



Angel Operations – Oil Pollution First Strike Plan

Security and Emergency Management
Hydrocarbon Spill Preparedness Unit

September 2021

Revision: 10

TABLE OF CONTENTS

1.	NOTIFICATIONS (ALL LEVELS)	8
2.	LEVEL 1 RESPONSE	12
2.1	Mobilisation of Response Techniques.....	12
3.	LEVEL 2/3 RESPONSE	16
3.1	Mobilisation of Response Techniques.....	16
4.	PRIORITY RECEPTORS	24
5.	DISPERSANT APPLICATION	27
APPENDIX A – CREDIBLE SPILL SCENARIOS AND HYDROCARBON INFORMATION		28
APPENDIX B – FORMS		34
APPENDIX C – 7 QUESTIONS OF SPILL ASSESSMENT		44
APPENDIX D – TRACKING BUOY DEPLOYMENT INSTRUCTIONS		45
APPENDIX E – COORDINATION STRUCTURE FOR A CONCURRENT HYDROCARBON SPILL IN BOTH COMMONWEALTH AND STATE WATERS/Shorelines		46
APPENDIX F – WOODSIDE INCIDENT MANAGEMENT STRUCTURE		47
APPENDIX G – WOODSIDE LIASON OFFICER RESOURCES TO DOT		48

ANGEL OPERATIONS OIL POLLUTION FIRST STRIKE PLAN

SPILL FROM FACILITY INCLUDING SUBSEA INFRASTRUCTURE

(Note: Pipe laying and accommodation vessels are considered a "FACILITY" under Australian Regs).

LEVEL 1

CONTROL AGENCY:
INCIDENT CONTROLLER:

WOODSIDE
Offshore Installation Manager (OIM) (initially), then CICC DUTY MANAGER (DM)

LEVEL 2 and 3

CONTROL AGENCY:
INCIDENT CONTROLLER:

WOODSIDE
Corporate Incident Coordination Centre (CICC) DUTY MANAGER

SPILL FROM FACILITY ENTERING STATE WATERS

LEVEL 1

CONTROL AGENCY:
INCIDENT CONTROLLER:

WOODSIDE
CICC DUTY MANAGER

LEVEL 2 and 3

CONTROL AGENCY:
INCIDENT CONTROLLER:

Department of Transport (DoT)
DoT Incident Controller (IC)

SPILL FROM VESSEL

(Note: SOPEP should be implemented in conjunction with this document)

LEVEL 1

CONTROL AGENCY:
INCIDENT CONTROLLER:

AMSA
VESSEL MASTER (with response assistance from Woodside)

LEVEL 2 and 3

CONTROL AGENCY:
INCIDENT CONTROLLER:

AMSA
AMSA (with response assistance from Woodside)

Guidance to Oil Spill Incident Levels

The most significant characteristic of the below guidance should be considered when determining level or escalation potential.

Characteristic	Level 1 Indicators	Level 2 Indicators	Level 3 Indicators
General Description	Generally able to be resolved within 24-48 hours.	Generally response required beyond 48 hours.	Response may extend beyond weeks.
Woodside Emergency Management (EM)/ Crisis Management Team (CMT) Activation	Onsite Incident Controller (IC) activated. Use of ICC support may be required.	Handover of control from onsite IC to Corporate Incident Coordination Center (CICC) Duty Manager (DM) in Perth.	Includes Perth based CMT activation.
Number of Agencies	First-response agency and Incident Management Team (IMT)	Multi-agency response	Agencies from across government and industry.
Environment	Isolated impacts or with natural recovery expected within weeks.	Significant impacts and recovery may take months.	Significant area and recovery may take months. Remediation required.
Economy	Business level disruption (i.e. Woodside).	Business failure or 'Channel' impacts.	Disruption to a sector.
Public Affairs	Local and regional media coverage (Western Australia).	National media coverage.	International media coverage.

For guidance on credible spill scenarios and hydrocarbon characteristics refer to [APPENDIX A – credible spill scenarios and hydrocarbon information](#)

For Spills Entering State Waters

In the event of a spill where Woodside is the responsible party and the spill may impact State waters/shorelines, Woodside will notify the Western Australian Department of Transport (DoT). The Director General of DoT is the Hazard Management Agency (HMA) for Western Australian waters.

If the spill impacts State waters/ shorelines and is a Level 1, Woodside will remain the Control Agency. If the spill is a Level 2 or 3 then DoT will become the Control Agency/ HMA for the response in State waters/shorelines only. DoT will appoint an Incident Controller and form a separate Incident Management Team to manage the State waters/shorelines response only. The coordination structure for a concurrent hydrocarbon spill in both Commonwealth and State waters/shorelines is shown in APPENDIX E – Coordination Structure for a Concurrent Hydrocarbon Spill in Both Commonwealth and State Waters/Shorelines.

Initially Woodside will be required to make available an appropriate number of suitably qualified persons to work in the DoT IMT (see APPENDIX G – Woodside liaison officer resources to DoT). DoT's role as the Controlling Agency/ HMA for Level 2 and 3 spills in State waters/shorelines does not negate the requirement for Woodside to have appropriate plans and resources in place to adequately respond to a Marine Hydrocarbon Spill incident in State waters/shorelines or to commence the initial response actions to a spill prior to DoT establishing incident control in line with DoT Offshore Petroleum Industry Guidance Note - Marine Oil Pollution: Response and Consultation Arrangements (July 2020):

https://www.transport.wa.gov.au/mediaFiles/marine/MAC_P_Westplan_MOP_OffshorePetroleumIndGuidance.pdf

Woodside's Incident Management Structure for a Hydrocarbon Spill, including Woodside Liaison Officer's command structure within DoT can be seen at [APPENDIX F – Woodside incident management structure](#).

Response Process Overview

Use the below to determine actions required and which parts of this plan are relevant to the incident.		
For guidance on credible scenarios and hydrocarbon characteristics, refer to APPENDIX A – credible spill scenarios and hydrocarbon information		
ALL INCIDENTS	Notify the Woodside Communication Centre (WCC) on: 1300 833 333, +61 8 9348 7184 / 4624 or sat phone: +881 632 410 392	
	Incident Controller or delegate to make relevant notifications in Table 1-1 of this document.	
LEVEL 1	FACILITY INCIDENT	VESSEL INCIDENT
	Coordinate pre-identified tactics in Table 2-1 of this document. Remember to download each Operational Plan.	Upon agreement with AMSA: Coordinate pre-identified tactics in Table 2-1 of this document. Remember to download each Operational Plan.
	If the spill escalates such that the site cannot manage the incident, inform the WCC on: 1300 833 333, +61 8 9348 7184 / 4624 or sat phone +881 632 410 392 and escalate to a Level 2/3 incident.	
LEVEL 2/3	FACILITY INCIDENT	VESSEL INCIDENT
	Hand over control to CICC for facility spill including from subsea infrastructure. OR Handover control to DoT for facility spill which has entered State waters.	Stand up CICC to assist AMSA.
	Undertake quick revalidation of the recommended strategies in Table 3-1 taking into consideration seasonal sensitivities and current situational awareness. Undertake validated strategies.	If requested by AMSA: Undertake quick revalidation of the recommended strategies in Table 3-1 taking into consideration seasonal sensitivities and current situational awareness. Undertake validated strategies.
	Create an Incident Action Plan (IAP) for all ongoing operational periods. <u>The content of the IAP should reflect the selected response strategies based on current situational awareness.</u> For the full detailed pre-operational Net Environmental Benefit Analysis (NEBA) see Appendix D of the Angel Operations Environment Plan.	If requested by AMSA: Create an IAP for all ongoing operational periods. <u>The content of the IAP should reflect the selected response strategies based on current situational awareness.</u> For the full detailed pre-operational Net Environmental Benefit Analysis (NEBA) see Appendix D of the Angel Operations Environment Plan.

1. NOTIFICATIONS (ALL LEVELS)

The Incident Controller or delegate must ensure the below notifications Table 1-1 are completed within the designated timeframes.

For other environmental notifications required refer to the *Angel Operations Environment Plan*.

Table 1-1: Immediate Notifications

Notification timing	Responsibility	Authority /Company	Name	Contact Number	Instruction	Form/ Template	Mark Complete (□)
Notifications to be made for ALL LEVELS of spill <i>(For spills from a vessel the following notifications must be undertaken by a WEL representative).</i>							
Immediately	Offshore Installation Manager (OIM) or Vessel Master	Woodside Communication Centre (WCC)	Duty Manager	1300 833 333 or +61 893 487 184 / 4624 or Sat phone: +881 632 410 392	Verbally notify WCC of event and estimated volume and hydrocarbon type.	Verbal	
Within 2 hours	OIM or Woodside Site Rep (WSR)	National Offshore Petroleum Safety Environmental Management Authority (NOPSEMA ¹)	Incident notification office	1300 674 472	Verbally notify NOPSEMA for spills >80L. Record notification using Initial Verbal Notification Form or equivalent and send to NOPSEMA as soon as practicable (cc to National Offshore Petroleum Titles Administrator (NOPTA) and Department of Mines, Industry Regulation and Safety (DMIRS)).	APPENDIX B – Forms – Form 1	
Within 3 days	OIM or Woodside Site Rep (WSR)				Provide a written NOPSEMA Incident Report Form as soon as practicable (no later than 3 days after notification) (cc to NOPTA and DMIRS).	APPENDIX B – Forms – Form 2	

¹ Notification to NOPSEMA must be from a Woodside Representative.

Notification timing	Responsibility	Authority /Company	Name	Contact Number	Instruction	Form/ Template	Mark Complete (□)
					NOPSEMA: submissions@nopsema.gov.au NOPTA: resources@nopta.gov.au DMIRS: petreps@dmirs.wa.gov.au		
As soon as practicable	CICC DM or Delegate	Woodside	Environment Duty Manager	As per roster	Verbally notify Environment Duty Manager of event and seek advice on relevant performance standards from EP.	Verbal	
As soon as practicable	CICC DM or Delegate	Department of Agriculture, Water and the Environment (Director of National Parks)	Marine Park Compliance Duty Officer	(0) 419 293 465	The Marine Park Compliance Duty Officer is notified in the event of oil pollution within a marine park, or where an oil spill response action must be taken within a marine park, so far as reasonably practicable, prior to response action being taken. The notification should include: <ul style="list-style-type: none"> • titleholder details • time and location of the incident • proposed response arrangements and locations as per the OPEP • contact details for the response coordinator. 	Verbal	
Additional notifications to be made ONLY if spill is from a vessel							
Without delay as per protection of the Sea Act, part II, section 11(1)	Vessel Master	Australian Maritime Safety Authority (AMSA)	Response Coordination Centre (RCC)	1800 641 792 or +61 2 6230 6811	Verbally notify AMSA RCC of the hydrocarbon spill. Follow up with a written Marine Pollution Report (POLREP) as	APPENDIX B – Forms – Form 3	

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved. Document to be read in conjunction with Angel Operations Environment Plan.

Notification timing	Responsibility	Authority /Company	Name	Contact Number	Instruction	Form/ Template	Mark Complete (□)
					soon as practicable following verbal notification.		
ADDITIONAL LEVEL 2/3 NOTIFICATIONS							
As soon as practicable	CICC DM or Delegate	AMOSC	AMOSC Duty Manager	+61 438 379 328	<p>Notify Australian Marine Oil Spill Centre (AMOSC) that a spill has occurred and follow-up with an email from the IC/CICC DM, CMT Leader or Oil Spill Preparedness Manager to formally activate AMOSC.</p> <p>Determine what resources are required consistent with the AMOSPlan and detail in a Service Contract that will be sent to Woodside from AMOSC upon activation.</p>	APPENDIX B – Forms – Form 4	
As soon as practicable	CICC DM or Delegate	Oil Spill Response Limited (OSRL)	OSRL Duty Manager	+65 6266 1566	<p>Contact OSRL Duty Manager and request assistance from technical advisor in Perth.</p> <p>Send the notification form to OSRL as soon as practicable.</p> <p>For mobilisation of resources, send the Mobilisation Form to OSRL as soon as practicable.</p>	<p>Notification:</p> <p>APPENDIX B – Forms – Form 6a</p> <p>Mobilisation:</p> <p>APPENDIX B – Forms – Form 6b</p>	
As soon as practicable or if spill is likely to extend into WA State waters.	CICC DM or Delegate	WA Department of Transport	DOT Duty Manager	08 9480 9924	<p>Marine Duty Manager to verbally notify DoT that a spill has occurred and request use of equipment stored in the Karratha supply shed.</p> <p>Follow up with a written POLREP as soon as practicable following verbal notification.</p>	APPENDIX B – Forms – Form 5	

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved. Document to be read in conjunction with Angel Operations Environment Plan.

Notification timing	Responsibility	Authority /Company	Name	Contact Number	Instruction	Form/ Template	Mark Complete (□)
					Additionally DoT to be notified if spill is likely to extend into WA State waters. Request DoT to provide Liaison to WEL IMT.		
As soon as practicable if there is potential for oiled wildlife or the spill is expected to contact land or waters managed by WA Department of Biodiversity, Conservation and Attractions (DBCA)	CICC DM or Delegate	DBCA	Duty Officer	08 9219 9108	Phone call notification.	Verbal	
As soon as practicable	CICC DM or Delegate	Marine Spill Response Corporation (MSRC)	MSRC Response Manager	+1-732-417-0175 or +1-703-326-5609	Activate the contract with MSRC (in full) for the provision of up to 30 personnel depending on what skills are required. Please note that provision of these personnel from MSRC are on a best endeavours basis and are not guaranteed.	Verbal	

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved. Document to be read in conjunction with Angel Operations Environment Plan.

Controlled Ref No: T0000AH9731598

Revision: 10

Woodside ID: 9731598

Page 11 of 51

Uncontrolled when printed. Refer to electronic version for most up to date information.

2. LEVEL 1 RESPONSE

2.1 Mobilisation of Response Techniques

For the relevant hydrocarbon type, undertake quick revalidation of the recommended techniques and pre-identified tactics indicated with a 'Yes' in Table 2-1. Undertake all validated pre-identified tactics immediately. These tactics should be carried out using the associated plan identified under Table 2-1 Operational Plan column.

All response techniques and pre-identified tactics have been identified from the pre-operational NEBA presented in the Angel Operations Environment Plan Appendix D: Oil Spill Preparedness and Response Mitigation Assessment.

Table 2-1: Level 1 Response Summary

Response Techniques	Hydrocarbon Type			Pre- Identified Tactics	Responsible	ALARP Commitment Summary	Complete ✓	Link to Operational Plans for notification numbers and actions
	Marine Diesel	Angel Condensate	Lambert Deep Rich Fluid					
Monitor and evaluate – tracking buoy (OM02)	Yes	Yes	Yes	<p>If a vessel is on location, consider the need to deploy the oil spill tracking buoy. If no vessel is on location, consider the need to mobilise oil spill tracking buoys from the King Bay Supply Base (KBSB) Stockpile.</p> <p>If a surface sheen is visible from the facility, deploy the satellite tracking buoy within two hours.</p>	Operations	DAY 1: Tracking buoy deployed within two hours.		Surveillance and Reconnaissance to Detect Hydrocarbons and Resources at Risk (OM02) of The Operational Monitoring Operational Plan. Deploy tracking buoy in accordance with APPENDIX D – Tracking buoy deployment instructions.
Please consider instructing the CICC DM to activate or implement any of the following Pre-Identified tactics. The following tactics will assist in answering the '7 Questions of Spill Assessment' identified in Appendix C to increase situational awareness.								
Monitor and evaluate – predictive modelling (OM01)	Yes	Yes	Yes	Undertake initial modelling using the Rapid assessment oil spill tool (Woodside Maps) and weathering fate analysis using ADIOS (or refer to the hydrocarbon information in APPENDIX A – credible spill scenarios and hydrocarbon information).	Intelligence or Environment	DAY 1: Initial modelling within six hours using the Rapid Assessment Tool.		Predictive Modelling of Hydrocarbons to Assess Resources at Risk (OM01 of the Operational Monitoring Operational Plan). <i>Planning to download immediately and follow steps</i>
	Yes	Yes	Yes	Send Oil Spill Trajectory Modelling (OSTM) form APPENDIX B – Forms, Form 7 to RPS APASA response team (email rpsresponse@rpsgroup.com) and call +61 0408 477 186.	Intelligence	DAY 1: Detailed modelling within four hours of APASA receiving information from Woodside.		

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved. Document to be read in conjunction with Angel Operations Environment Plan.

Response Techniques	Hydrocarbon Type			Pre- Identified Tactics	Responsible	ALARP Commitment Summary	Complete ✓	Link to Operational Plans for notification numbers and actions
	Marine Diesel	Angel Condensate	Lambert Deep Rich Fluid					
Monitor and evaluate – aerial surveillance (OM02)	Yes	Yes	Yes	Instruct Aviation Duty Manager to commence aerial observations in daylight hours. Aerial surveillance observer to complete log in APPENDIX B – Forms, Form 8.	Logistics – Aviation	DAY 1: Two trained aerial observers. One aircraft available. Report made available to the IMT within two hours of landing after each sortie.		Surveillance and Reconnaissance to Detect Hydrocarbons and Resources at Risk (OM02 of The Operational Monitoring Operational Plan). <i>Planning to download immediately and follow steps</i>
Monitor and evaluate – satellite tracking (OM02)	Yes	Yes	Yes	The Intelligence Duty Manager should be instructed to stand up KSAT to provide satellite imagery of the spill (email emergency@ksat.no and call +4777661300).	Intelligence	DAY 1: Service provider will confirm availability of an initial acquisition within two hours. Data received to be uploaded into Woodside Common Operating Picture		
Monitor and evaluate – monitoring hydrocarbons in water (OM03)	Yes	Yes	Yes	Consider the need to mobilise resources to undertake water quality monitoring (OM03).	Planning or Environment	DAY 3: Water quality assessment access and capability. Daily fluorometry reports will be provided to IMT.		Detecting and Monitoring for the Presence and Properties of Hydrocarbons in the Marine Environment (OM03 of The Operational Monitoring Operational Plan).

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved. Document to be read in conjunction with Angel Operations Environment Plan.

Controlled Ref No: T0000AH9731598

Revision: 10

Woodside ID: 9731598

Page 14 of 51

Uncontrolled when printed. Refer to electronic version for most up to date information.

Response Techniques	Hydrocarbon Type			Pre- Identified Tactics	Responsible	ALARP Commitment Summary	Complete ✓	Link to Operational Plans for notification numbers and actions
	Marine Diesel	Angel Condensate	Lambert Deep Rich Fluid					
Monitor and evaluate – pre-emptive assessment of receptors at risk (OM04)	Yes	Yes	Yes	Consider the need to mobilise resources to undertake pre-emptive assessment of sensitive receptors at risk (OM04).	Planning or Environment	In agreement with WA DoT, deployment of two specialists for each of the Response Protection Areas (RPA) within 10 days of predicted impacts.		Pre-emptive Assessment of Sensitive Receptors at Risk (OM04 of The Operational Monitoring Operational Plan).
Monitor and evaluate – shoreline assessment (OM05)	Yes	Yes	Yes	Consider the need to mobilise resources to undertake shoreline assessment surveys (OM05).	Planning or Environment	In agreement with WA DoT, deployment of one specialist in SCAT for each of the RPAs within 10 days of predicted impacts.		Monitoring of contaminated resources (OM05 of The Operational Monitoring Operational Plan).

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved. Document to be read in conjunction with Angel Operations Environment Plan.

Controlled Ref No: T0000AH9731598

Revision: 10

Woodside ID: 9731598

Page 15 of 51

Uncontrolled when printed. Refer to electronic version for most up to date information.

3. LEVEL 2/3 RESPONSE

3.1 Mobilisation of Response Techniques

For the relevant hydrocarbon type, undertake quick revalidation of the recommended techniques and pre-identified tactics indicated with a 'Yes' in Table 3-1. Undertake all validated pre-identified tactics immediately. These tactics should be carried out using the associated plan identified under Table 3-1 Operational Plan column.

All response strategies and pre-identified tactics have been identified from the pre-operational NEBA presented in the Angel Operations Environment Plan Appendix D: Oil Spill Preparedness and Response Mitigation Assessment.

Table 3-1: Level 2/3 Response Summary

Response Techniques	Hydrocarbon Type			Pre- Identified Tactics	Responsible	ALARP Commitment Summary	Complete ✓	Link to Operational Plans for notification numbers and actions
	Marine Diesel	Angel Condensate	Lambert Deep Rich Fluid					
Monitor and evaluate – tracking buoy (OM02)	Yes	Yes	Yes	<p>If a vessel is on location, consider the need to deploy the oil spill tracking buoy. If no vessel is on location, consider the need to mobilise oil spill tracking buoys from the King Bay Supply Base (KBSB) Stockpile.</p> <p>If a surface sheen is visible from the facility, deploy the satellite tracking buoy within two hours.</p>	Operations	DAY 1: Tracking buoy deployed within two hours.		<p>Surveillance and Reconnaissance to Detect Hydrocarbons and Resources at Risk (OM02) of The Operational Monitoring Operational Plan.</p> <p>Deploy tracking buoy in accordance with APPENDIX D – Tracking buoy deployment instructions.</p>
Monitor and evaluate – predictive modelling (OM01)	Yes	Yes	Yes	Undertake initial modelling using the Rapid assessment oil spill tool (Woodside Maps) and weathering fate analysis using ADIOS (or refer to the hydrocarbon information in APPENDIX A – credible spill scenarios and hydrocarbon information).	Intelligence or Environment	DAY 1: Initial modelling within six hours using the Rapid Assessment Tool.		Predictive Modelling of Hydrocarbons to Assess Resources at Risk (OM01 of The Operational Monitoring Operational Plan). <i>Planning to download immediately and follow steps</i>
	Yes	Yes	Yes	Send Oil Spill Trajectory Modelling (OSTM) form APPENDIX B – Forms, Form 7 to RPS APASA response team (email rpsresponse@rpsgroup.com) and call +61 0408 477 186	Intelligence	DAY 1: Detailed modelling within 4 hours of APASA receiving information from Woodside.		

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved. Document to be read in conjunction with Angel Operations Environment Plan.

Response Techniques	Hydrocarbon Type			Pre- Identified Tactics	Responsible	ALARP Commitment Summary	Complete ✓	Link to Operational Plans for notification numbers and actions
	Marine Diesel	Angel Condensate	Lambert Deep Rich Fluid					
Monitor and evaluate – aerial surveillance (OM02)	Yes	Yes	Yes	Instruct Aviation Duty Manager to commence aerial observations in daylight hours. Aerial surveillance observer to complete log in APPENDIX B – Forms, Form 8.	Logistics - Aviation	DAY 1: Two trained aerial observers. One aircraft available. Report made available to the IMT within two hours of landing after each sortie.		Surveillance and Reconnaissance to Detect Hydrocarbons and Resources at Risk (OM02 of The Operational Monitoring Operational Plan). <i>Planning to download immediately and follow steps</i>
Monitor and evaluate – satellite tracking (OM02)	Yes	Yes	Yes	The Intelligence Duty Manager should be instructed to stand up KSAT to provide satellite imagery of the spill (email emergency@ksat.no and call +4777661300).	Intelligence	DAY 1: Service provider will confirm availability of an initial acquisition within two hours. Data received to be uploaded into Woodside Common Operating Picture.		
Monitor and evaluate – monitoring hydrocarbons in water (OM03)	Yes	Yes	Yes	Consider the need to mobilise resources to undertake water quality monitoring (OM03).	Planning or Environment	DAY 3: Water quality assessment access and capability. Daily fluorometry reports will be provided to IMT.		Detecting and Monitoring for the Presence and Properties of Hydrocarbons in the Marine Environment (OM03 of The Operational Monitoring Operational Plan).
Monitor and evaluate – pre-emptive assessment of receptors at risk (OM04)	Yes	Yes	Yes	Consider the need to mobilise resources to undertake pre-emptive assessment of sensitive receptors at risk (OM04).	Planning or Environment	DAY 2: In agreement with WA DoT, deployment of two specialists for each of the Response Protection Areas (RPA) with predicted impacts.		Pre-emptive Assessment of Sensitive Receptors (OM04) of The Operational Monitoring Operational Plan.
Monitor and evaluate – shoreline assessment (OM05)	Yes	Yes	Yes	Consider the need to mobilise resources to undertake shoreline assessment surveys (OM05).	Planning or Environment	DAY 2: In agreement with WA DoT, deployment of one specialist in SCAT for each of the RPAs with predicted impacts.		Shoreline Assessment (OM05) of The Operational Monitoring Operational Plan.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved. Document to be read in conjunction with Angel Operations Environment Plan.

Response Techniques	Hydrocarbon Type			Pre- Identified Tactics	Responsible	ALARP Commitment Summary	Complete ✓	Link to Operational Plans for notification numbers and actions
	Marine Diesel	Angel Condensate	Lambert Deep Rich Fluid					
Surface Dispersant	No	No	No	This response strategy is not recommended as there is limited to no surface expression above threshold. and where present, it is only present in the first 48 hours. The addition of dispersant is not considered to have a net environmental benefit, particularly given the low persistent fraction (0.9%).				
Mechanical Dispersion	No	No	No	<p>This technique is not recommended.</p> <p>Although feasible, highly volatile hydrocarbons are likely to weather, spread and evaporate quickly and lead to unsafe conditions in the vicinity of fresh hydrocarbon.</p> <p>Additionally, vessels used for mechanical dispersion would be contaminated by the hydrocarbon and could cause secondary contamination of unimpacted areas.</p>				

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved. Document to be read in conjunction with Angel Operations Environment Plan.

Controlled Ref No: T0000AH9731598

Revision: 10

Woodside ID: 9731598

Page 19 of 51

Uncontrolled when printed. Refer to electronic version for most up to date information.

Response Techniques	Hydrocarbon Type			Pre- Identified Tactics	Responsible	ALARP Commitment Summary	Complete ✓	Link to Operational Plans for notification numbers and actions
	Marine Diesel	Angel Condensate	Lambert Deep Rich Fluid					
Containment and Recovery	No	No	No	<p>This technique is not recommended for marine diesel or the Angel condensate scenario as modelling predicts that floating oil will not reach containment and recovery response thresholds at any RPA.</p> <p>Containment and Recovery of Condensate poses a significant safety risk and low flash points. Corralling low flash point substances should be avoided, therefore this response technique is not feasible.</p>				
In Situ Burning	No	No	No	<p>This technique is not recommended.</p> <p>It requires calm sea state conditions which limits its feasibility in the region. Furthermore, modelling predicts that floating oil will not reach response thresholds or slick thickness to required for effective in situ burning operations.</p> <p>There are health and safety risks for response personnel associated with the containment and subsequent burning of hydrocarbons and the residue from attempts to</p>				

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved. Document to be read in conjunction with Angel Operations Environment Plan.

Controlled Ref No: T0000AH9731598

Revision: 10

Woodside ID: 9731598

Page 20 of 51

Uncontrolled when printed. Refer to electronic version for most up to date information.

Response Techniques	Hydrocarbon Type			Pre- Identified Tactics	Responsible	ALARP Commitment Summary	Complete ✓	Link to Operational Plans for notification numbers and actions
	Marine Diesel	Angel Condensate	Lambert Deep Rich Fluid					
				burn would sink, posing a risk to the environment.				
Shoreline Protection and Deflection	No	Yes	No	<p>Shoreline protection and deflection may be deployed if Operational Monitoring activities detect surface hydrocarbons moving towards shorelines. Undertaken in agreement with WA DoT (for Level 2/3 spills).</p> <p>Woodside will mobilise and begin the shoreline protection and deflection response to reduce the volume of oil at shorelines by deploying protection and deflection equipment at selected RPA shorelines 5 days prior to predicted impact.</p> <p>Equipment from Woodside, AMOSC and AMSA Western Australian Stockpiles mobilised. Consideration of mobilisation of interstate/international shoreline protection equipment (i.e. OSRL).</p>	Operations and Planning	<p>In agreement with WA DoT, activate relevant Tactical Response Plans (TRPs) 5 days prior to impact.</p> <p>In agreement with WA DoT, mobilise teams to RPAs 5 days prior to impact.</p> <p>In agreement with WA DoT, equipment mobilised from closest stockpile 5 days prior to impact.</p> <p>Supplementary equipment mobilised from State, AMOSC, AMSA stockpiles 5 days prior to impact.</p>		<p>Protection and Deflection Operational Plan</p> <p><u>Logistics to download immediately and follow steps</u></p> <p>Tactical Response Plans available from:</p> <p><u>Oil Spill Portal - Tactical Response Plans</u></p>
				Mobilise security provider as per security support plan.				Land Based Security Support Plan

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved. Document to be read in conjunction with Angel Operations Environment Plan.

Response Techniques	Hydrocarbon Type			Pre- Identified Tactics	Responsible	ALARP Commitment Summary	Complete ✓	Link to Operational Plans for notification numbers and actions
	Marine Diesel	Angel Condensate	Lambert Deep Rich Fluid					
Shoreline Clean Up	No	Yes	No	<p>Shoreline clean-up operations may be deployed if Operational Monitoring activities detect surface hydrocarbons moving towards shorelines. Undertaken in agreement with WA DoT (for Level 2/3 spills).</p> <p>Equipment from Woodside, AMOSC and AMSA Western Australian Stockpiles and relevant personnel mobilised.</p> <p>Consideration of mobilisation of interstate/international shoreline cleanup equipment and relevant personnel (i.e. OSRL).</p>	Logistics and Planning	<p>One shoreline clean-up team to each contaminated RPA 5 days prior to impact.</p> <p>TRPs available for at risk shorelines 5 days prior to impact.</p> <p>720 m³ waste storage required by month 3 and an additional 288 m³ in month 4.</p>		Shoreline Clean-up Operational Plan Logistics to download immediately and follow steps
				Mobilise security provider as per security support plan.				Land Based Security Support Plan
Oiled Wildlife Response	Yes	Yes	Yes	<p>If oiled wildlife is a potential impact, request AMOSC to mobilise containerised oiled wildlife first strike kits and relevant personnel. Refer to relevant Tactical Response Plan for potential wildlife at risk.</p> <p>Mobilise AMOSC Oiled Wildlife Containers.</p> <p>Consider whether additional equipment is required from local suppliers.</p>	Logistics and Planning	<p>DAY 5:</p> <p>Contracted capability to treat up to an additional 250 individual fauna within a five-day period.</p> <p>Facilities for oiled wildlife rehabilitation are operational 24/7.</p>		Oiled Wildlife Response Operational Plan

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved. Document to be read in conjunction with Angel Operations Environment Plan.

Response Techniques	Hydrocarbon Type			Pre- Identified Tactics	Responsible	ALARP Commitment Summary	Complete ✓	Link to Operational Plans for notification numbers and actions
	Marine Diesel	Angel Condensate	Lambert Deep Rich Fluid					
Scientific Monitoring (Type II)	Yes	Yes	Yes	Notify Woodside science team of spill event.	Environment			Oil Spill Scientific Monitoring Programme – Operational Plan
For well integrity event the following strategies apply:								
Well Intervention – Subsea First Response Toolkit (SFRT)	No	Yes	No		Operations, Logistics and Drilling and Completions (source control)	DAY 2: Remotely Operated Vehicle (ROV) on Mobile Offshore Drilling Unit (MODU) ready for deployment within 48 hours.		Source Control and Well Intervention Operational Plan
Subsea Dispersant	No	No	No	Given the 79 m water depth at the Angel location, the use of subsea dispersant is not feasible. Lambert Deep is a flowline/ riser release so subsea dispersant is not applicable.				
Capping Stack	No	No	No	Given the 79 m water depth at the Angel location, deployment of a capping stack is not feasible. Lambert Deep is a flowline/ riser release so a capping stack is not applicable.				
Relief Well	No	Yes	No	Undertake tactics per Source Control Emergency Response Plan (SCERP).	Operations, Logistics and Drilling and Completions (source control)	DAY 1: Identify source control vessel availability within 24 hours. ROV on MODU ready for deployment within 48 hours. MODU mobilised to location		Source Control Emergency Response Plan

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved. Document to be read in conjunction with Angel Operations Environment Plan.

4. PRIORITY RECEPTORS

Note: DoT are the Control Agency to respond to all the sites listed below in a Level 2/3 spill into State waters/shorelines.

Action: Provide DoT with all relevant Tactical Response Plans for these locations.

Based on hydrocarbon spill risk modelling results, no response protection areas have the potential to be contacted by hydrocarbon at or above impact threshold levels within 48 hours of a spill for any of the modelled scenarios (see APPENDIX A – credible spill scenarios and hydrocarbon information). Open ocean surrounding the Angel Platform (MEE-02-3B) is predicted to have surface hydrocarbons at response threshold (**Error! Reference source not found.**).

Please note that impact thresholds (10 g/m² surface hydrocarbon concentration, 100 g/m² shoreline accumulation, and 100 ppb entrained hydrocarbon concentration) used to determine the 'environment that may be affected' (EMBA) identified in the Environment Plan are lower than the response thresholds (Table 4-1).

Table 4-1: Response Thresholds

Surface Hydrocarbon (g/m ²)	Description
>10	Predicted minimum threshold for commencing operational monitoring ²
50	Predicted minimum floating oil threshold for effective containment and recovery and surface dispersant application ³
100	Predicted optimum floating oil threshold for containment and recovery and surface dispersant application
100	Predicted minimum shoreline accumulation threshold for shoreline assessment operations
250	Predicted minimum threshold for effective shoreline clean-up operations

Table 4-2: Receptors for Priority Protection (MEE-02-3B)

Receptor	Distance and Direction from Lambert Deep Riser	Threshold triggered and recommended strategy	Tactical Response Plans (also available within the Data Directory)
Open ocean	Up to 8 km from the 17.6 km ²	Surface hydrocarbons at >50 g/m ² Recommended strategies: Monitor and evaluate. <i>Due to the volatile nature of the hydrocarbons and very low residues, containment and recovery and surface dispersant are not deemed feasible or to provide a net environmental benefit.</i>	N/A – open ocean

² Operational monitoring will be undertaken from the outset of a spill whether or not this threshold has been reached. Monitoring is needed throughout the response to assess the nature of the spill, track its location and inform the need for any additional monitoring and/or response techniques. It also informs when the spill has entered State Waters and/or control of the incident passes to statutory authorities e.g. WA DoT or AMSA.

³ At 50g/m² containment and recovery and surface dispersant application operations are not expected to be particularly effective. This threshold represents a conservative approach to planning response capability and displaying the spread of surface oil.

Hydrocarbon spill modelling results for MEE-01-02A indicate that other sensitive receptors which may have the potential to be contacted above response thresholds beyond the first 48 hours of the spill as follows:

- Southern Pilbara Islands – Peak Island: 23 m³ on day 62.9
- Muiron Islands/ Muiron Islands MMA: 46 m³ on day 64.1
- Sunday Island: 3 m³ on day 75.4

Tactical Response plans can be accessed via the [Oil Spill Portal - Tactical Response Plans](#)⁴.

Oil spill trajectory modelling specific to the spill event will be required to determine the regional sensitive receptors to be contacted beyond 48 hours of a spill.

Figure 4-1 illustrates the location of regional sensitive receptors in relation to the Angel Operations PAP.

Consideration should be given to other stakeholders (including mariners) in the vicinity of the spill location. Table 4-3 indicates the assets within the vicinity of the Angel Operations PAP.

Table 4-3: Assets in the vicinity of the Angel operational area

Asset	Distance and direction from operational area	Operator
North Rankin Complex	0 km	Woodside
Okha	5 km south	Woodside
Goodwyn Alpha	22 km west	Woodside
Reindeer	50 km south-east	Santos

⁴ The Tactical Response Plans for the RPA's identified contain the details of potential forward operating bases and staging areas. Incident Command Centre: For Level 1 incidents the in-field team and asset operator will lead the response on-scene. For level 2/3 Incident the Incident control centre will be located in Perth at Woodside's building. The Woodside CICC is fully equipped with communications equipment and technology to ensure the coordination of response activities for the overall response.

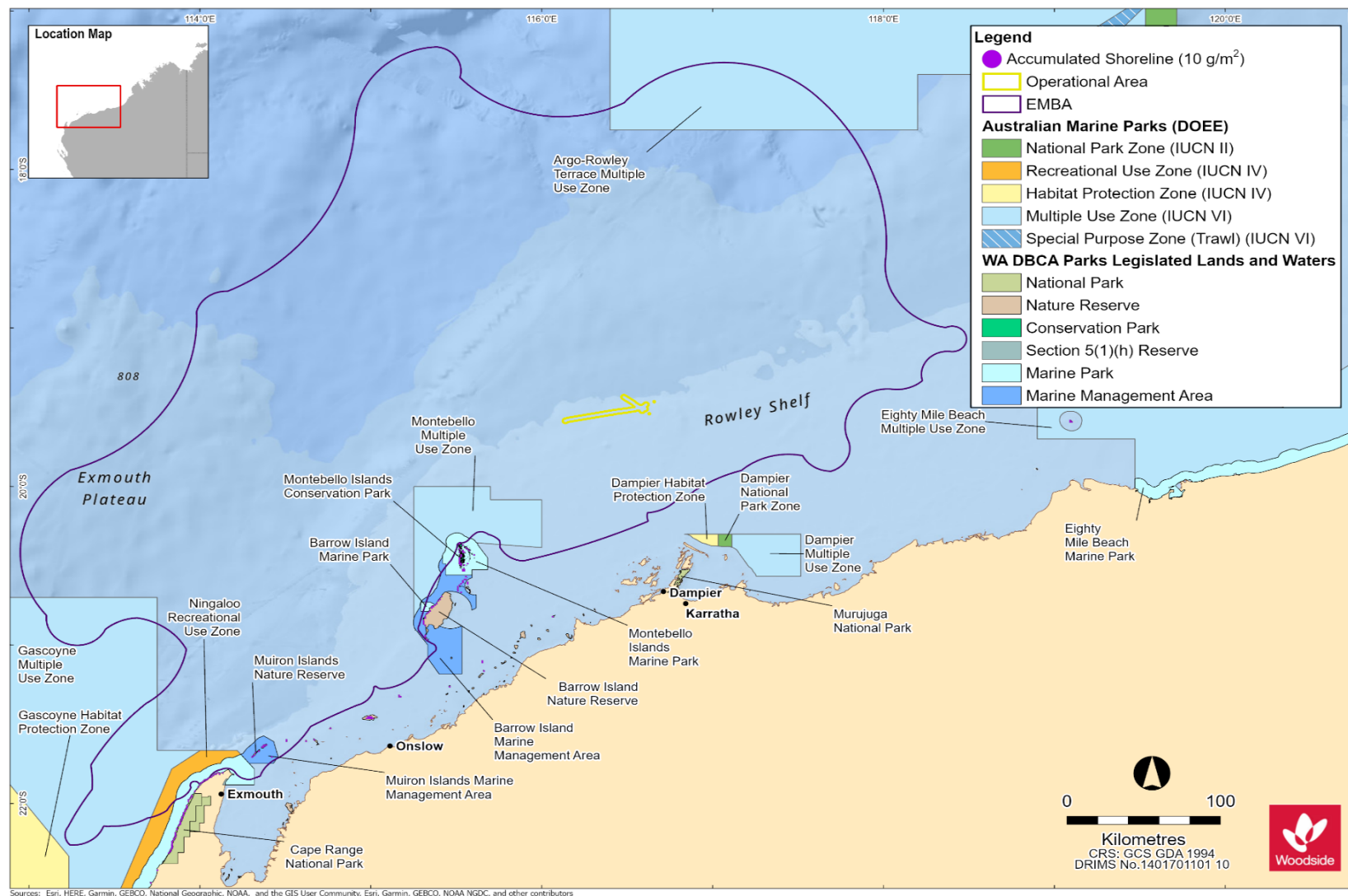


Figure 4-1: Regional sensitive receptors – Angel operational area

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved. Document to be read in conjunction with Angel Operations Environment Plan.

5. DISPERSANT APPLICATION

Dispersant is not considered an appropriate response strategy for this activity as described in Appendix D (Woodside's Hydrocarbon Spill Response) of the Angel Operations Environment Plan.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved. Document to be read in conjunction with Angel Operations Environment Plan.

Controlled Ref No: T0000AH9731598

Revision: 10

Woodside ID: 9731598

Page 27 of 51

Uncontrolled when printed. Refer to electronic version for most up to date information.

APPENDIX A – CREDIBLE SPILL SCENARIOS AND HYDROCARBON INFORMATION

For more detailed hydrocarbon information see the [Hydrocarbon Data Directory](#)

Credible Spill Scenarios

Scenario	Product	Maximum Volumes	Suggested ADIOS2 Analogue*
MEE-01-Credible Scenario-02A Hydrocarbon release caused by loss of well containment (MEE-01-02A)	Angel Condensate	107,779 m ³ (3.8 % residue of 4096 m ³)	NWS Condensate
MEE-02-Credible Scenario-03A: Hydrocarbon release caused by riser loss of containment subsea (MEE-02-03A)	Lambert Deep Rich Fluid	6,100 m ³ (0.9 % residue of 54.9 m ³)	NWS Condensate
MEE-02, Credible Scenario-03B: Hydrocarbon release caused by riser loss of containment at surface (MEE-02-03B)	Lambert Deep Rich Fluid	5,600 m ³ (0.9 % residue of 50.4 m ³)	NWS Condensate
MEE-04: Hydrocarbon release due to vessel collision (instantaneous surface release)	Marine diesel	105 m ³ (5% residue of 5.25 m ³)	Diesel Fuel Oil – Southern USA 1 (API 37.2°)

*Initial screening of possible ADIOS2 analogues was done by considering hydrocarbons with similar APIs. Suggested selection was based on the closest distillation cut to Woodside's hydrocarbon. Only hydrocarbons with distillation cuts that showed results for >380°C were included in selection process

Angel Condensate

Angel condensate is a mixture of volatile and persistent hydrocarbons with high proportions of volatile and semi-volatile components. In favourable evaporation conditions, about 67.0% of the oil mass should evaporate within the first 12 hours, a further 23.8% should evaporate within the first 24 hours, and a further 5.4% should evaporate over several days. Only about 3.8% of the oil is shown to be persistent (RPS, 2021).

The whole oil has a low asphaltene content (< 0.5%), indicating a low propensity for the mixture to take up water to form water-in-oil emulsion over the weathering cycle.

Soluble, aromatic, hydrocarbons contribute approximately 8.3% by mass of the whole oil. Around 5.8% by mass is highly soluble and highly volatile. A further 2.5% by mass has semi-to-low volatility. These compounds dissolve more slowly but tend to persist in soluble form for longer. Discharge onto the water surface will favour the process of evaporation over dissolution under calm sea conditions, but increased entrainment of oil and dissolution of soluble compounds can be expected under breaking wave conditions (RPS, 2021).

The mass balance forecast for the constant-wind case (see Figure 6 3 for Angel Condensate) shows that approximately 90.8% of the oil is predicted to evaporate within 24 hours. Under calm conditions, the majority of the remaining oil on the water surface will weather at a slower rate due to being comprised of the longer-chain compounds with higher boiling points. Evaporation of the residual compounds will slow significantly, and they will then be subject to more gradual decay through biological and photochemical processes (RPS, 2021).

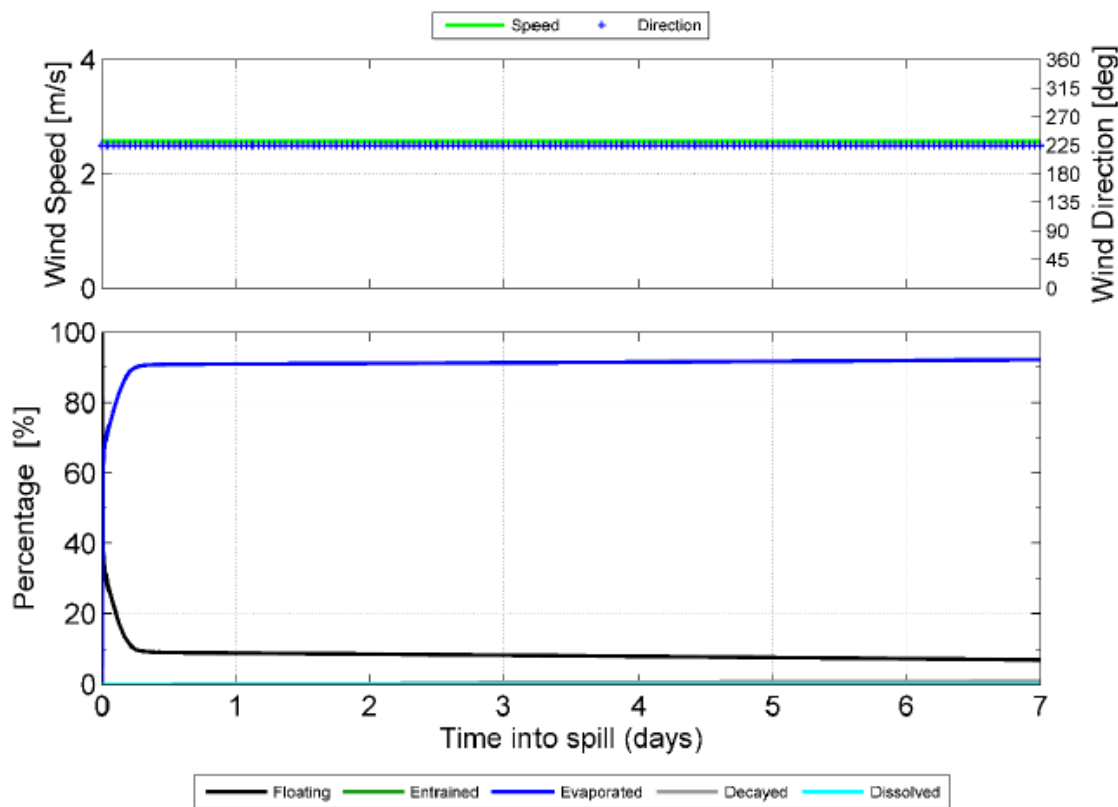


Figure A-1: Proportional mass balance plot representing the weathering of Angel Condensate spilled onto the water surface as a one-off instantaneous release and subject to a constant 5 kn (2.6 m/s) wind at 27°C water temperature and 25°C air temperature.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved. Document to be read in conjunction with Angel Operations Environment Plan.

Controlled Ref No: T0000AH9731598

Revision: 10

Woodside ID: 9731598

Page 29 of 51

Uncontrolled when printed. Refer to electronic version for most up to date information.

Under the variable-wind case (see Figure 6 4), where the winds are of greater strength on average, entrainment of Angel condensate into the water column is predicted to increase. Approximately 24 hours after the spill, around 14.5% of the oil mass is forecast to have entrained and a further 83.5% is forecast to have evaporated, leaving only a small proportion of the oil floating on the water surface (<1%). The residual compounds will tend to remain entrained beneath the surface under conditions that generate wind waves (approximately >6 m/s) (RPS, 2021).

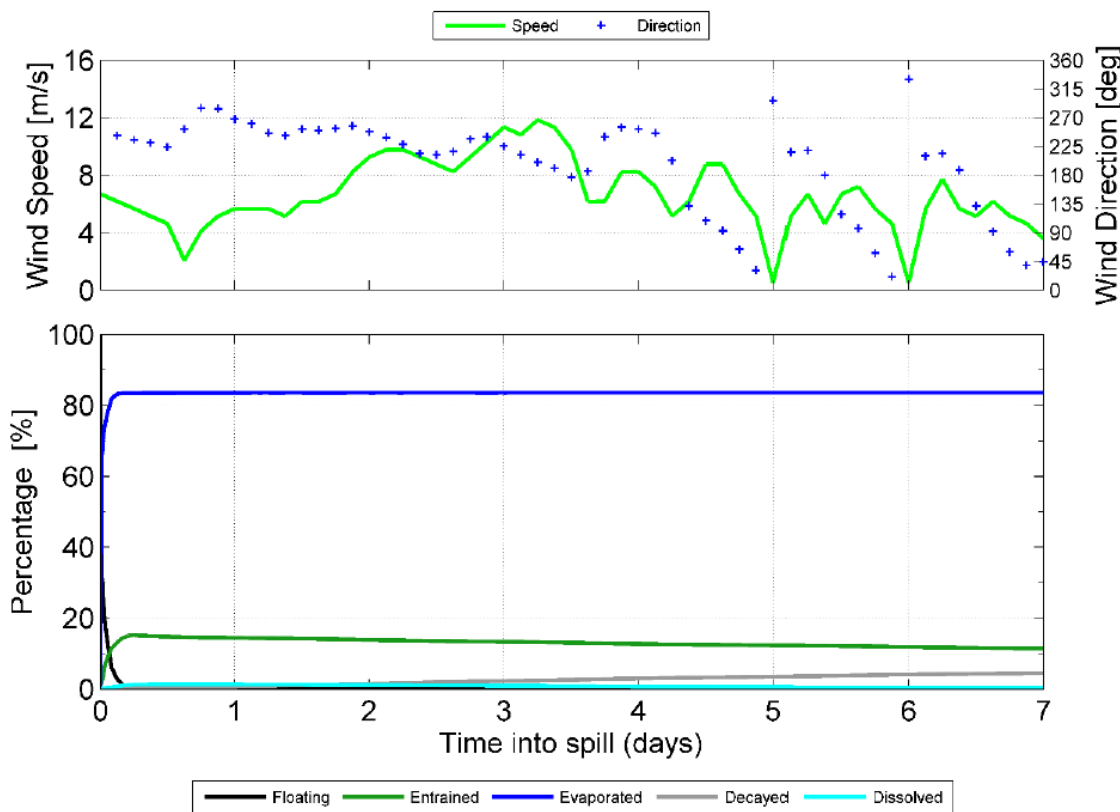


Figure A-2: Proportional mass balance plot representing the weathering of Angel condensate spilled onto the water surface as a one-off instantaneous release and subject to variable wind at 27 °C water temperature and 25 °C air temperature.

Lambert Deep Rich Fluid

Lambert Deep Rich Fluid is a mixture of volatile and persistent hydrocarbons with high proportions of volatile and semi-volatile components. In favourable evaporation conditions, about 52.9% of the oil mass should evaporate within the first 12 hours, a further 41.8% should evaporate within the first 24 hours, and a further 4.3% should evaporate over several days. Only about 0.9% of the oil is shown to be persistent (RPS, 2021).

The whole oil has no asphaltenes, indicating no propensity for the mixture to take up water to form water-in-oil emulsion over the weathering cycle.

Soluble, aromatic, hydrocarbons contribute approximately 13.3% by mass of the whole oil. Around 7.1% by mass is highly soluble and highly volatile. A further 5.6% by mass has semi-to-low volatility. These compounds dissolve more slowly but tend to persist in soluble form for longer. Discharge onto the water surface will favour the process of evaporation over dissolution under calm sea conditions, but increased entrainment of oil and dissolution of soluble compounds can be expected under breaking wave conditions (RPS, 2021).

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved. Document to be read in conjunction with Angel Operations Environment Plan.

Controlled Ref No: T0000AH9731598

Revision: 10

Woodside ID: 9731598

Page 30 of 51

Uncontrolled when printed. Refer to electronic version for most up to date information.

The mass balance forecast for the constant-wind case (see Figure 6 5) for Lambert Deep Rich Fluid shows that approximately 94.8% of the oil is predicted to evaporate within 24 hours. Under calm conditions, the majority of the remaining oil on the water surface will weather at a slower rate due to being comprised of the longer-chain compounds with higher boiling points. Evaporation of the residual compounds will slow significantly, and they will then be subject to more gradual decay through biological and photochemical processes (RPS, 2021).

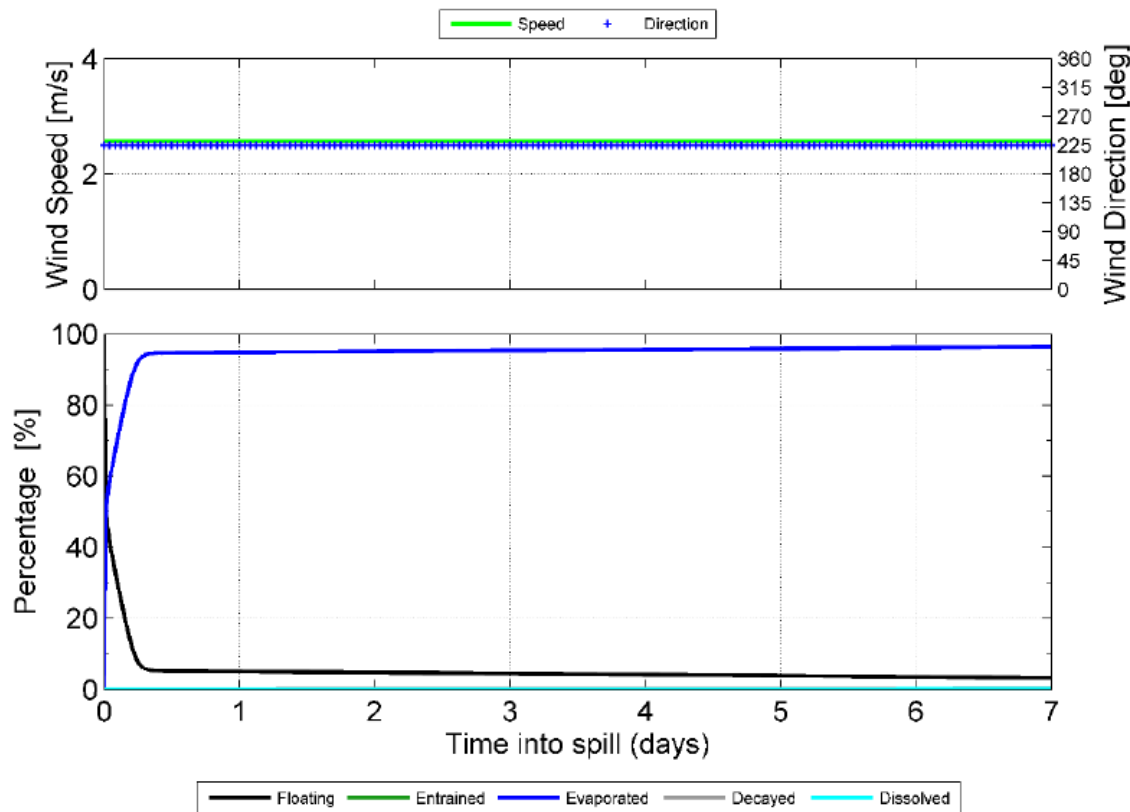


Figure A-3: Proportional mass balance plot representing the weathering of Lambert Deep Rich Fluid spilled onto the water surface as a one-off instantaneous release and subject to a constant 5 kn (2.6 m/s) wind at 27 °C water temperature and 25 °C air temperature.

Under the variable-wind case (see Figure 6 6), where the winds are of greater strength on average, entrainment of Lambert Deep Rich Fluid into the water column is predicted to increase. Approximately 24 hours after the spill, around 14.3% of the oil mass is forecast to have entrained and a further 81.8% is forecast to have evaporated, leaving only a small proportion of the oil floating on the water surface (<1%). The residual compounds will tend to remain entrained beneath the surface under conditions that generate wind waves (approximately >6 m/s) (RPS, 2021).

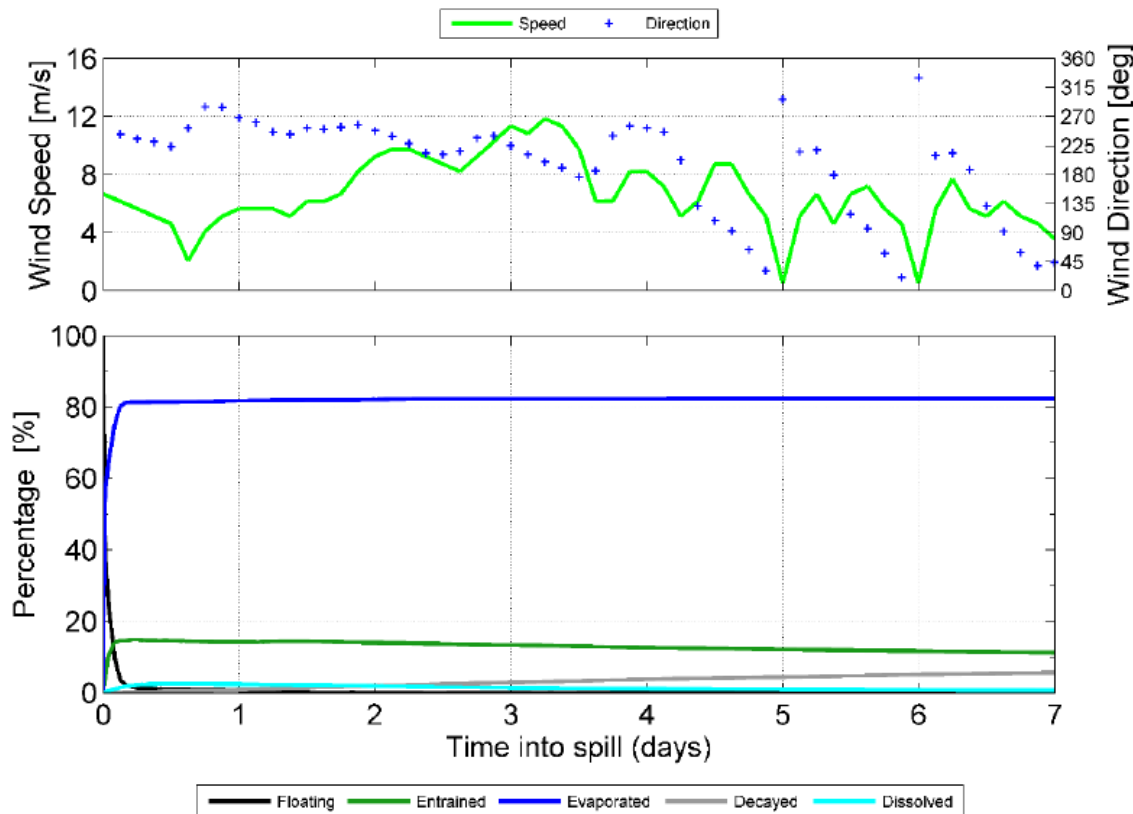


Figure A-4: Proportional mass balance plot representing the weathering of Lambert Deep Rich Fluid spilled onto the water surface as a one-off instantaneous release and subject to variable wind at 27 °C water temperature and 25 °C air temperature.

Marine diesel

Marine Diesel Oil is typically classed as an International Tanker Owners Pollution Federation (ITOPF) Group I/II oil. Marine diesel is a mixture of volatile and persistent hydrocarbons with low proportions of highly volatile and residual components. In general, about 6% of the oil mass should evaporate within the first 12 hours ($BP < 180\text{ }^{\circ}\text{C}$); a further 35% should evaporate within the first 24 hours ($180\text{ }^{\circ}\text{C} < BP < 265\text{ }^{\circ}\text{C}$); and a further 54% should evaporate over several days ($265\text{ }^{\circ}\text{C} < BP < 380\text{ }^{\circ}\text{C}$). Approximately 5% of the oil is shown to be persistent. The aromatic content of the oil is approximately 3%.

If released in the marine environment and in contact with the atmosphere (i.e. surface spill), approximately 41% by mass of this oil is predicted to evaporate over the first couple of days depending upon the prevailing conditions, with further evaporation slowing over time. The heavier (low volatility) components of the oil have a tendency to entrain into the upper water column due to wind-generated waves but can subsequently resurface if wind-waves abate. Therefore, the heavier components of this oil can remain entrained or on the sea surface for an extended period, with associated potential for dissolution of the soluble aromatic fraction.

Under the variable-wind case, where the winds are of greater strength, entrainment of marine diesel into the water column is indicated to be significant. Approximately 24 hours after the spill, around 72% of the oil mass is forecast to have entrained and a further 24% is forecast to have evaporated, leaving only a small proportion of the oil floating on the water surface ($<1\%$). The residual compounds will tend to remain entrained beneath the surface under conditions that generate wind waves (approximately $>6\text{ m/s}$).

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved. Document to be read in conjunction with Angel Operations Environment Plan.

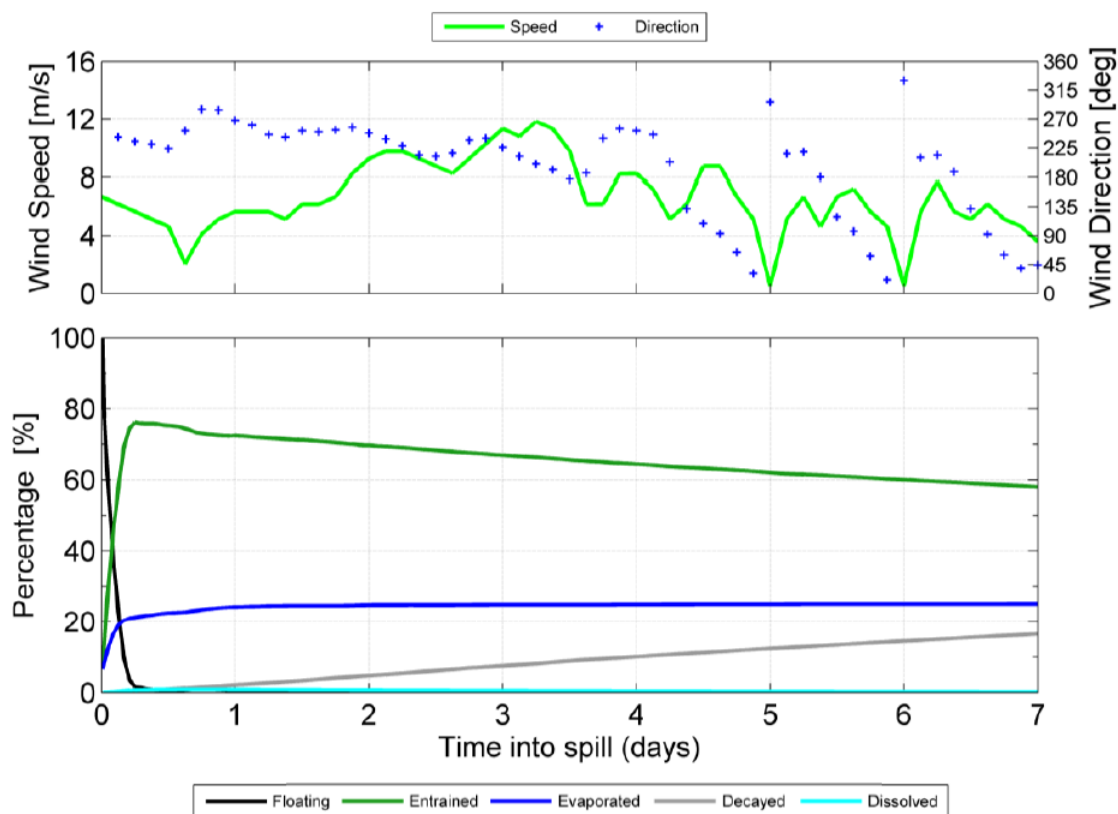


Figure A-5: Proportional mass balance plot representing the weathering of marine diesel spilled onto the water surface as a one-off release (50 m³ over 1 hour) and subject to variable wind at 27 °C water temperature and 25 °C air temperature.

APPENDIX B – FORMS

Form No.	Form Name	Link
1	Record of Initial Verbal Notification to NOPSEMA Template	Link
2	NOPSEMA Incident Report Form	Link
3	Marine Pollution Report (POLREP – AMSA)	Link
4	AMOSOC Service Contract Note	Link
5	Marine Pollution Report (POLREP – DoT)	Link
6a	OSRL Initial Notification Form	Link
6b	OSRL Mobilisation Activation Form	Link
7	RPS APASA Oil Spill Trajectory Modelling Request	Link
8	Aerial Surveillance Observer Log	Link

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved. Document to be read in conjunction with Angel Operations Environment Plan.

FORM 1

Record of initial verbal notification to NOPSEMA



(NOPSEMA ph: 1300 674 472)

Date of call	
Time of call	
Call made by	
Call made to	

Information to be provided to NOPSEMA:

Date and Time of incident/time caller became aware of incident	
Details of incident	<ol style="list-style-type: none"> 1. Location _____ 2. Title _____ 3. Hydrocarbon source <ul style="list-style-type: none"> <input type="checkbox"/> Platform _____ <input type="checkbox"/> Pipeline _____ <input type="checkbox"/> FPSO _____ <input type="checkbox"/> Exploration drilling _____ <input type="checkbox"/> Well _____ <input type="checkbox"/> Other (please specify) _____ 4. Hydrocarbon type _____ 5. Estimated volume of hydrocarbon _____ 6. Has the discharge ceased? _____ 7. Fire, explosion or collision? _____ 8. Environment Plan(s) _____ 9. Other Details _____

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved. Document to be read in conjunction with Angel Operations Environment Plan.

Actions taken to avoid or mitigate environmental impacts	
Corrective actions taken or proposed to stop, control or remedy the incident	

After the initial call is made to NOPSEMA, please send this record as soon as practicable to:

1. NOPSEMA submissions@nopsema.gov.au
2. NOPTA resources@nopta.gov.au
3. DMIRS petreps@dmirs.wa.gov.au

FORM 2

[insert NOPSEMA Incident Report Form when printing]

[Link](#)

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved. Document to be read in conjunction with Angel Operations Environment Plan.

Controlled Ref No: T0000AH9731598

Revision: 10

Woodside ID: 9731598

Page 37 of 51

Uncontrolled when printed. Refer to electronic version for most up to date information.

FORM 3

[insert Marine Pollution Report (POLREP – AMSA) when printing]

[Link](#)

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved. Document to be read in conjunction with Angel Operations Environment Plan.

Controlled Ref No: T0000AH9731598

Revision: 10

Woodside ID: 9731598

Page 38 of 51

Uncontrolled when printed. Refer to electronic version for most up to date information.

FORM 4

[insert AMOSC Service Contract note when printing]

[Link](#)

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved. Document to be read in conjunction with Angel Operations Environment Plan.

Controlled Ref No: T0000AH9731598

Revision: 10

Woodside ID: 9731598

Page 39 of 51

Uncontrolled when printed. Refer to electronic version for most up to date information.

FORM 5

[insert Marine Pollution Report (POLREP – DoT) when printing]

[Link](#)

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved. Document to be read in conjunction with Angel Operations Environment Plan.

Controlled Ref No: T0000AH9731598

Revision: 10

Woodside ID: 9731598

Page 40 of 51

Uncontrolled when printed. Refer to electronic version for most up to date information.

FORM 6a

[insert OSRL Initial Notification Form when printing]

[Link](#)

FORM 6b

[insert OSRL Mobilisation Activation Form when printing]

[Link](#)

FORM 7

[insert RPS APASA Oil Spill Trajectory Modelling Request form when printing]

[Link](#)

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved. Document to be read in conjunction with Angel Operations Environment Plan.

Controlled Ref No: T0000AH9731598

Revision: 10

Woodside ID: 9731598

Page 42 of 51

Uncontrolled when printed. Refer to electronic version for most up to date information.

FORM 8

[insert Aerial Surveillance Observer Log when printing]

[Link](#)

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved. Document to be read in conjunction with Angel Operations Environment Plan.

Controlled Ref No: T0000AH9731598

Revision: 10

Woodside ID: 9731598

Page 43 of 51

Uncontrolled when printed. Refer to electronic version for most up to date information.

APPENDIX C – 7 QUESTIONS OF SPILL ASSESSMENT

WHAT IS IT? Oil Type/name Oil properties Specific gravity / viscosity / pour point / asphphaltines / wax content / boiling point	
WHERE IS IT? Lat/Long Distance and bearing	
HOW BIG IS IT? Area Volume	
WHERE IT IS GOING? Weather conditions Currents and tides	
WHAT IS IN THE WAY? Resources at risk	
WHEN WILL IT GET THERE? Weather conditions Currents and tides	
WHAT'S HAPPENING TO IT? Weathering processes	

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved. Document to be read in conjunction with Angel Operations Environment Plan.

Controlled Ref No: T0000AH9731598

Revision: 10

Woodside ID: 9731598

Page 44 of 51

Uncontrolled when printed. Refer to electronic version for most up to date information.

APPENDIX D – TRACKING BUOY DEPLOYMENT INSTRUCTIONS

(Insert [Link](#) when printing)

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved. Document to be read in conjunction with Angel Operations Environment Plan.

Controlled Ref No: T0000AH9731598

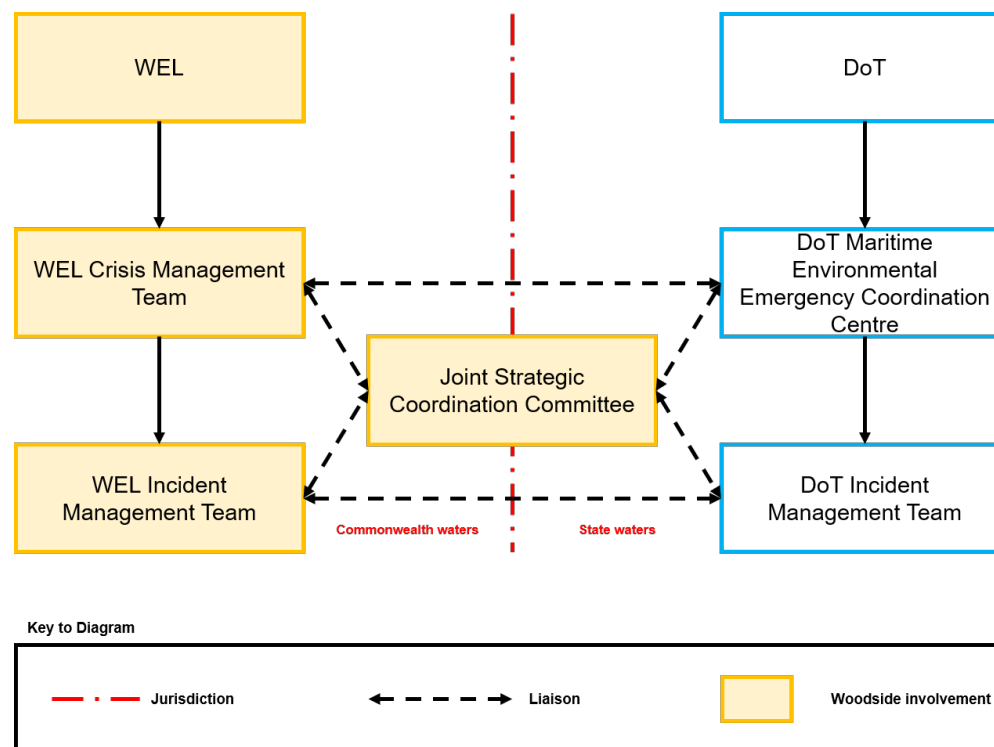
Revision: 10

Woodside ID: 9731598

Page 45 of 51

Uncontrolled when printed. Refer to electronic version for most up to date information.

APPENDIX E – COORDINATION STRUCTURE FOR A CONCURRENT HYDROCARBON SPILL IN BOTH COMMONWEALTH AND STATE WATERS/ShORELINES⁵

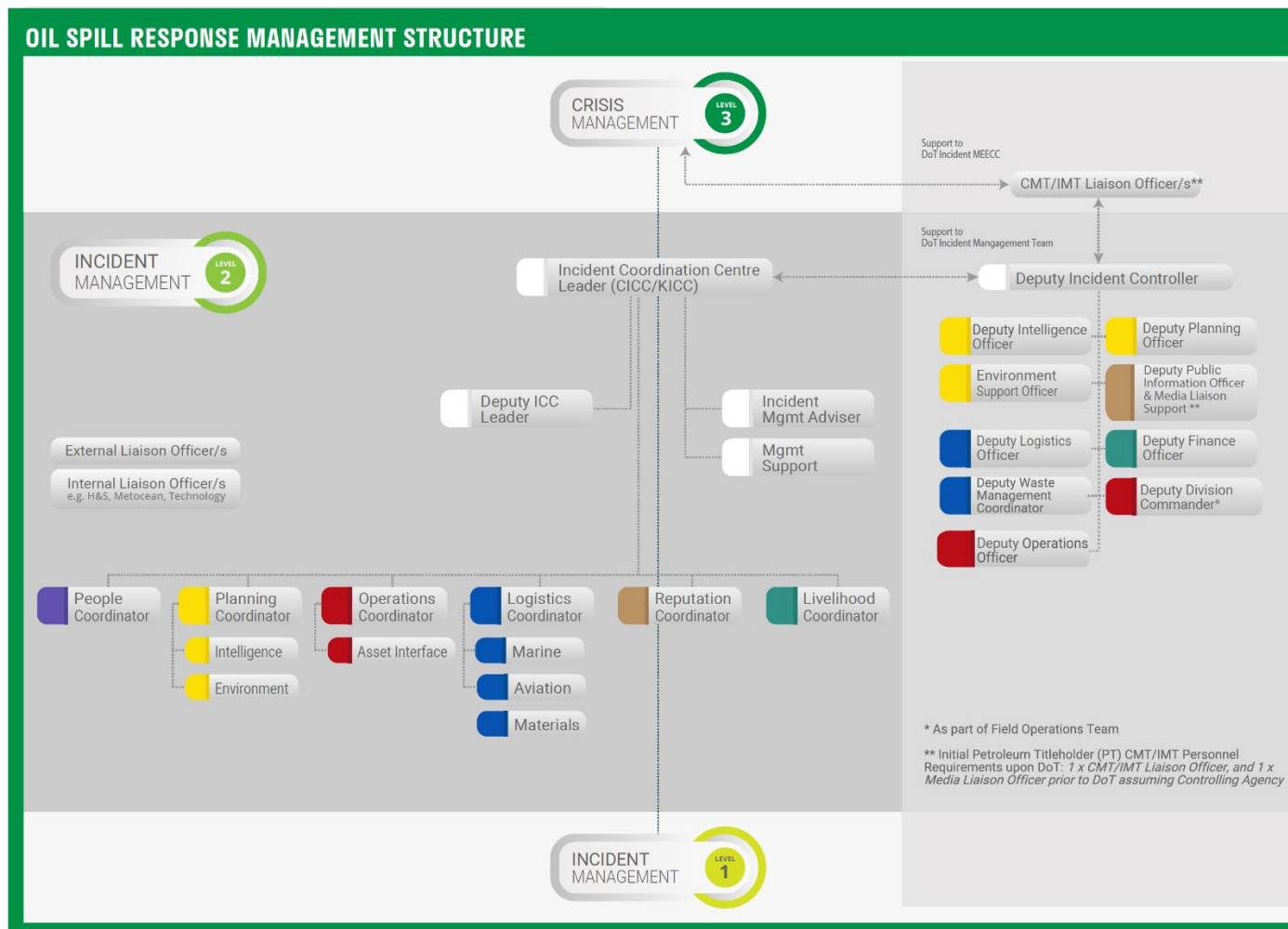


The Control Agency for a hydrocarbon spill in Commonwealth waters/shorelines resulting from an offshore petroleum activity is Woodside (the Petroleum Titleholder). The Control Agency for a hydrocarbon spill in State waters/shorelines resulting from an offshore petroleum activity is DoT. DoT will appoint an Incident Controller and form a separate IMT to only manage the spill within State waters/shorelines.

⁵ Adapted from DoT Offshore Petroleum Industry Guidance Note, Marine Oil Pollution: Response and Consultation Arrangements July 2020. Note: For full structure up to Commonwealth Cabinet/Minister refer to Marine Oil Pollution: Response and Consultation Arrangements Section 6.5, Figure 3.

APPENDIX F – WOODSIDE INCIDENT MANAGEMENT STRUCTURE

Woodside Incident Management Structure for Hydrocarbon Spill (including Woodside Liaison Officers Command Structure within DoT IMT if required).



This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved. Document to be read in conjunction with Angel Operations Environment Plan.

APPENDIX G – WOODSIDE LIASON OFFICER RESOURCES TO DOT

Once DoT activates a State waters/shorelines IMT, Woodside will make available the following roles to DoT.

Area	WEL Liaison Role	Personnel Sourced from ⁶ :	Key Duties	#
DoT MEECC	CMT Liaison Officer	CMT Leader Roster	<ul style="list-style-type: none"> Provide a direct liaison between the CMT and the MEECC. Facilitate effective communications and coordination between the CMT Leader and the State Marine Pollution Coordinator (SMPC). Offer advice to SMPC on matters pertaining to PT crisis management policies and procedures. 	1
DoT IMT Incident Control	WEL Deputy Incident Controller	CICC Leader Reserve List Roster	<ul style="list-style-type: none"> Provide a direct liaison between the PT IMT and DoT IMT. Facilitate effective communications and coordination between the PT IC and the DoT IC. Offer advice to the DoT IC on matters pertaining to PT incident response policies and procedures. Offer advice to the Safety Coordinator on matters pertaining to PT safety policies and procedures, particularly as they relate to PT employees or contractors operating under the control of the DoT IMT. 	1
DoT IMT Intelligence	Intelligence Support Officer/ Deputy Intelligence Officer	AMOSC Staff Member or AMOSC Core Group	<ul style="list-style-type: none"> As part of the Intelligence Team, assist the Intelligence Officer in the performance of their duties in relation to situation and awareness. Facilitate the provision of relevant modelling and predications from the PT IMT. Assist in the interpretation of modelling and predictions originating from the PT IMT. Facilitate the provision of relevant situation and awareness information originating from the DoT IMT to the PT IMT. Facilitate the provision of relevant mapping from the PT IMT. Assist in the interpretation of mapping originating from the PT IMT. Facilitate the provision of relevant mapping originating from the DoT IMT to the PT IMT. 	1
DoT IMT Intelligence – Environment	Environment Support Officer	CMT Environmental FST Duty Managers Roster	<ul style="list-style-type: none"> As part of the Intelligence Team, assist the Environment Coordinator in the performance of their duties in relation to the provision of environmental support into the planning process. Assist in the interpretation of the PT OPEP and relevant TRP plans. Facilitate in requesting, obtaining and interpreting environmental monitoring data originating from the PT IMT. Facilitate the provision of relevant environmental information and advice originating from the DoT IMT to the PT IMT. 	1
DoT IMT Planning-Plans/ Resources	Deputy Planning Officer	AMOSC Core Group/CICC Planning Coordinator Reserve List and Planning Group 3	<ul style="list-style-type: none"> As part of the Planning Team, assist the Planning Officer in the performance of their duties in relation to the interpretation of existing response plans and the development of incident action plans and related sub plans. Facilitate the provision of relevant IAP and sub plans from the PT IMT. Assist in the interpretation of the PT OPEP from the PT. 	1

⁶ See [Combined CICC, KICC, CMT roster and Preparedness Schedule Link](#) / [AMOSC Service Contract Link](#)

Area	WEL Liaison Role	Personnel Sourced from ⁶ :	Key Duties	#
			<ul style="list-style-type: none"> Assist in the interpretation of the PT IAP and sub plans from the PT IMT. Facilitate the provision of relevant IAP and sub plans originating from the DoT IMT to the PT IMT. Assist in the interpretation of the PT existing resource plans. Facilitate the provision of relevant components of the resource sub plan originating from the DoT IMT to the PT IMT. <p>(Note this individual must have intimate knowledge of the relevant PT OPEP and planning processes)</p>	
DoT IMT Public Information-Media/ Community Engagement	Public Information Support and Media Liaison Officer/ Deputy Public Information Officer	Reputation (Media) FST Duty Manager Roster	<ul style="list-style-type: none"> As part of the Public Information Team, provide a direct liaison between the PT Media team and DoT IMT Media team. Facilitate effective communications and coordination between the PT and DoT media teams. Assist in the release of joint media statements and conduct of joint media briefings. Assist in the release of joint information and warnings through the DoT Information and Warnings team. Offer advice to the DoT Media Coordinator on matters pertaining to PT media policies and procedures. Facilitate effective communications and coordination between the PT and DoT Community Liaison teams. Assist in the conduct of joint community briefings and events. Offer advice to the DoT Community Liaison Coordinator on matters pertaining to the PT community liaison policies and procedures. Facilitate the effective transfer of relevant information obtained from through the Contact Centre to the PT IMT. 	1
DoT IMT Logistics	Deputy Logistic Officer	Services FST Logistics Team 2 Roster	<ul style="list-style-type: none"> As part of the Logistics Team, assist the Logistics Officer in the performance of their duties in relation to the provision of supplies to sustain the response effort. Facilitate the acquisition of appropriate supplies through the PTs existing OSRL, AMOSC and private contract arrangements. Collects Request Forms from DoT to action via PT IMT. <p>(Note this individual must have intimate knowledge of the relevant PT logistics processes and contracts)</p>	1
DoT IMT Finance-Accounts/ Financial Monitoring	Deputy Finance Officer	CICC Finance Coordinator Roster	<ul style="list-style-type: none"> As part of the Finance Team, assist the Finance Officer in the performance of their duties in relation to the setting up and payment of accounts for those services acquired through the PTs existing OSRL, AMOSC and private contract arrangements. Facilitate the communication of financial monitoring information to the PT to allow them to track the overall cost of the response. 	1

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved. Document to be read in conjunction with Angel Operations Environment Plan.

Area	WEL Liaison Role	Personnel Sourced from ⁶ :	Key Duties	#
			<ul style="list-style-type: none"> Assist the Finance Officer in the tracking of financial commitments through the response, including the supply contracts commissioned directly by DoT and to be charged back to the PT. 	
DoT IMT Operations	Deputy Operations Officer	CICC Operations Coordinator Roster	<ul style="list-style-type: none"> As part of the Operations Team, assist the Operations Officer in the performance of their duties in relation to the implementation and management of operational activities undertaken to resolve an incident. Facilitate effective communications and coordination between the PT Operations Section and the DoT Operations Section. Offer advice to the DoT Operations Officer on matters pertaining to PT incident response procedures and requirements. Identify efficiencies and assist to resolve potential conflicts around resource allocation and simultaneous operations of PT and DoT response efforts. 	1
DoT IMT Operations – Waste Management	Facilities Support Officer/ Deputy Waste Management Coordinator	Services FST Logistics Team 2 and WEL Waste Contractor Roster	<ul style="list-style-type: none"> As part of the Operations Team, assist the Waste Management Coordinator in the performance of their duties in relation to the provision of the management and disposal of waste collected in State waters. Facilitate the disposal of waste through the PT's existing private contract arrangements related to waste management and in line with legislative and regulatory requirements. Collects Request Forms from DoT to action via PT IMT. 	1
DoT FOB Operations Command	Deputy On-Scene Commander/ Deputy Division Commander	AMOSC Core Group	<ul style="list-style-type: none"> As part of the Field Operations Team, assist the Division Commander in the performance of their duties in relation to the oversight and coordination of field operational activities undertaken in line with the IMT Operations Section's direction. Provide a direct liaison between the PT FOB and DoT FOB. Facilitate effective communications and coordination between the PT Division Commander and the DoT Division Commander. Offer advice to the DoT Division Commander on matters pertaining to PT incident response policies and procedures. Assist the Safety Coordinator deployed in the FOB in the performance of their duties, particularly as they relate to PT employees or contractors. Offer advice to the Safety Coordinator deployed in the FOB on matters pertaining to PT safety policies and procedures. 	1
Total Woodside personnel initially required in DoT IMT				11

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved. Document to be read in conjunction with Angel Operations Environment Plan.

DOT LIAISON OFFICER RESOURCES TO WOODSIDE

Once DoT activates a State waters/shorelines IMT, Woodside will request DoT make available the following roles:

Area	DoT Liaison Role	Personnel Sourced from:	Key Duties	#
WEL CMT	DoT Liaison Officer (prior to DoT assuming Controlling Agency) / Deputy Incident Controller – State waters (after DoT assumes Controlling Agency)	DoT	<ul style="list-style-type: none"> Facilitate effective communications between DoT's SMPC / Incident Controller and the Petroleum Titleholder's appointed CMT Leader / Incident Controller. Provide enhanced situational awareness to DoT of the incident and the potential impact on State waters. Assist in the provision of support from DoT to the Petroleum Titleholder. Facilitate the provision technical advice from DoT to the Petroleum Titleholder Incident Controller as required. 	1
WEL Reputation FST (Media Room)/ Public Information – Media	DoT Media Liaison Officer	DoT	<ul style="list-style-type: none"> Provide a direct liaison between the PT Media team and DoT IMT Media team. Facilitate effective communications and coordination between the PT and DoT media teams. Assist in the release of joint media statements and conduct of joint media briefings. Assist in the release of joint information and warnings through the DoT Information and Warnings team. Offer advice to the PT Media Coordinator on matters pertaining to DoT and wider Government media policies and procedures. 	1
Total DoT Personnel Initial Requirement to Woodside				2

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved. Document to be read in conjunction with Angel Operations Environment Plan.