a complaint about your privacy, please contact NOPSEMA's Privacy Contact Officer on (08) 6188 8700 or by email at: privacy@nopsema.gov.au.

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FORM

Recordable Environmental Incident Monthly Report

Document No: N-03300-FM0928 A198750

Date: 10/01/2024

Due Date: By the 15th day of the following month.

Send completed form to: submissions@nopsema.gov.au via secure file transfer at https://securefile.nopsema.gov.au/filedrop/submissions

Reference: Regulation 50

Please check the following boxes if applicable to this report		Nil Incident Report: ☐		Final report for this activity: ☐	
Titleholder name:		**Titleholder business address:**		**Title of environment plan for the activity:**	
Activity type: (e.g. drilling, seismic, production)		**Month, Year:**		**Facility name and type :** (e.g. MODU, Seismic Vessel, FPSO)	
Contact person:		**Email:**		**Phone:**	
Incident date	**All material facts and circumstances** (including release volumes to environment if applicable)	**Performance outcome(s) and/or standard(s) breached**	**Action taken to avoid or mitigate any adverse environmental impacts of the incident**	**Corrective action taken, or proposed, to stop, control or remedy this incident**	**Action taken, or proposed, to prevent a similar incident occurring in future**

Note 1: As at 28 February 2014, amendments to the Offshore Petroleum and Greenhouse Gas Storage (Environment) Regulations changed from environmental performance objective to environmental performance outcome. If you are reporting against an EP accepted under the old Regulations please report against the environmental performance objective for that activity.

Note 2: This form may be submitted in conjunction with the 'Injuries and Fatalities – Monthly Summary Report' Form available at www.nopsema.gov.au

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Recordable Environmental Incident Monthly Report Form

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- individuals who make a request under the *Freedom of Information Act 1982*
- the Australian National Audit Office and other privately appointed auditors
- NOPSEMA's legal advisors.

NOPSEMA may occasionally be required to disclose information to overseas recipients in order to discharge its functions or exercise its powers, or to perform its necessary business activities. Information about how you can access, or seek correction to, your personal information is contained in NOPSEMA's APP Privacy Policy at www.nopsema.gov.au/privacy. If you have an enquiry or a complaint about your privacy, please contact NOPSEMA's Privacy Contact Officer on 08 6188 8700 or by email at privacy@nopsema.gov.au.

APPENDIX B

INCIDENT ACTION PLAN TEMPLATE

APPENDIX B: INCIDENT ACTION PLAN TEMPLATE

Phase/Task		Action	Responsibility	Check
Briefing	1	Brief key IMT Officers	IMTL/ Planning Officer	
		a) Current situation:		
		• Spill type • Spill location • Spill size • Containment		
		• Statutory/Combat Agencies		
		• Tier/resources mobilised		
		b) Predicted situation:		
		• Trajectory		
		• Resources at risk/effects		
	2	State aim (or policy) of response.		
IAP Sub-Plans Development	3	Develop and rank response objectives, based on protection priorities.	Planning Officer/ Env Advisor	
	4	Develop strategies for each objective.	Planning Officer	
	5	Develop tactics for each strategy.	Planning Officer	
	6	Identify/obtain any permits required for strategies.	IMTL/ Env Advisor	
	7	Prepare/review sub-plans		
		a) Health and safety sub-plan	Safety Officer	
		b) Wildlife sub-plan	Env Advisor	
		c) List of equipment, personnel and service requirements for the planned response	Logistics Officer	
		d) Communication sub-plan	Planning Officer	
		e) Media sub-plan	Safety Officer	
Logistics	8	Determine need for and location of any staging areas.	Logistics Officer	
IAP Preparation	9	Document aim, objectives and strategies and prepare Draft Incident Action Plan.	IMTL/ Planning Officer	
	10	Attach sub-plans to Incident Action Plan (IAP).	Planning Officer	
	11	Prepare revised list of resource needs for submission to Logistics officer.	All IMT Officers	
Approval	12	Approve IAP.	IMTL	

* Process to be repeated throughout the response as scenarios, objectives, strategies or tactics change.

APPENDIX C

NET ENVIRONMENTAL BENEFIT ASSESSMENT

APPENDIX C: NET ENVIRONMENTAL BENEFIT ASSESSMENT

Procedure	Net Benefit Analysis (NEBA)
Responsibility	The IMT Planning Officer will be responsible for the completion of the NEBA, with the assistance of an Environmental Advisor. The Environmental Advisor is to have technical competence to undertake the NEBA assessment and have a thorough understanding of the potential areas to be impacted and sensitivities that exist at these places. An understanding of the potential impacts of different spill response options is also required. The Environmental Advisor will require support from the Safety, Logistics and Operations Officers in consultation with the IMTL. The IMT Planning Officer may request advice from technical experts in completing the NEBA.
Timing	From the occurrence of the spill, the NEBA will be developed to supplement the Incident Action Plan (IAP) being developed by the IMTL. The initial NEBA will be completed within 1 hour of receiving sufficient data input (spill modelling, current and forecasted weather conditions, volume of spill, the presence of sensitive receptors). Thereafter, the NEBA will be reviewed on a daily basis to inform the IAP. The reviews are flexible in the fact they can be more frequent, based on information from operational monitoring, resource availability, changes in weather and safety considerations. A review can be requested by the IMTL at any stage.

Task	Action	Status
1 a)	Each NEBA undertaken is to have a cover page completed. The cover page is to be assigned a unique reference code which is of a standard format. For example: *NEBA X (NEBA number conducted)_ddmmyyyy (date)_00:00 (time)_* *Site Abbreviation Initials of Assessor* *e.g. NEBA5_01012013_15:15_Ashmore_JW* Note the site abbreviation will become prevalent once the locations to be impacted are determined (i.e. Ashmore, Cartier, Hibernia, etc.).	
b)	The details in the cover sheet are to be completed to the largest extent possible based on the information available. Details to be completed include: • Level of the spill • season • water depth • details of people completing the form • date of form • weather conditions • resources available • existing response strategies • spill modelling forecast: – areas predicted to be impacted – time to contact – volumes. • operational monitoring inputs.	

Task	Action	Status
2a)	Populate the NEBA table with response strategies under consideration, sites and resources of interest. Part A is pre-prepared reference, the positive and negative environmental impacts as well as considerations for various response options. Review and update this as necessary based on the spill characteristics.	
b)	From the cover page add in the site names of potentially affected sites to the top row of the NEBA table (Part B).	
c)	List the key sensitivities for the potentially affected sites identified through modelling (refer to Section 5.6.4 in the OPEP and the relevant Environment Plan) and additional information supplied by APASA (from OSRA) or other local environmental experts.	
d)	The initial NEBA will focus on primary response strategies (containment and recovery) which target reducing the volume of oil on the water surface and minimising the risk of shoreline contact. As the time to contact reduces, and potential volumes that may contact the sites become clear, secondary response strategies such as protection and deflection and shoreline clean-ups will become more prevalent and should be incorporated into the NEBA. It is important to include detail in the initial NEBA with an outlook for the future 48 hours so that the response strategies can be refined over the coming days. This will assist the Operational Officer in acquiring resources.	
e)	Review the peak migratory seasons for sensitivities such as: • Migratory Birds – peak migratory periods occurring during October to November. • Marine Reptiles (Turtles) – turtle nesting occurs between the months of December to January; Hatchlings can be expected between February and March. If the spill will affect key seasonal sensitivities, note this in each of the response strategy boxes.	
f)	For each response strategy review the positive/negatives and considerations in Section A, update as necessary and apply them to the sites and sensitivities listed in Section B to assess the relative benefits of each response under consideration.	
g)	If multiple sites are identified to be impacted and prioritisation is required. It is important to list the following details against the relevant response strategy for each location: • the time to contact • the volume predicted to impact • the length of shoreline to be impacted • state of weathering at impact • hydrocarbon phase at impact • tidal phases (spring tides etc.) • review migratory/nesting seasons for key sensitivities • review operational monitoring data on number and diversity of fauna currently present that could be impacted.	
h)	If a single site is to be impacted, detailed operational monitoring data will be used to identify where specific response strategies could be implemented (protection	

Task	Action	Status
	and deflection, shoreline protection) given the conditions at the time (sea state, currents, access). A site specific NEBA can be undertaken using as real time information to identify the most beneficial response strategies for each location within the site.	
3a)	Once viable response options have been identified, this information can be incorporated into spill modelling to assess the outcome of the response and identify preferred locations for deploying the response.	
4a)	The Planning Officer and Environmental Advisor are to supply the IMTL with: 1. the completed NEBA 2. a list of the recommended response options for each site of interest 3. modelling results for response options (where applicable).	
b)	Ensure the NEBA and supporting information is saved in a dedicated location that is readily accessible to the IMT.	
c)	Prepare the template for the following NEBA, based on the existing NEBA so that it is ready to be reviewed and refined if requested at short notice by the IMTL.	

NEBA Cover Sheet

Net Environmental Benefit Analysis Cover Sheet			
Document Number:		Location:	
Previous NEBA Document Number:			
Date:		**People Involved:**	
Time:			
Time (days) Since Spill:			
Prevailing Weather Conditions:	**Temperature: (range)**	**Wind: (Speed/direction)**	**Swell: (m)**
Spill Modelling Data:			
Relevant Operational Monitoring Data:			
Predicted Locations To Be Impacted:	**Time to shoreline contact**	**Hydrocarbon phase at impact**	**Volumes predicted ashore at each location**
Resources Available:	**Currently**	**<24 hours**	**>24 hours**

Section A - Information to Inform NEBA				Section B – Conceptual NEBA Receptor/Sensitivity		
				Location/Receptor	Location/Receptor	Location/Receptor
Response Strategy	**Negative Impacts**	**Positive Impacts**	**Consideration**	**Sensitivities at Receptor**	**Sensitivities at Receptor**	**Sensitivities at Receptor**
Natural recovery (surveillance and monitoring)	• Acute and chronic toxicity effects of surface oil on organisms • Physical effects e.g. smothering from surface oil • Potential extended exposure of surface water and inter-tidal resources • Survey vessels pose chance of disturbance/collision with marine fauna	• No additional impacts from clean-up activities • Identify emerging risks to sensitive areas • Limited risk to sub-tidal resources • No waste generation	• EPBC Regulations 2000, Part 8 Division 8.1 interactions with cetaceans • For most spills aerial surveillance will be required for effective monitoring of spill movement and extent • Requires trained observers			
Containment and Recovery	• Response vessel movement increase chance of disturbance/collision with marine fauna • Generation of oily waste requiring disposal.	• Reduces volume of surface slick • Reduced risk of oiling of wildlife and shorelines	• Dependent on weather • Containment and recovery operations require surface slicks of			

		• Less waste generated than during shoreline clean-up	thresholds >10 g/m² • Requires trained responders • Booms in shallow water monitored to free trapped wildlife and prevent damage to shallow reef structures • EPBC Regulations 2000, Part 8 Division 8.1 interactions with cetaceans			
Protection and deflection	• Increased vessel movement increase chance of disturbance/collision with marine fauna • Potential damage/disturbance to intertidal and benthic habitats • Disturbance of shoreline fauna, e.g. nesting birds or turtles	• Can reduce volume of surface slick • Reduce the risk of oiling of wildlife and shorelines • Less waste generated than during shoreline clean-up	• Requires trained responders • Booms in shallow water monitored to free trapped wildlife and prevent damage to shallow reef structures or booms • Flat bottom vessels, catamarans or			

			vessels with tenders may be required to access shorelines to deploy booms and other protective equipment. • Beach profile must be restored after installing barriers/berms where practicable • EPBC Regulations 2000, Part 8 Division 8.1 interactions with cetaceans			
Shoreline clean up	• Potential intertidal and shoreline disturbance, including fauna, nests etc, from landing vessels and personnel. • Large amounts of waste generated • Changes to beach profiles	• Removes stranded hydrocarbons from shorelines – reduces oil burial and long-term contamination • Reduces impacts associated	• Remote area work requiring extensive logistic support including waste removal and transport • Access permits required for some areas. • Induction and training of onshore team			

	• Depending on environment may not speed natural recovery	with smothering effects • Reduces risk of wildlife contacting oil • Reduces potential for remobilisation of stranded oil to other sensitive receptors • May speed shoreline recovery	accessing to uninhabited islands. Induction to include that spill response teams should avoid disruption of environment and take practical tactical precautions to avoid contact with flora and fauna • IMT to: Coordinate basic training to clean-up contractors; Oversee the clean-up process to ensure appropriate procedures are used to minimise the impact on the environment; Provide advice on practical precautions to minimise contact with flora and			

			fauna; and Assist with the NEBA process when selecting spill response strategies and to evaluate the impact of strategies			
Oiled wildlife response	• Increased vessel movement increase chance of disturbance/collision with marine fauna • Disturbance to shorelines and intertidal areas during capture or marine fauna • Approaching marine fauna could drive individuals towards/into spill • Pre-emptive capture and relocation of turtle hatchlings may result in reduced survival (predation and/or exposure)	• Prevent or reduce oiling of wildlife • May assist recovery of oiled wildlife	• Wildlife at risk will depend on seasonal factors as well as the location of the spill • Wildlife washing facility requires large area and large supply of clean water • Trained responders required for wildlife capture and care • Consider wildlife threatened or impacted by other operational activities associated with			

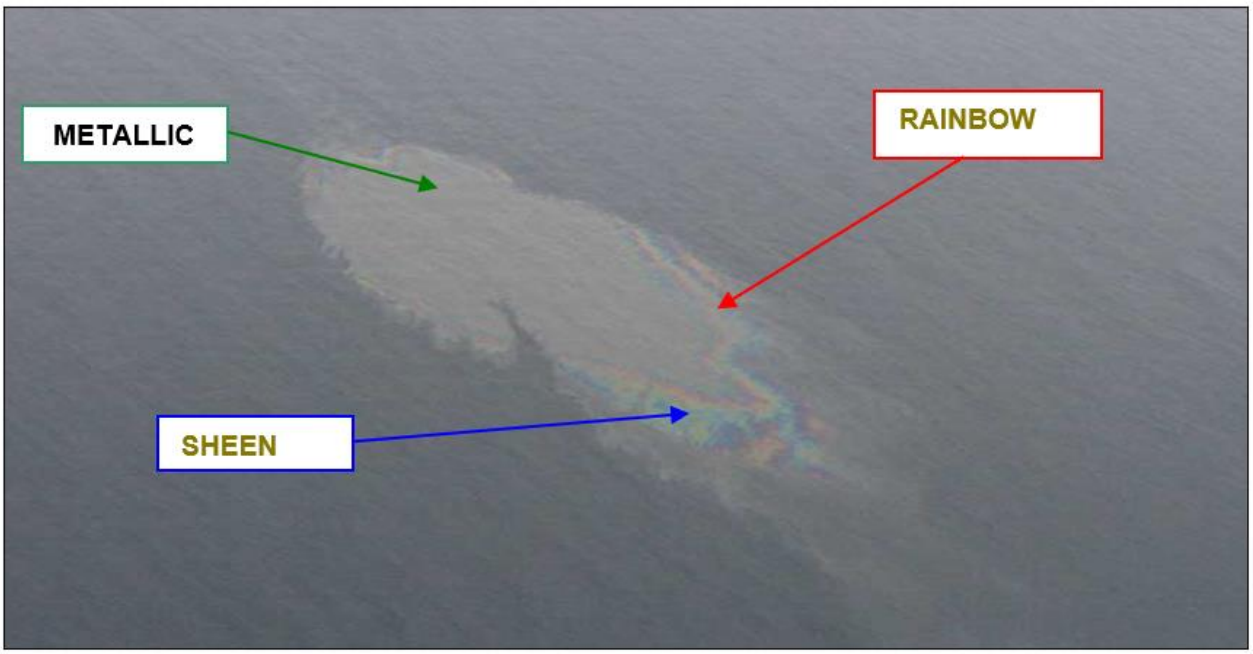
	• Large volumes of oily water and waste generated by bird washing		the response (e.g. containment and clean up, aviation etc.)			

APPENDIX D

BONN APPEARANCE CODES

APPENDIX D: BONN APPEARANCE CODES

Code	Description - Appearance	Layer Thickness Interval (µm)	Litres per km²
1	Sheen (silvery/grey)	0.04 to 0.30	40 – 300
2	Rainbow	0.30 to 5.0	300 – 5000
3	Metallic	5.0 to 50	5000 – 50,000
4	Discontinuous True Oil Colour	50 to 200	50,000 – 200,000
5	Continuous True Oil Colour	More than 200	More than 200,000



Oil Behaviour

The behaviour of oil at sea, and its subsequent fates and effects is influenced by a number of factors and these are outlined below.

Significance of Oil Character

The character of oil determines its behaviour at sea, and this in turn influences a number of aspects of spill management. The most important considerations are:

- Spreading rate. Oils like diesel, light crude oils and condensates will spread rapidly. This makes containment with booms difficult due to the time taken to deploy equipment and the large area covered by these oils in a short time. High spreading rates also results in a rapid evaporation of the oils and facilitate a rapid physical breakup of the slick due to the thin layer that is achieved through spreading. Breakup of some of these oils is so rapid that they are classed as "non persistent" (most condensates).
- Tendency to emulsify. Some oils, such as heavy fuel oils, tend to pick up water and form thick, viscous emulsions. This depends in apart on an oil's asphaltene content. These are persistent and difficult to recover from the sea using skimmers. Some light high wax oils will also form emulsions if high mixing energies are applied. This is one reason why it is not recommended to break up surface slicks with vessel's propeller action.
- Pour point. This is the temperature above which oil is liquid. If an oil has a pour point close to or below sea and air temperatures it may not spread or be amenable to some response strategies. This reflects an oil's wax content and asphaltene content.
- The resulting persistence of an oil is an important consideration in mounting a response, particularly in isolated areas. Non-persistent oils may not need cleanup, particularly if they are spilled a long way from sensitive resources or coastlines

The chemical and physical properties of the various oils has been assessed and the relevant data used as input into the oil fates and trajectory modelling.

Behaviour of Oils at Sea

Four oils could be spilled from commissioning and operations activities:

- Diesel fuel.

  These vary greatly in their constituents and consequent behaviour although all spread rapidly. Heavier diesels and tropical diesels may leave a significant residue after evaporative losses although these will tend to break up in the open sea.
- Lubricating oil.

  These are carried and transported in small quantities only.
- Crude oil.

  Montara crude is a medium (Group III) high pour point waxy crude (API Gravity of approximately 34.8°) with a wax content of 11.3%. A light crude oil is one with an API Gravity of between 33° and 45.5°. **Caution**: this oil poses an extreme fire hazard.
- Aviation fuel.

  Either avgas or jet fuels. These are light rapidly spreading oils.

Oil spilled at sea undergoes a number of physical and chemical changes, although the rate of change depends upon such factors as:

- The oil's initial physical and chemical characteristics
- Prevailing weather and sea conditions. Weathering is generally accelerated by:
  - High winds
  - High sea states which act to break surface oils up. However, this also promotes emulsification in some oils which reduces evaporative loss and spreading hence retarding break-up (see below)
- Whether the oil remains at sea or is washed ashore

APPENDIX E

ESTIMATING OIL SLICKS AT SEA

APPENDIX E: ESTIMATING OILS SLICKS AT SEA

GUIDE TO ESTIMATING OIL SLICKS AT SEA

Flight Plans

The first over flight of a large spill should be at 300 to 700 metres, to locate and determine its general orientation and dimensions.

Determining the colour of the oil is best made at lower altitudes. When searching for an oil slick, aircraft should undertake a "parallel track search" of the area in which the slick is considered to be located.

The longer search legs should be oriented with the direction of drift. This will maximise search effectiveness (better chance of slick detection).

Estimating Slick Volumes at Sea

Estimates of the volume of a slick can be made on the basis of its appearance at sea, and the area covered.

A trained observer must be present on surveillance aircraft to identify oil on the water or shoreline and to accurately report location to the Aerial Coordinator or Operations Officer. Photographs should be taken to aid later assessments.

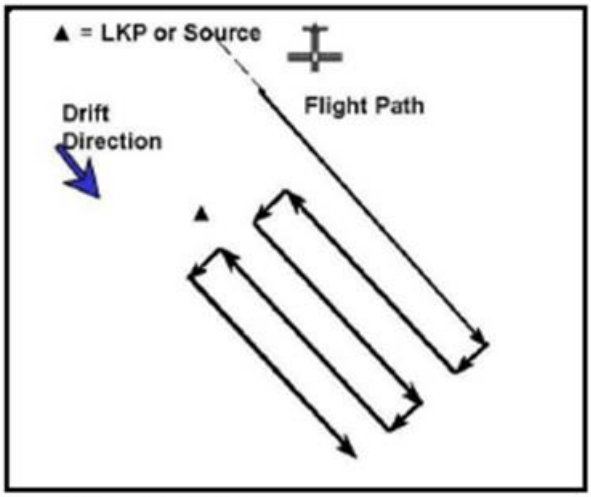


Figure I1: Parallel track search pattern

Suitably experienced observers can be identified and obtained through AMSA or AMOSC. In the long term PTTEP AA aims to train some aerial observers.

Table I1: Guidelines for estimation of slick volume

Appearance of Oil Slick	Volume of Oil per Km^2		
	m^3	Tonnes	Barrels
Barely Visible except under some light conditions	0.05	0.04	0.31
Silvery Sheen	0.10	0.09	0.43
Rainbow – Iridescence: Bright bands of colour	0.30	0.24	1.89
Dull Colours. Colours still visible but are dull	1.00	0.85	4.29
Dark Black or Brown (or very dark colour)	2.00	1.70	12.40

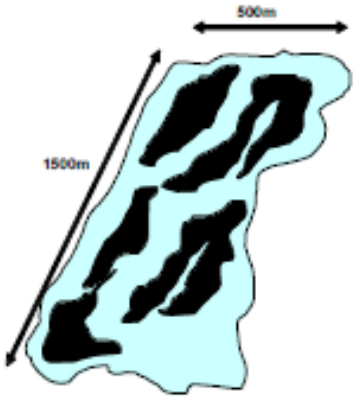
NOTES: Source Bonn Agreement.

The surface area of the slick can be estimated by:

1. Flying the length and breadth of the slick and equating the time taken to fly over the slick and the aircraft speed.
2. Calculating the slick area (i.e. length x breadth), and

3. Multiplying the area by the percentage of the slick that is oil (i.e. not clean water).
4. The areas covered by the various oil thicknesses should be calculated.
5. Calculate oil volumes using equation below.

Example of calculating slick volumes at sea



E.g: Area =1.5km x 0.5km = 0.75 sq km.
i) 40% of slick is black oil. So area of black oil is 40% of 0.75 sq km = 0.3 sq km.
ii) Using Table 6.1, volume in black oil is approximately: 2 x 0.3 = 0.6 cubic metres.
iii) 60% of slick is sheen. So area of sheen is 60% of 0.75 sq. km = 0.45 sq km.
iv) Using Table 9.1, volume of oil in the sheen is approximately: 0.05 x 0.45 = 0.0225 cubic metres.

Note that the sheen contains very little oil and estimated volume, in this example, is about 0.6 cubic metres of oil or oily emulsion.

APPENDIX F

IMT RESOURCING PLAN

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