

**WA-474-P, WA-70-R ABANDONED AND
SUSPENDED WELLS
OIL POLLUTION
EMERGENCY PLAN**

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ACRONYMS

Abbreviation	Meaning
AIIMS	Australian Inter-Service Incident Management System
ALARP	As Low As Reasonably Practicable
AMBA	Area that May Be Affected
AMSA	Australian Maritime Safety Authority
BAOAC	Bonn Agreement Oil Appearance Code
bbf	Barrel (units of oil)
DPaW	Department of Parks and Wildlife (Western Australia)
DER	Department of Environmental Regulation (Western Australia)
DoEE	Department of the Environment and Energy (formerly the Department of Environment)
DoF	Department of Fisheries (Western Australia)
DoT	Department of Transport (Western Australia)
EP	Environment Plan
ERT	Emergency Response Team
GHD	GHD Pty Ltd
HDPE	High Density Polyethylene
HMA	Hazard Management Agency
HSE	Health Safety Environment
IAP	Incident Action Plan
IC	Incident Commander
ICS	Incident Command System
IMO	International Maritime Organisation
IMP	Incident Management Plan
IMT	Incident Management Team
IST	Incident Support Team
MDO	Marine Diesel Oil
MFO	Marine Fauna Observer
MOU	Memorandum of Understanding
MS	Method Statement (OSMP)
MSDS	Material Safety Data Sheets
NOPSEMA	National Offshore Petroleum Safety and Environmental Management Authority
NatPlan	National Plan for Maritime Environmental Emergencies
NEBA	Net Environmental Benefit Assessment
NRT	National Response Team
OPEP	Oil Pollution Emergency Plan
OPGGS(E)R	Offshore Petroleum Greenhouse Gas and Storage (Environment) Regulations
OSC	On Scene Commander

Abbreviation	Meaning
OSCAR	Oil Spill Contingency and Response modelling framework
OSCU	Oil Spill Response Coordination Unit
OSMP	Oil Spill Monitoring Plan
OSRA	Oil Spill Response Atlas
OSTM	Oil Spill Trajectory Modelling
OWR	Oiled Wildlife Response
POLREP	Pollution Report
PPE	Personal Protective Equipment
PPS	Perth Petroleum Services
PROSWRP	Pilbara Region Oil Spill Wildlife Response Plan
RCC	Rescue Coordination Centre (AMSA)
ROV	Remotely Operated Vehicle
SINTEF	The Foundation for Scientific and Industrial Research (Norway)
SITREP	Situation Report
SOP	Standard Operation Procedure
SOPEP	Ship Oil Pollution Emergency Plan
SRT	State Response Team (DoT)
VSC	Vessel Safety Case
WAOWRP	Western Australian Oiled Wildlife Response Plan
WOMP	Well Operations Management Plan

1. INTRODUCTION

1.1 ACTIVITY DESCRIPTION

Western Gas Corporation Pty Ltd (Western Gas) propose to undertake well monitoring activities on the Glenloth-1 single suspended well (hereafter referred to as 'the Vessel Activities') within petroleum permit area WA-70-R (hereafter termed Permit Area). The Vessel Activities surveys will take up to seven days, including contingency, and involves one non-intrusive visual inspection of the well head, accomplished via remotely operated vehicle (ROV) videography acquired during a single survey of Glenloth-1 each year.

The Permit Area is located in the Northern Carnarvon Basin in Commonwealth waters approximately 145 km (78 nm) north of the North West Cape (Exmouth area) and about 275 km (148 nm) west of Dampier.

This Oil Pollution Emergency Plan (OPEP) is an operational manual to respond to an unplanned hydrocarbon release arising from the Vessel Activities within the permit area.

The permanent abandonment of four exploration wells, namely Chester-2, Glencoe-2, Mentorc-2 and Snapshot-1, and the continued suspension of Glenloth-1 well in petroleum permits WA-70-R and WA-474 is also included the WA-70-R and WA-474-P Abandoned and Suspended Wells Environment Plan (EP) (WG-HSE-PLN-001). However, it has been determined that the loss of well control from these wells is not credible and therefore no further consideration of these wells is provided in this OPEP. Therefore, this OPEP relates only to the Activity occurring in WA-70-R.

Western Gas holds an internal notification database (WGC-HSE-REG_OPEP Stakeholder Database_R0_221212) for relevant persons and organisations in the event of an emergency hydrocarbon spill. This database will be updated on a six-monthly or needs basis to hold relevant contact information.

Refer to Section 1.5.2 of the Environment Plan for an overview of regulatory status of these wells, including NOPSEMA's acceptance of the end of well abandonment reports.

1.2 EXISTING ENVIRONMENT

The Operational Area for the proposed Activity lies within the Northern Carnarvon Basin, approximately 150 km from the closest mainland coast and approximately 135 km from Barrow Island (refer to EP Figure 2-1). The area lies directly north of Exmouth and occurs within waters approximately 900 m to 1,200 deep.

The Operational Area and the EMBA do not overlap any shoreline habitats such as mangroves, sandy beaches, rocky shores or wetlands. At its closest, the EMBA is approximately 14 km from the nearest shoreline.

The EMBA for an MDO spill from Western Gas' vessel-based activities is described in the EP. In defining the EMBA, a range of factors detailed in National Offshore Petroleum Safety and Environmental Management Authority Oil Pollution Risk Management Guidance Note A382148 (NOPSEMA, 2021) have been considered. Specifically, the size of the EMBA has been based upon the quantity of hydrocarbons, duration of discharge, concentration of hydrocarbons, film thickness of hydrocarbons that can result in ecological impacts, zone of spill response activities and the environmental conditions that contribute to the largest distance travelled by the hydrocarbon. Figure 4-1 in the EP shows the EMBA's derived oil spill trajectory modelling for the worst-case MDO spill, defined using low hydrocarbon exposure values, refer to Section 4 of the EP for information regarding the existing environment.

Refer to Section 7.1.3 of the EP for more information about the hydrocarbon exposure values used for the oil spill modelling along with the environmental risk assessment undertaken for the impact of a hydrocarbon spill on nearby receptors.

1.3 PURPOSE

The overarching objective of the OPEP has been prepared in accordance with Regulation 14(8) and Regulation 14(8AA) of the Commonwealth Offshore Petroleum and Greenhouse Gas Storage (Environment) Regulations 2009 (OPGGs(E)R). The OPEP has been prepared to integrate with the National Plan for Maritime Environmental Emergencies (NatPlan) and the Western Australian (WA) State Hazard Plan: Maritime Environmental Emergencies (MEE)

This OPEP is designed to be an operational response document used in the event of an unplanned hydrocarbon spill event associated with the Vessel Activities within the permit area.

Oil spill response strategies addressed in this OPEP rely on information described in the associated EP when considering the existing environment, environmental impacts, risk management, performance outcomes, performance standards, reporting compliance, selection of suitable response strategies and the decision processes that will apply in the event a spill does occur.

Although this OPEP is a 'stand-alone' response plan, it is part of a broader emergency response framework detailed in Western Gas Emergency Response Arrangements (WG-HSE-008).

The OPEP is to guide the Incident Management Team (IMT) and response leaders of the Emergency Response Team (ERT) in the event a spill response is necessary.

The objectives of this OPEP are to:

- Support the timely implementation of pre-determined response strategies as outlined in this OPEP
- Ensure that the management of the response is consistent with the NatPlan, the MEE and the Australian Industry Cooperative Oil Spill Response Arrangements (AMOSPlan).
- Ensure effective integration and use of industry/government response efforts and resources.
- Ensure Western Gas has timely access to appropriately trained people and resources in order to effectively respond to and manage an oil spill response.

1.4 RESPONSE PRIORITIES

In the event of an incident, available resources will be used to protect the following, in order of priority:

- (1) **P**eople: employees, contractors, suppliers, customers and communities.
- (2) **E**nvironment: air, water, land spillages and areas of sensitivity.
- (3) **A**ssets and Property: Western Gas, contractors, communities and third-party facilities and offices.
- (4) **R**eputation and Business Continuity: supply, production, licence to operate.

A preliminary Net Environmental Benefit Analysis (NEBA) was conducted using hydrocarbon spill modelling of the worst-case spill scenarios identified for the Vessel Activities and assessing the sensitivities in the area (environmental and socio-economic) that may be at risk of impact from hydrocarbon spills. The preliminary NEBA considered the effectiveness of response strategies for the potential spill parameters, the benefit(s), potential environmental impacts and risks and the operational/functional constraints of the response option. This NEBA is presented within Section 8 of the EP. In the event of a spill, the assessment of response options will be reviewed and verified prior to implementation to ensure that the assumptions made in the planning process are valid. Immediate actions described in Section 3 are aimed to protect and/or mitigate impacts to these sensitivities.

1.5 RESPONSE TIERS

Determination of the response tier is based on an assessment of the size and nature of the spill, and the equipment and resources required to control the spill and manage the response. Guidelines are provided in Table 1-1. The Control Agency (often referred to as the 'Combat Agency') (see Section 1.7) is responsible for determining the Tier level.

Table 1-1: Guidelines for determining the level (Tier) of response

	Level 1 spill incident	Level 2/3 spill incident
Western Gas Classification	Small in size and short in duration. Can be managed at the site by the site ERT.	Large in size and ongoing duration. Cannot be managed at the site by the site ERT. Potential for media and/or stakeholder interest. Immediate reporting requirements.
Possible spill scenarios	Deck spills of oil, lubricant, vessel collision/failure resulting in loss of a small MDO fuel tank	Vessel collision releasing contents of single MDO fuel tank
Worse case credible spills scenario volumes	Deck spills 160 L and; Spill to environment < 60 m ³ of MDO	Maximum volume of single MDO fuel tank of 1,000 m ³
Resourcing Requirements¹	Vessel equipment and personnel / SOPEP response	Western Gas IMT and supporting contractors

1.6 OVERVIEW OF POTENTIAL HYDROCARBON SPILL IMPACTS AND RESPONSE STRATEGIES

Western Gas identified a potential hydrocarbon spill scenario that has the potential to require a coordinated spill response, as outlined in this OPEP:

- Vessel collision resulting in a ruptured fuel tank releasing 1,000 m³ of Marine Diesel Oil (MDO)

Excluded from the scope of this OPEP are vessels transiting to or from the Operational Area (as described in the EP). These vessels are deemed to be operating under the Commonwealth *Navigation Act 2012* and not engaged in petroleum-related activity.

1.6.1 Hydrocarbon Characteristics

This OPEP addresses marine diesel oil (MDO) that may be accidentally released during the Vessel Activities within the Operational Area, and which is expected to rapidly spread on the sea surface with rapid break-up and dispersal of slicks. Most of the spill is expected to evaporate in the first 48 hours after release.

Other hydrocarbons that may also be released during the Vessel Activities include hydraulic and lubricating oils that are expected spread rapidly and emulsify on the sea surface. These small volume spills will rapidly dissipate. Response to these smaller Level 1 spills will be based on the vessel Shipboard Oil Pollution Emergency Plan (SOPEP).

¹ An overall spill response resourcing strategy is provided in Section 5.

1.6.2 Level 1 Small Spills

No refuelling will occur during the Vessel Activities in the Operational Area (only at port). The largest credible release volume of hydraulic fluid directly into the marine environment is 30 L as a result of equipment failure or damage of a ROV. The largest credible release of shipboard hydraulic fluid that could potentially enter the marine environment is 160 L (1 bbl) from the rupture of an on-deck hydraulic hose. Refer to EP Section 7 for a description of the impacts from these spills.

The lowest-level spill risk for this Activity is a < 60 m³ MDO spill occurring from a small survey vessel. This would result in a Level 1 spill response.

Level 1 spills will be managed in accordance with the survey vessel's SOPEP, and do not typically require the stand-up of the IMT for support.

1.6.3 Level 2/3 MDO Impacts

Western Gas utilised representative modelling conducted by RPS from BHP's Stybarrow Decommissioning and Field Management activity to determine the potential impacts of a MDO release from a vessel collision. (see EP Section 7.1.2), this spill scenario predicts no MDO contact with any shorelines.

About 40.6% of the MDO mass should evaporate within the first 24 hours (180°C < BP < 265°C). After several days, 95% of the MDO mass should evaporate (265°C < BP < 380°C). Around 5% (by mass) of MDO will not evaporate at atmospheric temperatures and will persist within the environment.

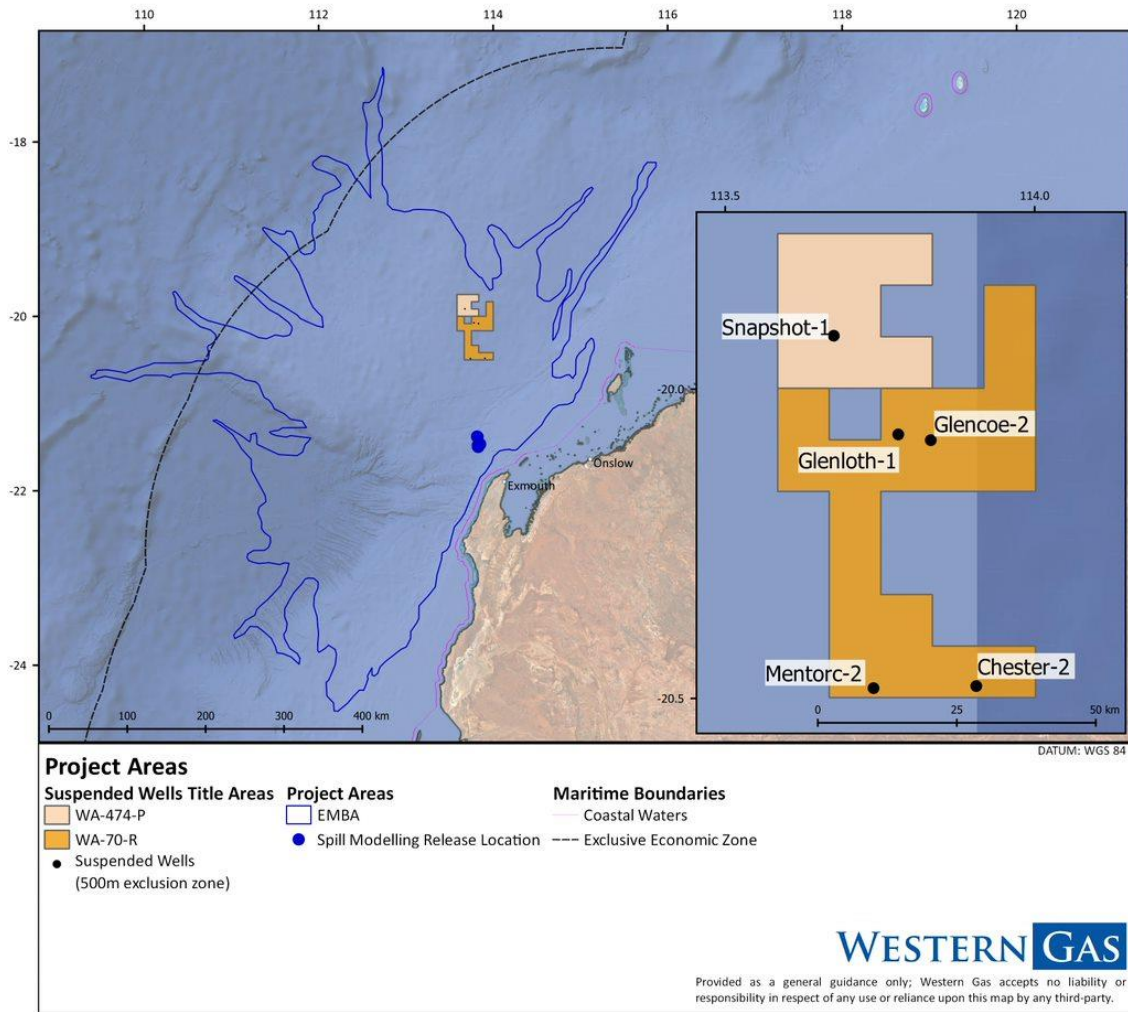


Figure 1-1: Area that may be affected (EMBA) for a Level 2/3 MDO spill within the Operational Area

1.6.4 Summary of Level 2/3 Hydrocarbon Spill Response Strategies

Immediate and ongoing response arrangements are in place for Level 2/3 spills. Western Gas arrangements for appropriate response strategies to mitigate impacts for credible worst-case spills are based on worst case credible release rates and volumes (1000 m³), MDO characteristics and typical metocean conditions as described in Section 7.1 of the EP. A summary of applicable spill response strategies is presented in Table 1-2.

Table 1-2: Summary of applicability of oil spill response strategies

Response strategy	Level 1 Spill	Level 2/3 MDO
Source control	NR	a Primary
Monitor & evaluate	NR	a Primary
Scientific Monitoring	NR	a Primary
Oiled wildlife response	NR	a Secondary
Waste Management	NR	a Primary
Mechanical dispersion	NR	NS
Shoreline clean-up	NR	NR
Containment and Recovery	NR	NS
Shoreline protection and deflection	NR	NS
Dispersant application	NR	NS
In-situ burning	NR	NS

NS: Not suitable
NR: Not required

Following notification and initial classification of the spill, the response will be managed by allocated onsite personnel for small spills or the Incident Management Team (IMT) for large spills. The IMT will coordinate effective implementation of Level 2/3 response strategies as required.

1.7 RESPONSE CONTROL AGENCY

The allocation of Control Agency is determined by the source and location of the spill and is summarised in the following sections.

Table 1-3 provides an overview of the organisation or agency that will assume the Control Agency role for a spill based on its source and the location in accordance with NatPlan (AMSA, 2020²). Western Gas will also establish a MoU with AMSA prior to undertaking the inspection survey that can result in a Level 2/3 spill.

Modelling identifies that an MDO spill is not predicted to enter state waters. As the spill extent is within close proximity of the state boundary, for completeness this OPEP outlines interactions with neighbouring state-based agencies. This aligns with the approach taken with the EP to identification of and consultation with relevant persons within the EP e.g., DoT.

Table 1-3: Jurisdictional, control and support authorities / agencies

Location of Incident	Spill Source/ Location	Jurisdictional Authority	Control Agency	
			Level 1	Level 2/3
Commonwealth Waters (>3 nm offshore)	Vessel at sea	AMSA	Western Gas until AMSA assumes command	
State Waters (<3 nm from land)	Vessel at sea	DoT	Not required. Operational Area does not include State waters and spills not predicted to enter State waters	
Support Agencies			Not Required	Contracted resources

1.7.1 Spills from Vessels (Commonwealth waters i.e., >3 nm from land)

AMSA is the Control Agency for all spills from vessels in Commonwealth Waters as per the NatPlan (AMSA, 2020³). AMSA’s National Marine Oil Spill Contingency Plan (AMSA, 2020⁴) is the operational response plan for the management of ship-sourced incidents. For a Level 2/3 spill, Western Gas will respond as per this OPEP until AMSA assumes control. For a Level 1 spill, where requested by the Vessel Master, Western Gas will provide appropriate assistance.

Spills from vessels within the Operational Area will be reported to NOPSEMA by Western Gas in addition to any regulatory reports by the relevant Vessel Master.

1.7.2 Spills from Vessels threatening State Waters (i.e., <3 nm from land)

The Operational Area does not include State waters and no vessel spills in Commonwealth waters are predicted to threaten WA State waters.

⁴ Australian Maritime Safety Authority (AMSA). National Marine Oil Spill Contingency Plan. January 2011. Available from <http://amsa.gov.au/environment/maritime-environmental-emergencies/national-plan/Contingency/Oil/documents/NMOSCP.pdf>.

2. INCIDENT MANAGEMENT

2.1 RESPONSE STRUCTURE

For an incident that requires an emergency response responsibility begins at the event scene level Emergency Response Team (ERT) and rises through the Incident Management Team (IMT) in Perth if required (Figure 2-1).

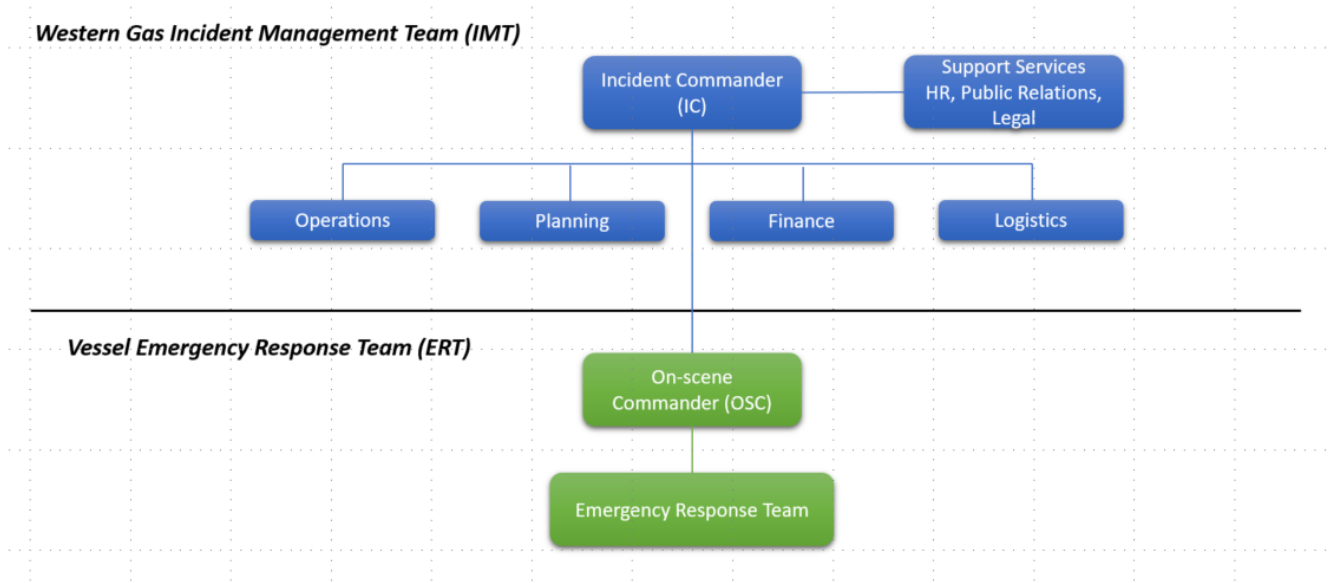


Figure 2-1: Emergency Response Structure

2.2 IMT ROLES AND RESPONSIBILITIES

The IMT is accountable for managing the overall physical and tactical response being undertaken by the on-scene ERT. The IMT also manages any other issues arising from an emergency that have implications to Western Gas' personnel or operations. The IMT will be flexible and scalable dependent on the nature and scale of the response. The overall responsibilities of the IMT focus on:

- Establish and maintain contact and provide guidance and support to the On-Scene Commander (OSC) who is conducting the physical and immediate response to the incident at the incident scene.
- Develop objectives and associated plans for the overall management of the incident and its consequences, ensuring the response moves from a reactive, to a proactive response as quickly as possible.
- Obtain and mobilise resources as appropriate to support the operations of the ERT, IMT and support services.
- Ensure that initial notifications and interactions with government and regulatory bodies are completed.
- Manage any public relations including media.
- Manage all immediate financial matters related to the incident including implementing procurement and cost tracking processes.

Key responsibilities for each role within the IMT are detailed in the Western Gas Emergency Response Arrangements (WGC-HSE-PLN_Emergency Response and Crisis Management_R0)). A responsibility summary overview of the roles of the IMT is outlined in Table 2-1.

Table 2-1: Key IMT sections and responsibilities

Personnel/Teams	Responsibilities
<p>On-Scene Commander (OSC) (Vessel Master)</p>	<ul style="list-style-type: none"> • Initiates the SOPEP for Level 1 or 2 spills • Onsite management of the spill response with the ERT (initially vessel crew) • Implements source control. • Notify and communicate directly with the Incident Commander
<p>Incident Management Team (IMT) - Perth</p>	<p>IMT is led by the Incident Commander (IC) who is responsible for the overall management and support to the response operations of the incident. IMT carries the overall accountability for the emergency and is organised into the following sections:</p> <p><u>Incident Command</u></p> <ul style="list-style-type: none"> • Strategic in nature. • Generates Strategic Objectives, determines response priorities, and ensures that emergency response operations are carried out in a safe and timely fashion. • Interacts with government agencies and the public and handles human resources and legal matters. <p><u>Operations</u></p> <ul style="list-style-type: none"> • Provide strategic direction to the work to the OSC / ERT. • Responsible for informing the IMT on the nature and status of response operations, and the needs of the ERT. <p><u>Planning</u></p> <ul style="list-style-type: none"> • Conduct short-term (e.g., preparation of Incident Action Plans) and long-term (e.g., preparation of a General Plan) planning to meet Strategic Objectives of the response as set by the IC. • Manage information associated with emergency response operations by establishing and maintaining a situation status display (the Information Centre) and collecting and preserving documentation. • Incorporates any specialist technical capability which is mobilised to support the response. This technical knowledge may include (but is not limited to) environmental, oil spill response, search and rescue and trajectory analysis expertise. <p><u>Logistics</u></p> <ul style="list-style-type: none"> • Support emergency response operations by sourcing the personnel, equipment, materials, and supplies needed to carry out the operations. Supported by local legal as necessary. • Coordinate for the services to sustain emergency response including food, water, housing, clothing, transportation, first aid, security, fuel, spare parts and anything else needed to keep people and equipment working in a safe and productive fashion. <p><u>Finance</u></p> <ul style="list-style-type: none"> • Manage all financial aspects of the response ensuring that the IMT has the necessary financial resources and processes in places. • Monitors expenditure and maintains records for insurance / cost recovery purposes.

2.2.1 Communication Interfaces

Communication interfaces are illustrated in Figure 2-2. The IMT is responsible for both internal (ERT) and external communications (e.g., government, media).

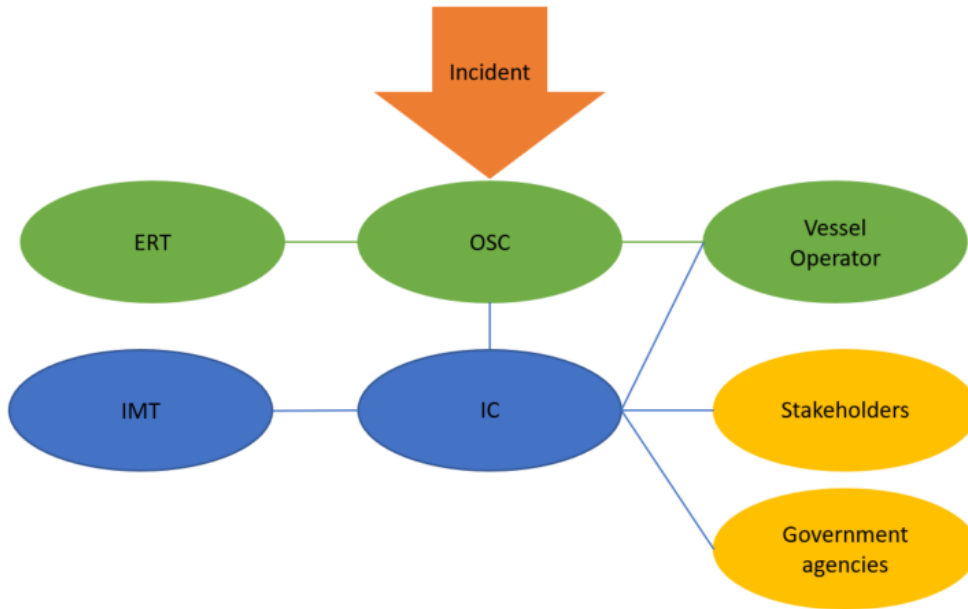


Figure 2-2: Western Gas communication interfaces

The IMT is responsible for both internal (i.e., CMT, ERT/SCT) and external communications related to the spill response (e.g., AMSA, DoT etc). The Western Gas CMT is responsible for external communications related to government regulatory bodies, media liaison and related stakeholders if required. Dependent on the size of the spill and jurisdiction, Western Gas has support from a range of mutual support agencies and organisations, of which some of the key agencies and organisations are outlined in the following sub-sections.

Australian Maritime Safety Authority (AMSA) and NatPlan

AMSA is the nominated Control Agency for all spills from vessels in Commonwealth Waters as per the NatPlan (AMSA, 2020). The NatPlan sets out the national arrangements, policies, and roles and responsibilities of states, territories and industry in managing maritime environmental emergencies (AMSA, 2020). NatPlan integrates Commonwealth and State government oil spill response framework to facilitate effective response to marine pollution incidents. AMSA manages the NatPlan and works with State governments (who manage the equivalent State plans that integrate into the NatPlan), shipping, petroleum, chemical industry and emergency services to optimise Australia’s marine pollution response capability. This plan applies to all hydrocarbon spills in Commonwealth waters seaward of

the State water limit. The NatPlan is Australia's key maritime emergency contingency and response plan.

WA Department of Transport (DoT) and WA State Hazard Plan

The WA Department of Transport (DoT) is the Control Agency for all marine oil spills that occur within, or enter into, WA state waters as per MEE. The plan prescribes management arrangements for the prevention of, preparation for, response to and recovery from a marine oil pollution incident in order to minimise the impacts of oil spill incidents in State waters.

Where a spill enters or is predicted to enter from Commonwealth to State waters DoT will assume the role as the State Maritime Pollution Coordinator (SMPC) and take on the role of Controlling Agency for response actions in State waters. The SMPC provides overall strategic management response and executive level support and guidance to the Incident Control.

Western Gas will continue to conduct the initial response and manage those operations as per this OPEP until formal incident control can be established by WA DoT. Western Gas and DoT will establish separate IMTs to manage response activities in Commonwealth and State waters, respectively, with one of the IMTs adopting the role of 'Lead IMT' for some response functions as outlined within the DoT's Offshore Petroleum Industry Guidance Note – Marine Oil Pollution: Response and Consultation Arrangements (DoT 2020).

Modelling does not identify that a spill will extend into State Waters. The extent of an MDO spill is predicted to be within close proximity to the state water boundary and therefore the process for management of a spill that crosses from Commonwealth to State waters has just been included for completeness.

WA Department of Biodiversity, Conservation and Attractions (DBCA) and WAOWRP

The DBCA has responsibility and statutory authority to protect wildlife as outlined in the WA Biodiversity Conservation Act 2016. It also has legislative requirement to ensure the humane treatment, housing and release or euthanising of fauna under the Animal Welfare Act 2002.

For spills in State waters, WA DoT is the Controlling Agency and DBCA is the Jurisdictional Authority for OWR and lead agency for OWR. The role of DBCA (formerly DPaW) in an OWR is outlined in the WA Oiled Wildlife Response Plan (WAOWRP) and regional sub-plans. The WAOWRP (DPaW, 2014a) sets out the minimum standard required for an OWR in WA in both State and Commonwealth waters. The Pilbara Region Oiled Wildlife Response Plan (PROWRP) (DPaW, 2014b) outlines specific 'on ground' information required to carry out OWR specific to this region (e.g., environmental values, high risk environmental areas, designated oiled wildlife facilities, equipment lists and resource lists, contact lists).

For a spill originating from petroleum activities in Commonwealth waters that moves into State waters, Western Gas retains command until formal incident control is established by WA DoT. In the event that wildlife has been impacted or there is imminent threat of impact requiring OWR, the WAOWRP and PROWRP will be activated. A Wildlife Division Coordinator (WDC) will be established and will liaise with the WA DoT to identify and coordinate the necessary OWR functional units of the Oiled Wildlife Division (OWD), as per the WAOWRP. In the event of oiled wildlife, DBCA will provide an Oiled Wildlife Advisor (OWA) to advise. The OWA and WDC will provide advice to the WA DoT on the level of OWR required and will ensure provision of resources to support OWR operations.

Once WA DoT becomes the Controlling Agency, they will be responsible for overall command of an OWR. Western Gas will provide necessary resources (equipment and personnel, primarily through Western Gas' AMOSC membership), as directed by WA DoT to support their functions.

During a Level 3 spill from petroleum activities and that impacts only Commonwealth waters, DBCA will similarly provide advice on OWR to the Western Gas DIMT through a nominated OWA.

2.3 IMT ACTIVATION

The activation of the Western Gas Incident Management Team is based on the tier level of a spill:

- In the event of a Level 1 spill, the IMT will not normally require activation; however, the IC will be advised.
- In the event of a Level 2/3 spill, the IMT is activated.

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

- (1) The incident is reported to the Western Gas Project Survey Manager via the duty phone number. Should the Western Gas Project Survey Manager not be immediately available, a Duty Manager can be contacted via on-call phone number (refer to Contacts Directory). At this point, if the incident has escalated beyond a Level 1, the person contacted will confirm they are assuming the role of Incident Commander and, as such, becomes accountable for managing the Western Gas response to the incident. The lead in the field (e.g., Vessel Master) will become the On-Scene Commander.
- (2) After consulting with the On-scene Commander, the Incident Commander will notify the Incident Management Team (IMT) members to either standby or mobilise to Incident Command Room (ICR).
- (3) The IMT will conduct all relevant notifications, action any appropriate response plans and mobilise the required resources for the incident.

The IMT is on 24-hour call and can be stood up within 1 hour. Additional support will be drawn from AMSA National Response Team when AMSA assumes control of the spill response. Upon notification of a Level 2 incident, the IMT will scale appropriately in size and scope (operational and tactical levels, as applicable) to manage the impending response of the incident.

3. IMMEDIATE ACTIONS

Immediate actions in response to a Level 2/3 incident have been planned to expedite oil spill response. These actions are to be undertaken while the Incident Action Plan (IAP) is updated ('ongoing' actions that follow 'immediate' actions are described in Section 4).

The immediate actions to be executed by the IMT include:

- Gain situational awareness of the incident (Section 3.1);
- Execute the notification plan (Section 3.2);
- Initiate the source control plan (Section 3.3);
- Initiate the monitor and evaluate plan (Section 3.4);
- Initiate the oiled wildlife response (Section 3.5); and
- Initiate the scientific monitoring plan (Section 3.6).

3.1 INCIDENT SITUATIONAL AWARENESS

3.1.1 Immediate Information Acquisition

In order to review the applicability of the response strategies contained within this OPEP to the actual incident characteristics and to assess the response strategies with a NEBA to achieve impacts that are 'As Low As Reasonably Practicable' (ALARP), the IMT must first gain situational awareness by obtaining immediate information. Responsibility for collection of this information will reside with the vessel and survey crew under the direction of the On Scene Commander (OSC). An initial response guide for obtaining this information is shown in Table 3-1. This guide is intended as a guide only and actions that will be undertaken are subject to change based on specific parameters and conditions at the time of the incident. This initial response guide is consistent with the strategic response priorities detailed in the NatPlan and WA State Hazard Plan Maritime Environmental Emergency. In the initial phase of a spill, the primary protection priority is human health and safety.

Table 3-1: Initial Response Guide - MDO Spill from Vessel

Step	Action	Responsibility	Indicative Timing	Additional Information
1	On discovery of a spill from the vessel - notify the Vessel Master Vessel Master to assume the role of OSC	Spill Observer	Immediate	SOPEP
2	Manage the safety of all personnel Secure sources of ignition and alert all personnel (appropriate to the level of the spill)	Vessel Master	Immediate	SOPEP
3	If safe, stop the spill through source control actions Assess incident and prevent further spillage if possible / safe	Vessel Master	Immediate	SOPEP
4	Determine spill parameters: <ul style="list-style-type: none"> • What is it - oil type/group/properties? • Where is it - lat/long, leading edge (if known) • How big is it - area/volume? • What is happening to it - status of release i.e., continuing or under control? • Weather conditions at site (wind/currents) 	Vessel Master	As soon as practicable	SOPEP
5	Determine Spill Response Level required: Level 1 or 2: Level 1: <ul style="list-style-type: none"> • Vessel Master to act as Incident Commander and refer to SOPEP • Inform IMT IC Level 2: <ul style="list-style-type: none"> • Contact Western Gas Onshore Project Manager via Duty Officer number • Confirm role of Incident Commander • Request IMT mobilisation • Confirm Vessel Master role as On-scene Commander (OSC) 	Vessel Master	As soon as practicable	SOPEP / OPEP Section 3.1.2
6	In the event of a significant (Level 2) spill, deploy the oil spill tracking Buoy(s), following the deployment instructions	OSC (Vessel Master)	As soon as practicable	OPEP Section 3.4.4
7	Complete relevant internal Western Gas notifications	Western Gas Project Survey Manager / IC	Refer to Table 3-1	OPEP Section 3.2
8	Notify AMSA of Level 2/3 spill incident and request AMSA assume control as the relevant Control Agency: <ul style="list-style-type: none"> • Establish appropriate line of communication • Request AMSA IMT liaison until IMT able to assume control 	Western Gas Project Survey Manager / IC	As soon as practicable	OPEP Section 3.2
9	Complete any relevant external notifications – as directed by the control agency (AMSA)	Western Gas Project Survey	As soon as required	OPEP Section 3.2

Step	Action	Responsibility	Indicative Timing	Additional Information
		Manager / IC / AMSA IC		
10	Continue to assess spill parameters - provide regular reports to the IC regarding: <ul style="list-style-type: none"> • Appearance and behaviour of surface spill • Weather (surface wind speed, direction, sea state, current speed and direction) • Tidal conditions • Changes to release status if relevant 	Vessel Master	Ongoing until terminated	SOPEP

3.1.2 Classification of Spill Tier

Following immediate information acquisition, an assessment of the spill tier is required to gauge a proportionate response as shown in Table 1-1.

Where doubt exists over the severity or appropriate response to an unplanned event, the OSC should discuss the situation with the IC. The principle of prudent over reaction and rapid de-escalation applies when considering the level of activation as it is easier and usually more effective to scale down an over-reaction than is to ramp up an under-reaction.

The NatPlan classifies incidents to provide direction on the potential consequence and impact of an incident. This assists in guiding agency readiness levels, incident notifications, response actions and potential response escalations. The classification consists of three levels, which are based on the size and/or complexity of the incident (Table 3-2).

Table 3-2: Spill Level Classification (Adapted from the NatPlan)

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

*This Level is not relevant to the activities being undertaken but is included for completeness

3.2 NOTIFICATION PLAN

Table 3-4 details the required notifications in the event of a Level 2/3 hydrocarbon spill. Level 1 notifications are undertaken as per the vessel SOPEP. The OSC is responsible for activating the available on-scene initial response for all spills. The IC (or delegate) is responsible for subsequent activations and notifications on the basis of the spill circumstances.

Notifications will include:

- All known material facts and circumstances regarding the incident;
- Details of any action(s) taken to avoid or mitigate any adverse environmental impacts from the incident; and
- Details of any corrective action(s) that has been taken (or proposed) to prevent a similar reportable incident.

Contact numbers for roles in Figure 2-1 are listed in the Western Gas Emergency Contact List (WG-EHS-LST-001), which is regularly updated and distributed to all relevant parties with key regulator, spill response organisations and contracted resource contact details. The environmental performance outcome, standard and measurement criteria for the notification plan are provided in Table 3-3.

Table 3-3: Performance criteria for spill notifications

Environmental Performance Objective	Performance Standard	Measurement Criteria
Environmental agencies are informed of the incident and the response arrangements within regulatory stipulated timeframes	Undertake communications in accordance with the Notification Plan	<ul style="list-style-type: none"> • Communications records • Incident log • Applicable notifications within nominated timeframes

Table 3-4: Notification plan contact details

From	To	Description	Type	Timing
All Tier Spills				
OSC	IC	IC to activate IMT (if Level 2/3) and notify/activate regulatory authorities, external stakeholders and contractors (as required)	Verbal	ASAP or within 1 hour
IC (or delegate)	NOPSEMA (if reportable incident) Ph: 1300 674 472 submissions@nopsema.gov.au	Jurisdictional Authority. Requirement to submit regulatory report.	Verbal	ASAP and no later than 2 hours
			Written notification	ASAP after oral notification
			Written report (FM0831- http://www.nopsema.gov.au/environmental-management/notification-and-reporting/)	ASAP, but within 3 days of incident
	AMSA (Rescue Coordination Centre) Ph: 1800 641 792 (24/7) rccaus@amsa.gov.au	Legal requirement to notify in the event of any spill of oil to sea. Notification and mobilisation of NatPlan resources ⁵ . Control agency for all spills from ships.	Verbal	Marine Pollution (MARPOL) Report ⁶
IC (or delegate)	Parks Australia (Director of National Parks) via Marine compliance Duty Officer Ph: 0419 293 465 (24/7)	Any spill within or the potential to impact the Gascoyne Marine Park or Ningaloo Marine Park.	Notification to include: <ul style="list-style-type: none"> ○ Titleholder details ○ Time and location of the incident ○ Proposed response strategies as per OPEP ○ Contact details for the response. 	ASAP

⁵ The Australian Maritime Safety Authority ('AMSA') will coordinate the resources of the NatPlan for MEE on the formal request of the appointed IC.

⁶ Marine Pollution (MARPOL) Report.

Level 2/3 Spills				
IC	IMT	Activate IMT	Verbal	ASAP or within 1 hour
IC (or delegate)	DoT Maritime Environmental Emergency Response (MEER) +61 8 9480 9924 (24/7) marine.pollution@transport.wa.gov.au	WA DoT is to be notified immediately followed by POLREP in the event of any spill to sea that has the potential to impact State waters.	Verbal WA POLREP form http://www.transport.wa.gov.au/mediaFiles/marine/MAC-F-PollutionReport.pdf	ASAP
	Department of Biodiversity, Conservation and Attractions (DBCA) +61 8 9219 9108 (O) Duty Officer	DBCA are the WA State control agency for oiled wildlife response and have equipment and trained personnel capability. WA DoT will notify DBCA in the event of a spill once it is reported to them. This contact provides an important point of verbal contact with DBCA in the event of an oil spill and provision of advice in relation to the Wildlife Care Act and CALM Act.	Verbal (for information) via WA POLREP form http://www.transport.wa.gov.au/mediaFiles/marine/MAC-F-PollutionReport.pdf	ASAP
	Australia Fisheries Management Authority Ph: 1300 723 621 or (02) 6225 5555	Fisheries within the environment that may be affected (EMBA) Consider a courtesy call if not in exposure zone	Verbal	ASAP
	DCCEEW +61 2 6274 1372 1800 110 395 compliance@environment.gov.au	Spill has potential to cause significant impact to a matter of national environmental significance (NES) Death or injury of individual(s) from a Listed Species	Verbal and Written	Verbal within 24hrs of detection for death or injury of Listed Fauna / within 48hrs of detection of impact on matters of NES Written within 3 days

3.3 SOURCE CONTROL PLAN

The initial and highest priority response to an oil spill incident is to prevent or limit further hydrocarbon loss into the marine environment. However, this should only be attempted if safe to do so and in a manner that will not cause any further risk or impact to the environment. Source control procedures and methods are dependent upon the hydrocarbon source and spill tier. These methods could include a number of options, depending on the spill scenario. An overview of the source control plan is demonstrated schematically in Figure 3-1 with specific source control plans for Level 2/3 (Section 3.3.1) and Level 1 (Section 3.3.2) in subsequent sub-sections.

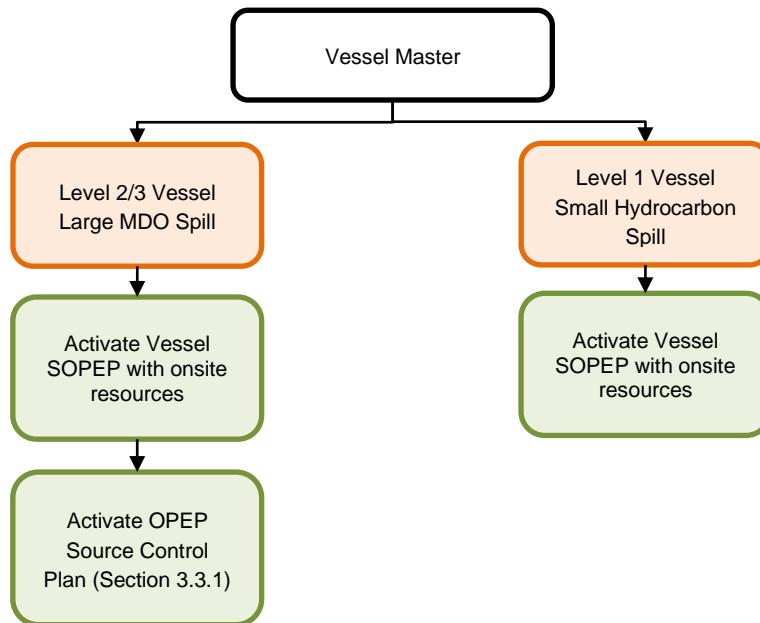


Figure 3-1: Overview of Source Control Plan

3.3.1 Level 2/3 – MDO Spill

Source Control Plan: Level 2/3 Fuel Tank Rupture				
Initiation Trigger	Notification of a Level 2/3 spill incident.			
Aim	Safely stop the loss of MDO from the fuel tank rupture to minimise hydrocarbon releases to the marine environment.			
Applicable Hydrocarbon	MDO	Refined Oil		
	YES	NO		
Procedure	Required Timeframe and Action (if safe)		Person Responsible	Tick When Complete
	Day 0 - Implement the following MDO flow reduction measure as appropriate: <ul style="list-style-type: none"> Reduce the tank head (pressure) driving the MDO spill from the tank rupture 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 MDO loss; If the affected tank is not easily identified, reduce the level of the MDO in the tanks in the vicinity of the suspected area if stability of the vessel will not be compromised; Attempt repair and plugging of hole or rupture; Evaluate the transfer of MDO to other vessels; and/or Trimming or lightening the vessel to avoid further damage to intact tanks. 		Vessel Master	<input type="checkbox"/>
	Day 0 - Mobilise support vessel to location if required		OSC	<input type="checkbox"/>
	Ongoing - Use onboard spill kits to clean-up hydrocarbons from the deck. Oily waste will be bagged, labelled and segregated into a banded hazardous waste area. Hazardous wastes will be transferred onshore after the Vessel Activities with a licensed waste management contractor and dispose of wastes in a suitably classed State waste disposal facility.		OSC/ Vessel Master	<input type="checkbox"/>
Resources Required	Resource	Available From: (Refer to Section 5.2)		
	Vessel	Contracted vessel provider.		
Termination Criteria	Direct observation: MDO from the ruptured fuel tank is secured on the vessel and actions have been taken to prevent any further MDO release, or that no more hydrocarbons can be released.			
Key Response Documents	Vessel SOPEP OPEP			
Environmental Performance Outcome	Contain the unplanned MDO release from a Level 2/3 fuel tank rupture.			
Control Measure	Performance Standard	Measurement Criteria		
Vessel SOPEP	Western Gas Project Survey Manager will ensure that Vessel SOPEP copies are in the Western Gas offices 2 weeks prior to survey for IMT reference if a Level 2/3 spill.	Copies of Vessel SOPEPs in Western Gas.		
	IC activates source control plan within 2 hours of fuel tank rupture notification	Incident response logs.		

3.3.2 Level 1 – Small Deck Spill of Refined Oil and Minor MDO Spill

Source Control Plan: Level 1 Spill				
Initiation Trigger	Notification of a Level 1 spill			
Aim	Safely stop the loss of oil to minimise hydrocarbon releases to the marine environment.			
Applicable Hydrocarbon	MDO	Refined Oil		
	YES	YES		
Procedure	Required Timeframe and Action (if safe)		Person Responsible	Tick When Complete
	Immediate - Turn off pumps/machinery and contain spill in bunded area. Identify and replace failed equipment if possible.		Vessel Master	<input type="checkbox"/>
	Post-Spill - Use the onboard spill kits to clean up hydrocarbons from the deck. Replenish or replace any supplies that were used from the spill kits. Oily waste will be bagged, labelled and segregated into a bunded hazardous waste area. Hazardous wastes will be transferred onshore after the Vessel Activities- using a licensed waste management contractor and dispose of wastes in a suitably classed State waste disposal facility.		Vessel Master	<input type="checkbox"/>
	Post-Spill - Before washing down the deck, confirm that the deck drainage network is still closed, and the water will not be released into the marine environment.		Vessel Master	<input type="checkbox"/>
	Complete an incident report that states: <ul style="list-style-type: none"> • The time of incident notification • When and what actions taken to control the spill • When and what actions taken to prevent the spill occurring again • The volume of hydrocarbons that were released • The volume that was released into the marine environment • When and under whose authority was the spill response terminated. 		Vessel Master	<input type="checkbox"/>
Resources Required	Resource	Available From: (Refer to Section 5.2)		
	Vessel spill kits	On-board vessel		
Termination Criteria	Direct observation: Hydrocarbons from the incident secured and actions have been taken to prevent any further release.			
Key Response Documents	Vessel SOPEP			
Environmental Performance Outcome	Contain the unplanned release from a Level 1 refined oil spill.			
Control Measure	Performance Standard	Measurement Criteria		
Vessel SOPEP	Western Gas Project Survey Manager will ensure that Vessel SOPEP is in accordance with this Level 1 Source Control Plan in the event of a Level 1 spill.	Memo on file that Vessel SOPEP in accordance with this Level 1 Source Control Plan.		

	In the event of a Level 1 spill, response activities in accordance with this source control plan are immediately implemented.	Incident report.
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3.4 MONITOR AND EVALUATE PLAN

Monitoring, Evaluation and Surveillance (MES) activities are undertaken to assist in anticipating resources at risk of exposure, directing response resources and evaluating the effectiveness of response techniques. MES activities are conducted throughout the incident response.

This OPEP includes MES tactics that may be used to evaluate the parameters and potential trajectory of the spill and may include one or more of the following:

- Fate and weathering modelling – computer modelling and computational techniques to estimate the weathering of an oil spill;
- Trajectory modelling – computer models and computational techniques to estimate the speed and direction of movement, weathering and dispersal patterns;
- Visual observation (from aircraft and/or vessels) – observers on aircraft or vessels use standard references to characterise oil slicks; and
- Remote sensing – uses remote sensing technologies, including tracking buoys, to identify and track surface oil.

The monitor and evaluate plan is initiated by the IMT (through the IC or delegate) except for immediate onsite surveillance from the survey vessel, which is initiated by the OSC⁷.

Table 3-5 provides guidance for implementing MES for the Vessel Activities (this is guidance only and the IC may vary tasks as appropriate). MES tactics will be terminated in accordance with the process detailed in Section 4.1.4.

⁷ Aerial surveillance will be the preferred method while vessel surveillance will be undertaken opportunistically when vessels are available. Initial observations can be provided by vessel crew.

Table 3-5 Monitoring, Evaluation, and Surveillance Implementation Guide

MES Tactic	Action	Complete
Information gathering	Obtain weather data via of the Bureau of Meteorology (http://www.bom.gov.au/) for the spill location.	
Hydrocarbon, distribution, fate and weathering assessment	<p>Conduct hydrocarbon distribution, fate and weathering assessment to further develop response strategies:</p> <ul style="list-style-type: none"> • Spill fates, weathering and trajectory modelling – conduct internally, through AMSA NatPlan arrangements. <ul style="list-style-type: none"> ○ If using AMSA, complete then email the AMSA Oil Spill Trajectory Modelling (OSTM) request form, available from: http://www.amsa.gov.au/environment/maritime-environmental-emergencies/national-plan/General-Information/SPILLREQUEST/index.asp • Undertake ADIOS modelling using hydrocarbon characteristics detailed in the EP https://response.restoration.noaa.gov/adios 	
Vectoring	Use vectoring to identify predicted spill trajectory. https://response.restoration.noaa.gov/sites/default/files/Trajectory_Analysis_Handbook.pdf	
Tracking Buoy Monitoring	<p>Confirm deployment of satellite tracking buoys (if Level 2 incident). Access oil spill tracking buoy live feed data if a buoy has been deployed from the vessel:</p> <ul style="list-style-type: none"> • Buoy service will be activated prior to spudding well and vessel and rig operators will be trained on their deployment. • Western Gas – through Metocean Services - can log into the tracking buoy account and monitor location. 	
Aerial Observation	Mobilise Aerial Observation aircraft (if Level 2 incident) to commence operations in daylight hours (as directed by AMSA).	
Marine Observation	Obtain vessel observations from any vessels on location / spill source vessel (if appropriate)	

A summary of the MES strategy is provided in Table 3-6 outlining the requirements, resources and standards for each spill type.

Table 3-6 Summary of the MES strategy

Requirement	Spill Level		Outcome	Minimum resources	Provider	Minimum standard
	1	2				
Visual observation – vessels of opportunity (VoO)	Y	Y	Identify extent and trajectory of spill. Record visual characteristics.	1 x vessel & crew 1 x Observer	Survey Contracted Vessel Survey Team Contract Personnel	VoO onsite within 48 hours
Visual observation – aircraft	N	Y	Identify the extent and trajectory of the spill, record visual characteristics	1 x Aircraft 1 x Observer	AMSA NRT	Onsite within 12 hours of request
Satellite tracking buoys	N	Y	Imagery to identify the trajectory of the spill and ground truth computer modelling	1 x satellite tracking buoy on Survey Support Vessel	Advisian	Deployed immediately after a spill support vessel/s
Oil spill vectoring	N	Y	Identify the likely trajectory and fate of spill using real time parameters. Predict timeframes to contact environmental sensitivities.	1 x person with spill assessment training	IMT Planning Unit or IMT Intelligence Unit	Undertaken within 3 hours from oil spill notification
OSTM	N	Y	Model the likely trajectory and fate of spill using available data. Predict timeframes to contact environmental sensitivities	Contract with RPS via AMSA.	RPS	Results within 4 hours of spill notification

3.4.1 Oil Spill Trajectory Calculation

Spill Size Estimation

The spill size may be determined based upon the estimated amount of hydrocarbon released from a ‘known’ hydrocarbon inventory; an estimate of release rates from time of the commencement of the incident; or an estimate of the appearance of oil on the sea surface based upon the likely thickness and type of oil (Table 3-7 and Figure 3-3).

Spill Movement

The movement and behaviour of an oil slick may be manually estimated by undertaking vector calculations. Manual calculations can commence as soon as the preliminary information on the spill is known and proposed within 3 hours of the spill. For spills in close proximity to shore, this method may provide the best option for predicting the likely spill trajectory and timeframes before protection priorities

are impacted. Manual estimation of oil trajectory movement applies only to floating oil on the sea surface.

Prior to commencing the calculation, the wind and current data is required. This can be accessed via the Bureau of Meteorology observation station (winds) (<http://www.bom.gov.au/wa/observations/waall.shtml>).

The calculation is based on the spill moving 100% of the current vector and 3% of the wind vector, as shown in Figure 3-2.

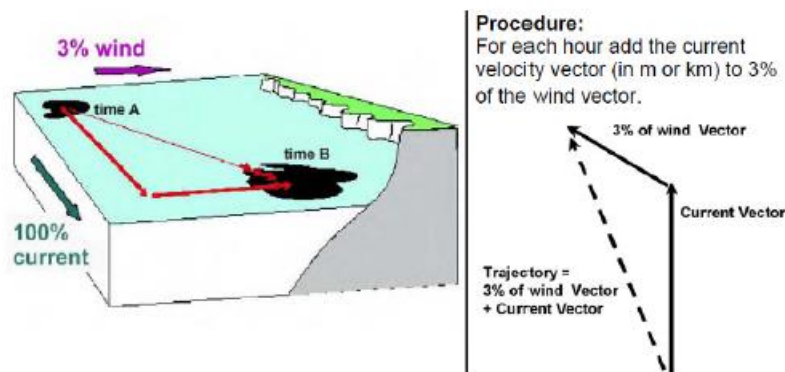


Figure 3-2 Spill vectoring overview

Source: AMSA (2003).

Hydrocarbon Weathering

The Automated Data Inquiry for Oil Spills (ADIOS) can be used to provide weathering predictions of hydrocarbon types for spill volumes at different wind speeds and water temperatures. This computer-based oil spill response tool is available to download from: <http://response.restoration.noaa.gov/oil-and-chemical-spills/oil-spills/response-tools/downloading-installing-and-running-adios.html>

The overall aim of the monitor and evaluate plan is to:

- Understand the behaviour of the spill;
- Maintain situational awareness (update IAP and inform IMT);
- Provide ongoing information for the assessment of the response strategies; and
- Provide ongoing information for scientific monitoring planning to assess environmental impacts from the spill.

This OPEP includes MES tactics that may be used to evaluate the parameters and potential trajectory of the spill and may include one or more of the following:

- Fate and weathering modelling – computer modelling and computational techniques to estimate the weathering of an oil spill;
- Trajectory modelling – computer models and computational techniques to estimate the speed and direction of movement, weathering and dispersal patterns;
- Visual observation (from aircraft and/or vessels) – observers on aircraft or vessels use standard references to characterise oil slicks; and

Scientific monitoring is used to assess impacts and subsequent recovery of environmental receptors from the spill and is described in Section 3.6.

3.4.2 Vessel Surveillance

For a Level 2 spill, monitoring and evaluation will be undertaken to assess the natural weathering process and identify the location of the slick. In all cases this will involve visual monitoring from vessels of opportunity (as available) following a spill incident.

Vessel surveillance commences as instructed by the IMT (through the IC or delegate) or OSC when metocean conditions are conducive for vessel surveillance. Vessel surveillance will be undertaken opportunistically when vessels are available. Initial observations will be provided by survey vessel crew. Spill observers may include project team members, vessel crew and in the event of a Level 2 spill, or AMSA NRT members.

Vessel surveillance observations are to be recorded with supporting photographic images or video records. GPS coordinates and date/time observations are to be recorded to allow calculations of the spill extent. The thickness of the slick will be estimated by trained observers based on the Bonn Agreement Oil Appearance Code (BOAC) (Bonn Agreement 1998). Records will be completed with marine fauna sightings and *ad hoc* notes from the trained marine fauna observers (MFOs) (once mobilised after an incident). Completed logs will be emailed to the IMT upon shift changes or return to port.

Table 3-7: Guidelines for estimating spill volume

Code	Description of appearance	Approximate thickness (µm)	Approximate litres per km ²
1	Silvery	<0.05 to 0.1	
2	Grey	0.1 to 0.30	40-300
3	Rainbow	0.3 to 5.0	300-5,000
4	Metallic	5.0 to 50	5,000-50,000
5	Discontinuous true oil colour (heavy oil)	50 to 200	50,000 – 200,000
6	Continuous true colour (heavy oil)	>200	>200,000
Other	Mousse or emulsion		

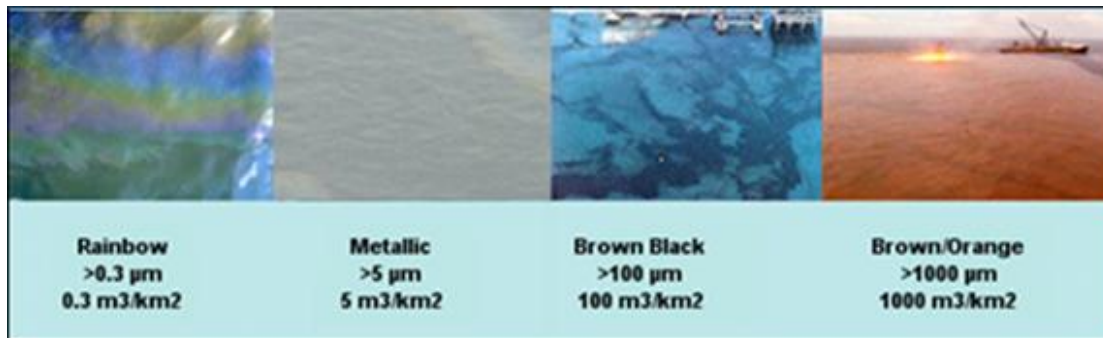


Figure 3-3 Bonn Agreement Oil Appearance Code

3.4.3 Aerial Surveillance

In the event of a Level 2 MDO release, surveillance will be carried out via aerial means to gain situational awareness and inform the spill response.

Aerial surveillance commences as instructed by the IMT (through the IC or delegate) or OSC when metocean conditions are conducive for aircraft surveillance. Aerial surveillance is preferred over vessel surveillance because of the greater spatial coverage of observations.

AMSA has access to the fixed wing service providers and provide accredited marine pollution aerial observers (NRT members). Requests for aircraft to conduct aerial observations should be directed by AMSA IC.

Observations are to be recorded and filed with supporting photographic images or video records. GPS coordinates and date/time observations are to be recorded and archived to allow for calculations of the spill extent. The thickness of the slick will be estimated by trained observers based on the Bonn Agreement Code (Bonn Agreement 1998). Records will be completed with marine fauna sighting and *ad hoc* notes from the trained observers. Completed logs will be emailed to the IMT upon change of shift or return to port/airport.

Table 3-8: Aerial surveillance resources

Resource	Requirements	Provider
Trained Oil Spill Response personnel	1 x Aerial Observer (trained)	AMOSC AMSA NRT
Air Support	1 x Aircraft & Pilot	AMOSC Contracts

3.4.4 Satellite Tracking Buoy

Satellite tracking buoys can monitor the leading or rear edge of a slick to estimate its trajectory and thereby inform response planning and implementation of response measures. A satellite tracking buoy

will be on available on the survey vessel. Instructions will be provided to Vessel Master for the deployment of the buoy. At the time of a spill, the monitoring buoy will be activated and deployed overboard to allow for real-time satellite tracking of the spill (Level 2 only). The buoys' location will be monitored through regular data downloads (every 30 minutes) using software. Western Gas will have access to the live updated data via the service provider.

3.4.5 Oil Spill Trajectory Modelling

The IMT is able to assess the movement of a hydrocarbon slick using computerised OSTM using RPS via its arrangements with AMSA. Access to OSTM will be directed by AMSA upon request (submit an electronic request via the NEMO system. NEMO is AMSA's cloud-based customisable incident management system, designed to manage and monitor all national pollution and maritime casualty incidents. Information is captured from multiple sources and in a variety of formats to provide a real-time common operating picture during maritime environmental emergencies. It delivers information management and decision support tools that assist AMSA and the States / Northern Territory during NatPlan activations.

To predict the early movement of larger spills, real-time OSTM will be conducted. Preliminary modelling results are generally available within 2-3 hours of an initial request following a spill event.

For Level 1 spills, Western Gas will not undertake OSTM due to the limitations of using the model near shore with small volumes. Aerial observations will be used to ground-truth the spill location.

3.4.6 MES Summary and Performance Standards

Table 3-9 provides a summary of the performance standards for the MES strategy.

Table 3-9: MES Performance Standards and Measurement Criteria

Control Measure	Performance Standard	Measurement Criteria
Satellite Tracking Buoys	Satellite tracking buoy deployed from vessel within 1 hour of spill.	<ul style="list-style-type: none"> • Vessel storage logs confirm tracking buoys on-board; • Emails between Vessel Master and IMT confirm commencement of tracking; • Incident log indicates tracking buoys deployed; • Operational web-based buoy tracking portal; and • Archive of satellite tracking buoy data.
Vessel Surveillance	Surveillance with contracted support vessel(s) undertaken within 30 minutes (if it is available for surveillance activities) of spill notification.	<ul style="list-style-type: none"> • IMT logs; • Vessel logs; • Completed Observation sheets.
	Vessel surveillance with untrained observers within 24 hours of IMT activation.	
	Ongoing vessel surveillance information regularly available until termination criteria met.	
Aerial Surveillance	Aerial surveillance requested by IMT within 3 hours and initial survey within 24 hours (daylight permitting) with untrained observers and 48 hours with trained observers.	<ul style="list-style-type: none"> • IMT logs; • Flight logs; and • Associate Membership with AMOSC for core group access.
	Aerial surveillance observations made available to IMT within 1 hour of completion of flight.	<ul style="list-style-type: none"> • IMT logs; • Completed aerial observation data sheets or similar reporting; and • Flight logs.
	Provision of aerial surveillance observations to RPS APASA within 4 hours of receipt.	<ul style="list-style-type: none"> • Emails between IMT and OSTM service provider; and • Incident log indicates date and time of aerial surveillance observations sent to RPS APASA.
OSTM	OSTM commissioned within 2 hours of OMS1 initiation.	<ul style="list-style-type: none"> • Emails between IMT, and RPS APASA show date and time of OSTM request; and • Completed SAP OMS1 initiation checklist.

Control Measure	Performance Standard	Measurement Criteria
	OSTM continues until spill source is controlled and no further regions affected by the spill.	<ul style="list-style-type: none"> • IMT access-enabled web portal with quasi-real-time modelling results; and • OSTM forecast report(s) to IMT

3.5 OILED WILDLIFE RESPONSE

A marine oil pollution incident has the potential to immediately impact wildlife. As such, rapid establishment of the Wildlife Branch, activation of an oiled wildlife response contractor, and the immediate implementation of wildlife response actions are critical for the prevention and mitigation of impact to wildlife and responding to oiled animals through capture and rehabilitation.

The level of escalation of the OWR is determined by the IMT, informed by advice from Western Gas and Parks and Wildlife Oiled Wildlife Advisors and data collected via initial MES tactics. The OWR will be conducted in accordance with the WA Oiled Wildlife Response Plan (WAOWRP) (Parks and Wildlife & AMOSC 2014). This overarching document provides the framework for OWR, with the regional context and detail required to carry out an OWR provided in seven regional response plans. The relevant Regional Oiled Wildlife Response Plan(s) will be enacted following initial MES information.

Any response to oiled wildlife will be directed by AMSA as the control agency in coordination with DBCA. Western Gas IMT will **not** be responsible for any wildlife response. Table 3-10 outlines the general steps AMSA will undertake to ensure it is consistent with the OWR framework outlined in the WAOWRP.

Table 3-10: Oiled Wildlife Response Implementation Guide

Tactic	Implementation / Activation Guide	Complete
OWR Activation	<p>Notification of Department of Parks and Wildlife State Duty Officer.</p> <p>The State Duty Officer will contact the Parks and Wildlife Oiled Wildlife Advisor (OWA) to provide advice to the Control Agency.</p>	
OWR Plan Activation and Escalation	<p>Activate the relevant Regional Oiled Wildlife Response Plan(s) in accordance with the Western Australian – Oiled Wildlife Response Plan (Parks and Wildlife & AMOSC 2014).</p> <p>https://www.dpaw.wa.gov.au/images/documents/conservation-management/marine/wildlife/West Australian Oiled Wildlife Response Plan V1.1.pdf</p> <p>Notify key stakeholders as outlined in the relevant regional OWR plan, based on preliminary reports and trajectory information.</p>	
Wildlife First Strike Response	<p>Activate the relevant Regional Oiled Wildlife Response Plan in accordance with the Western Australian – Oiled Wildlife Response Plan.</p> <p>Undertake the Wildlife First Strike Response steps outlined in the Western Australian – Oiled Wildlife Response Plan.</p>	
Mobilisation of Resources	<p>Mobilise personnel, equipment and facilities in coordination with AMSA and Parks and Wildlife.</p>	
Wildlife Reconnaissance	<p>Determine potential wildlife resources at risk based on initial MES data (aerial and marine observation).</p> <p>Information gained from these surveys is key to mounting effective deterrence, search and capture, and response efforts and will be used to determine the scope and scale of wildlife response.</p>	
Incident Action Plan Wildlife Sub-Plan	<p>Develop the Incident Action Plan Wildlife Sub-plan in coordination with regulatory agencies (DCCEEW, DBCA, WA DoT) based on known conditions and information gathered from wildlife reconnaissance and MES. The sub-plan is to be modified or amended throughout the incident as needed when conditions change. The sub-plan is to include the appropriate response options:</p> <ul style="list-style-type: none"> • Wildlife priorities for protection from contact with oil; • Deterrence measures; and • Recovery and treatment of oiled wildlife; resourcing of equipment and personnel. 	
Wildlife Response	<p>Coordinate with DBCA on the arrangements of any wildlife response stages required:</p> <ul style="list-style-type: none"> • Wildlife reconnaissance • Wildlife Rescue • Wildlife Rehabilitation • Oiled wildlife carcass collection • Oiled wildlife sampling/necropsy • Waste Management 	

3.6 SCIENTIFIC MONITORING PLAN (TYPE II MONITORING)

The Type II scientific (Type II) monitoring plan will be in place prior to commencement of the Vessel Activities. The aim of the scientific monitoring plan is to characterise the short- and long-term impacts and subsequent recovery of the marine environment from a hydrocarbon spill. The IC (or delegate) upon notification of a Level 2/3 hydrocarbon incident will initiate the scientific monitoring plan. A summary of the proposed scientific monitoring plan is provided in Section 9.5.5 of the EP.

4. ONGOING RESPONSE ARRANGEMENTS

The response is coordinated by the IMT through the Incident Action Plan (IAP), which comprises all specific response strategy sub-plans to execute over specific operational periods. In this section an overview of the IAP development process is provided which is followed by specific response strategy sub-plans that have been identified as appropriate to mitigate the impact of spills arising from a release of MDO from a vessel collision as detailed in Section 7.1 of the EP.

4.1 INCIDENT ACTION PLAN

The Incident Action Planning process governs the ongoing response following the initial response phase (first 24 hours). During the initial response phase, initial response (or 'first-strike') actions and notifications are undertaken, and the required spill response teams are activated.

An Incident Action Plan (IAP) is developed for each Operational Period (as defined by the IC) following the initial response. The IAP informs incident personnel of the objectives for that operational period, the specific resources that will be applied, actions taken during the operational period to achieve the objectives, and other specific operational information (e.g., weather, constraints, limitations, etc). The Initial IAP facilitates the transition from the Initial Response phase to an ongoing incident response.

The initial IAP is to undertake Immediate Actions as set out in Section 3.

The IAP will evolve continuously during the response. An overview of the process to develop and update the IAP is illustrated in Figure 4-1.

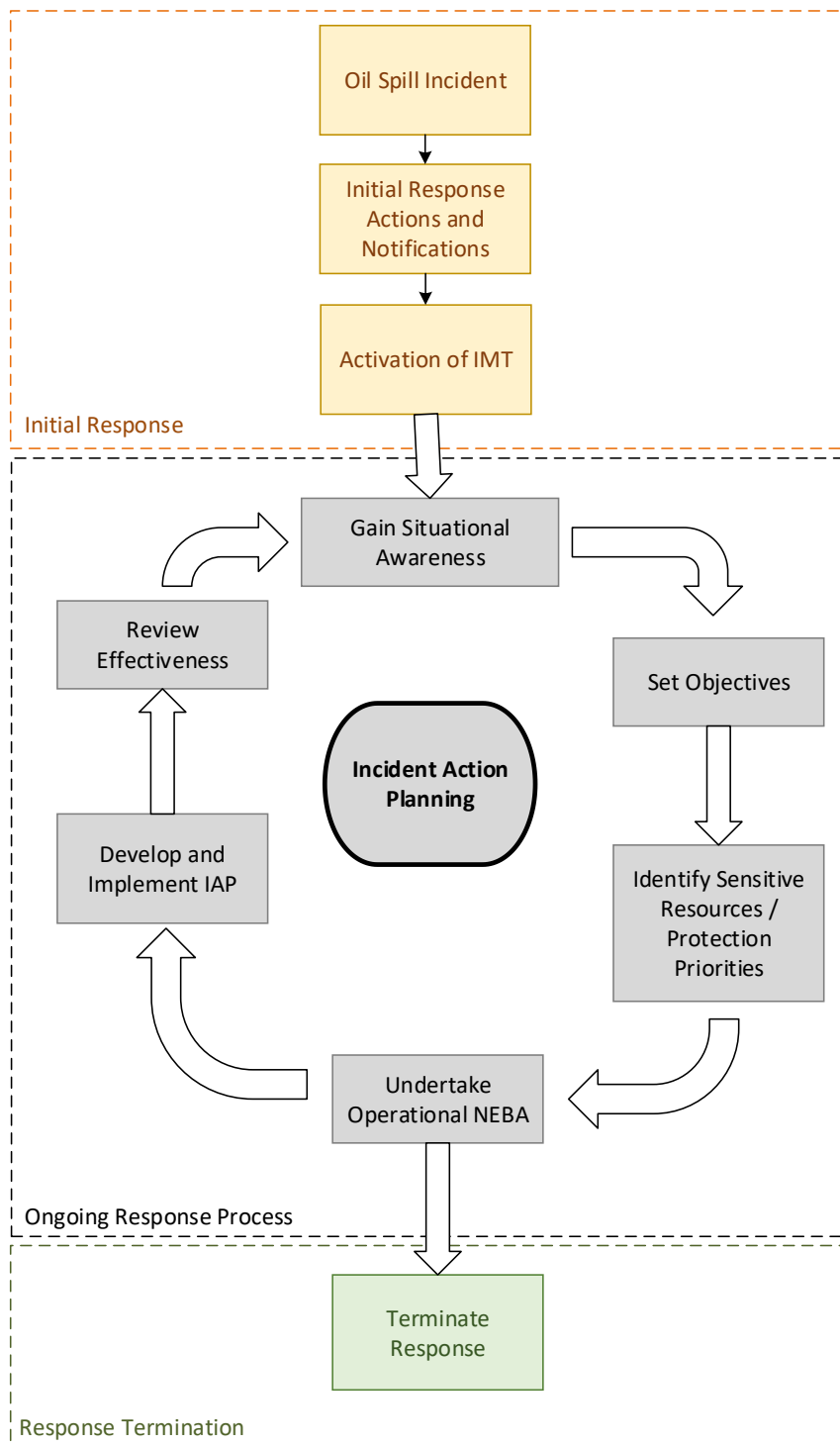


Figure 4-1: IAP process

4.1.1 Identify Sensitive Resources and Protection Priorities

The following strategic response priorities have been adopted for this OPEP and are consistent with the overall protection priorities detailed in the NatPlan and State MEE:

- Priority 1 – Human health and safety;
- Priority 2 – Protected habitats and cultural artefacts;
- Priority 3 – Threatened flora and fauna;
- Priority 4 – Commercial resources; and
- Priority 5 – Recreational and amenity areas.

These priorities provide context to decision-making when evaluating spill response options and selecting the overall response strategy and are continuously reviewed and assessed when reviewing feasibility and effectiveness of response options throughout a spill event.

Western Gas has further adopted the WA Department of Transport protection priority ranking process (DoT 2018) for socio-environmental receptors, to ensure a standardised and consistent approach in the event of cross-jurisdictional response management. Each sensitive receptor has been given a classification from Very Low to Very High in order to rank their priority for protection in an oil spill based on Table 4-1 (DoT 2018), taking into consideration the receptor’s vulnerability and/or sensitivity to a marine oil spill

Table 4-1: Department of Transport Protection Priority Ranking

Protection Priority	Ranking
Very High	5
High	4
Medium	3
Low	2
Very Low	1

The environment that may be affected (EMBA) by an unplanned oil spill event associated with the survey activities is detailed in Section 7.1 of the EP. In the event of an oil spill, information from MES tactics will be used to identify potential ecological and socio-economic receptors at risk as detailed in the EP, and their protection priority ranked based on Table 4-14 (DoT 2018). This will be used to inform the IAP process.

4.1.2 Operational Net Environmental Benefit Analysis (NEBA)

A Preliminary NEBA has been conducted for the survey activities and is outlined in Section 8.2 of the EP, and the spill response strategies selected detailed in Section 1.6 of this OPEP.

In the event of an oil spill, the IMT will undertake an Operational NEBA, intended to validate the assumptions made in the Preliminary NEBA, and identify any new parameters which have not been considered. The actual spill event parameters, such as the spill rate and volume, location and current metocean conditions and forecasted metocean and weather conditions, the seasonality of environmental sensitivities, will provide input into the Operational NEBA to assess the applicability and likely effectiveness of spill response tactics, along with the potential impacts and challenges of implementation given the parameters of the spill. An Operational NEBA will be undertaken / reviewed during the development of IAPs.

Any changes to the identified response options included in this OPEP will be assessed in accordance with the Management of Change process described in the EP.

4.1.3 Review Effectiveness

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

The 'Review Effectiveness' process is conducted until the termination criteria have been met (Section 4.1.4). An Operational NEBA will be used to inform the decision to terminate the response.

4.1.4 Terminate Response

The Control Agency is responsible for the decision to terminate response operations. In order to terminate response to a marine oil spill, the following requirements must be met:

- The source of the spill has been stopped;
- The objectives of the IAP have been met; and
- There are no further practicable steps that can be taken to respond to the spill.

An Operational NEBA will be conducted with the relevant IMT members, liaison officers and stakeholders to inform the decision to terminate a particular response strategy.

Key considerations include:

- The efficacy and benefit of the response options implemented against natural attenuation and weathering;
- The significance of the environmental receptor impacted; and
- Potential for environmental damage caused by further response efforts and other detrimental factors such as health and safety risks associated with the Vessel Activities.

Table 4-2 provides termination criteria for the spill response options included in this OPEP. These termination criteria are intended as guidance and are not considered an exhaustive list. Termination criteria may change due to the actual parameters in the event of a spill, response team / liaison officer advice, or stakeholder engagement during a spill.

Table 4-2: Spill Response Termination Criteria

Response Option	Termination Criteria
Source Control	<ul style="list-style-type: none"> • Vessel spill - source has been eliminated (e.g., fuel tank is secure) or the leak has been contained and controlled onboard.
Monitoring, Evaluation and Surveillance	<ul style="list-style-type: none"> • Source control has terminated (spill source eliminated/contained). • The spill is no longer visible to human observers (silver/grey sheen as defined by the Bonn Agreement (BAOAC 2007) is not observable and 24 hrs has elapsed since the last confirmed observation of surface hydrocarbons). • Modelling results do not predict surface exposures at visible levels.
Oiled wildlife response	<ul style="list-style-type: none"> • Response is discontinued when all affected/recovered animals are cleaned and rehabilitated as advised by relevant expert bodies. <i>To be determined in consultation with DCCEE, DBCA, WA DoT and AMSA.</i>
Waste management	<ul style="list-style-type: none"> • All waste generated from spill response activities has been appropriately disposed of.

4.2 WASTE MANAGEMENT PLAN

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

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

4.2.1 Waste Planning

Based on the hydrocarbon characteristics of diesel and condensate, and the predicted outcomes of the modelling of credible worst-case spill scenario, large volumes of waste are not expected to be generated. Waste generated from the spill is anticipated to be managed and contained within small transportable waste receptacles, suitable for the storage capacity on support vessels and port waste reception facilities. Oil spill response options may generate small amounts of waste, primarily from use of absorbents, contaminated personal protective equipment (PPE) and other consumables. The survey vessel has not yet been contracted; however, its waste management procedures will be described and adhered to as per the accepted Vessel Safety Case (VSC) or SOPEP as appropriate.

All solid and liquid wastes will be managed, containerised and transported onshore for recycling and disposal by licensed waste contractors. All hazardous waste materials will be stored in appropriate containers as per requirements of the material safety data sheet (MSDS) for each substance.

All waste stored or transferred will be fully documented, including details of exact volume and nature of the waste, date and time, receiver of the waste and destination of the waste, in accordance with vessel Garbage Management Plans and the onshore licenced waste contractor's waste tracking process.

4.2.2 Responsibilities

Spill response waste management will be the responsibility of the IMT Logistics Section Chief.

4.2.3 Handling, Storage and Disposal

4.5.3.1 Offshore Waste Collection

Given the nature of the Level 2/3 MDO fuel tank rupture (surface, quasi-instantaneous), and the response strategies to be implemented, recovery of oil will not occur. Waste generated from the response strategies will consist of typical vessel wastes that will be managed as per EP Section 6.8.

4.3 OPERATIONAL AND SCIENTIFIC MONITORING

The Operational and Scientific Monitoring Plan (OSMP) is primarily developed to achieve operational monitoring 'readiness' in the event of an unplanned Level 2 spill from the Vessel Activities. Western Gas will contract an OSMP service provider prior to undertaking the Vessel Activities. Due to the uncertainty of spill extent and tanks sizes associated with possible survey vessels, the OSMP will be validated, and an implementation plan developed pre-activity. As such this section is provided as a preliminary approach to be finalised with the OSMP contractor in advance of the Vessel Activities being commenced.

In the unlikely event of a Level 2 incident, AMSA will coordinate the operational monitoring studies (OMS) during the response, and Western Gas will initiate the scientific monitoring studies (SMS) according to the relevant monitoring strategy initiation criteria and sensitivities affected or with potential to be affected by an actual spill event.

Responsibilities for managing implementation of the SMPs and delivery of the information required within the context of a coordinated spill response required for a Level 2 spill incident will likely be within the Environmental Unit (EU) of the IMT.

The OSMP is triggered when initiation criteria for the various assessment components are met. Those MES tactics that are associated with protecting environmental receptors are addressed in the OSMP, with initiation and termination triggers provided in the OSMP.

4.3.1 Scope

The OSM implementation plan will provide a comprehensive description of the response phase and recovery phase monitoring programs that may be implemented in the event of a Level 2 hydrocarbon spill from the proposed Vessel Activities. The OSM implementation plan will be developed by the service provider prior to the Vessel Activity commencement. Monitoring methodologies are defined in individual sampling and analysis plans (SAPs) prepared for each response phase and recovery phase monitoring study, which underpin the OSMP in the event of a Level 2 MDO release.

The objectives of the OSMP are to:

- Identify high priority protection areas within the EMBA in real time;
- Specify response monitoring methodologies;
- Detail the process that Western Gas and the IMT will follow to determine the monitoring studies that will be implemented in order to:
 - Provide situational awareness and assist in planning and execution of spill response to minimise environmental harm; and
 - Provide for short-term and long-term environmental damage and recovery assessments.

In the event of a worst-case scenario where recovery phase monitoring is required for a Level 2 MDO release, Western Gas will utilise the scientific resources of a qualified marine science contractor to provide the required Principal Investigator (PI) and Monitoring Personnel (MP) outlined in the OSMP. Response phase monitoring would be implemented as part of the IMT.

4.3.2 OSMP Framework

In the event of a Level 2 hydrocarbon spill during drilling activities, OMSs will be implemented to inform spill response and quantify the extent of the spill impact. In addition, SMSs will be implemented to evaluate the potential environmental impacts to the marine environment. OMSs and SMSs are developed based on:

- The values and sensitivities of receptors within the EMBA and hydrocarbon exposure area;
- The potential impacts and risks of MDO spills;
- The assessment of spill response options and selection of an overall spill response strategy.

The OSMP includes:

- Monitoring strategies for OMSs and SMSs that have been deemed relevant for these Vessel Activities. The strategies provide details on the monitoring performance outcomes, monitoring standards, measurement criteria, initiation triggers, and termination criteria.
- Referenced Sampling and Analysis Plans (SAPs) to detail the technical aspects of each of the monitoring studies such as field methodology, data analysis and reporting (SAPs).

4.3.3 Monitoring Studies

The OMSs and SMSs that will be included within the finalised implementation plan and to be carried out in the event of a Level 2 spill during drilling activities are summarised in Table 4-3.

Table 4-3: List of OSMP Studies

Study ID	Study Name	Monitoring Outcome	Study Initiated
Operational Monitoring Studies			
OMS1	Operational Forecast Modelling	Carry out daily real-time predictions (forecasts) of the temporal / spatial distribution and concentrations of hydrocarbons on the surface and within the water column via numerical modelling.	
OMS2	Hydrocarbon Spill Surveillance and Tracking	Conduct surveillance and tracking of surface hydrocarbon spill distribution	
OMS3	Hydrocarbon Weathering Assessment	To determine the physical and chemical properties of hydrocarbon as it weathers to characterize temporal decrease in toxicity	
OMS4	Pre-emptive assessment of sensitive receptors at risk	To determine receptors that may be at risk of hydrocarbon exposure.	
OMS5	Air Quality (Responder Health and Safety) Assessment	Conduct air quality monitoring to provide a rapid assessment of the presence, type and concentration of hazardous volatile organic compounds (VOCs).	
Scientific Monitoring Studies			
SMS1	Water Quality Monitoring	Monitor hydrocarbons in marine waters at subtidal and offshore intertidal impact sites (which may include where relevant: priority/sensitive locations, Commonwealth marine protected areas, pelagic sites, commercial fishery areas) and reference sites to support the assessment of environmental impacts and recovery.	
SMS2	Seabird Population Monitoring	Monitor seabird populations to assess potential impacts to, and subsequent recovery following a hydrocarbon release.	
SMS3	Marine Megafauna Surveys	Undertake marine megafauna monitoring to assess potential impacts to, and subsequent recovery following a hydrocarbon release.	
SMS4	Hydrocarbon Monitoring of Representative Commercial and Recreational Fish Species	Monitor for hydrocarbons in representative commercial and recreational fish species (including shellfish) to assess the physiological impacts to fisheries; seafood quality/safety and the fisheries recovery following a hydrocarbon release.	
SMS5	Hindcast Modelling for Impact Assessment	Undertake hind-cast simulations of a hydrocarbon release, validated with information / data from other OSMP studies to refine post-incident impact assessment and to inform long-term scientific monitoring specifications to support assessments of the impacts and recovery of environmental sensitivities affected by the hydrocarbon spill.	
SMS6	Socio-Economic Surveys	The monitoring performance outcomes for this study is to carry out socio-economic monitoring studies to assess socio-economic, including cultural impacts and subsequent recovery pathways following a Level 2 hydrocarbon spill.	

5. OPEP RESOURCING

A response to a Level 2 spill will require specialist skills for an extended period of time. Resourcing requirements are based on the response timeframe and applicable response strategies. Modelling of the Level 2/3 vessel collision incident predicts that surface hydrocarbons will dissipate to 40% within 24 hours and 95% by in approximately 3 days. Depending on the area impacted, scientific monitoring studies SMS2: Water Quality Monitoring and SMS7: Hydrocarbon Monitoring of Representative Commercial and Recreational Fish Species, may continue beyond the period of visible surface hydrocarbons.

5.1 IMT RESOURCING

For Level 2/3 incidents Western Gas will respond as per this OPEP until AMSA assumes control. For a Level 1 spill, where requested by the Vessel Master, Western Gas will provide appropriate assistance via the Survey Lead Contractor. As per Table 5-1 the initial manning of the IMT will be by Western Gas and contracted personnel to provide full cover to these IMT positions.

Table 5-1: IMT manning strategy

Role	First Response	Provision of additional support
Incident Commander	Western Gas	WA DoT, contracted trained oil spill personnel, Waste Contractor, Forward Operations Contractor, Transport Contractor, Scientific Monitoring and Oil Spill Trajectory Modelling (OSTM) Contractor
Operations Section Chief	Western Gas, Contracted Resources	
Planning Section Chief	Western Gas, Contracted Resources	
Finance Section Chief	Western Gas	
Logistics Section Chief	Western Gas, Transport Contractor	

5.2 EXTERNAL RESOURCING

The IMT can activate several external support agencies if additional support is required. Section 9.5.4 of the EP outlines the Western Gas contracting strategy. Specific resources for each of the responses are identified in Section 3 for immediate actions and section 4 for ongoing arrangements.

5.2.1 External Resource Contacts

The contact details of key regulators, spill response organisations and contracted resources are detailed in the Western Gas Emergency Contact List (WG-EHS-LST-001).

6. DEMOBILISATION

6.1 DEMOBILISATION / STAND-DOWN PROCEDURES

6.1.1 Incident Control

Upon conclusion of the spill response operations, the following tasks will be undertaken by the IMT IC (and/or delegate):

- Advise all relevant contractors and Western Gas project management personnel;
- Advise all relevant government authorities;
- Prepare detailed reports on the response activities and outcomes and collate all documents for secure storage and/or submission to regulators;
- Undertake an inventory of consumables and prepare accounts;
- Arrange for the return and/or refurbishment of equipment;
- Conduct an investigation into the cause of the incident and report to relevant authorities;
- and
- Assess environmental monitoring requirements.

6.1.2 Marine and Aerial Support Activities

Upon receipt of response termination, the IMT will ensure that:

- All personnel are accounted for;
- Any equipment is recovered and cleaned;
- All vessels return to their respective berths;
- Equipment is safely offloaded and transported to a site for cleaning or repair;
- All equipment returned is logged; and
- All equipment is returned to the correct owner/ location.

7. RESPONSE ADMINISTRATION

7.1 OPEP CUSTODIAN

The OPEP custodian is the Western Gas Executive Director.

7.2 OPEP CUSTODIAN RESPONSIBILITIES

The OPEP custodian is responsible for:

- Approving the OPEP;
- Distributing and tracking copies of the OPEP as per the distribution list;
- Monitoring NatPlan or State Plan developments and ensuring these resources and plans meet potential spill scenarios;
- Verifying contractor emergency plans are compliant with this OPEP;
- Accepting, assessing and collating requests for revision;
- Making revisions to the OPEP;
- Maintaining an up-to-date digital version of the OPEP and a copy of the OPEP as currently issued (the “Master Copy”); and
- Issuing updates for revised sections.

7.3 OPEP REVIEW AND UPDATE

Given the short duration of the proposed Vessel Activities, this document shall be revised only in the event of regulator feedback, a project delay (which may result in the need for a legislative review) or a spill event.

Any revisions to this OPEP will be undertaken utilising Western Gas Management of Change Procedure, recognising the EP revision triggers in the OPGGS(E). Trigger thresholds for an EP revision include:

- Inclusion of a new activity;
- If there is a significant modification or new stage to an activity;
- If a significant new environmental impact or risk, or significant increase in existing environmental impact or risk is identified for the proposed Vessel Activities;
- If there is a series of new environmental impacts or risks or a series of increases in existing environmental impacts or risks, which when taken together, results in a significant new environmental impact or risk; or a significant increase in existing environmental impact or risk not provided for in the EP; or
- If there is a change in titleholder, which results in a change in the manner in which environmental impacts and risks are managed.

This OPEP custodian (or delegate) will review the OPEP in accordance with Western Gas HSE procedures and relevant statutory requirements.

7.1 ELECTRONIC ACCESS

This document is maintained on the Western Gas SharePoint system.

7.2 TRAINING AND EXERCISES

Oil spill response testing for the Vessel Activities are included in Section 9.10.2 of the EP.

In accordance with Regulation 14 (8A) & (8C) of the OPGGS(E)R, the response arrangements will be tested:

- When they are introduced;
- When they are significantly amended;
- Where a new Lead Contractor or vessel contractor are engaged
- Not later than 12 months after the most recent test; and
- If a new location for the Vessel Activities is added to the EP after the response arrangements have been tested, and before the next test is conducted – testing the response arrangement in relation to the new location as soon as practicable after it is added to the plan.

As required by the Environment Regulation 14(8A), the testing must relate to the nature and scale of the risk of oil pollution relevant to the Vessel Activities. Western Gas will conduct a series of exercises (notification, communication, tabletop) to test / validate the OPEP and contractor ERPs and SOPEPs for emergency response scenarios detailed in Section 9.10.2 of the EP. The full-scale oil-spill response

exercise will occur 3 months prior to Vessel Activities commencement to allow for lesson learnt to be incorporated into the OPEP and supporting documents.

Training and Testing arrangements appropriate to the nature and scale of Western Gas’s activities are included in Table 7-1.

Table 7-1: OPEP Testing Schedule

Test	Objective	Schedule	Mechanisms to assess effectiveness	Mechanisms to address recommendations arising from the test
OPEP Desk-Based Exercise	Scenario will include Level 2/3 oil spill. Adequacy of the IMT to facilitate a credible spill response. Adequacy of the OPEP and associated linkages. Notification and communication arrangements. Engagement of external parties identified to support the response. Media and/or external affairs management.	At least fourteen (14) days prior to the survey.	Assessment by external parties against requirements of the OPEP Feedback from external observers. Feedback from exercise participants. Written report incorporating feedback by exercise facilitator.	Tracking through Western Gas Corrective Action Register. Document updates as required. Additional training if required.
General Equipment Availability	Test that suppliers identified in the OPEP who provide critical equipment have the equipment available for immediate response.	At least ten (10) days prior to survey.	Email confirmation from suppliers of their current stock levels along with details of time to mobilise.	Tracking through Western Gas Corrective Action Register.
EP Audit	Ensure that the commitments relevant to spill response made in the EP and OPEP are being carried out as planned. Test understanding of those accountable for Performance Standards.	Onshore – at least one (1) week prior to vessel departure Offshore within one (1) day of vessel departure	Review of commitments made in EP & OPEP. Written report.	Tracking through Western Gas Corrective Action Register. Document updates as required. Additional training if required.

Classroom training and exercises will ensure that acquired competencies are maintained. Western Gas and related Contractor personnel staff will undergo and complete, at least 14 days prior to the survey.

Vessel and aerial observers will be trained in oil spill observation from an appropriate training provider.

The IMT will contain suitably trained Western Gas personnel supported by suitably qualified contractors in the event of an oil spill.

8. REFERENCES

AMOSPlan Australian Industry Cooperative Oil Spill Response Arrangements (2017). Accessed at <https://amosc.com.au/wp-content/uploads/2018/01/AMOSPlan-2017.pdf>

AMOSC CV19 Response Plan (May 2020) AMOSC Service Delivery under a COVID19 environment, Version 1.0, 17/8/2020

Australian Maritime Safety Authority (AMSA) 2020. National Plan for Maritime Environmental Emergencies. Accessed at: <https://www.amsa.gov.au/marine-environment/national-plan-maritimeenvironmental-emergencies/national-plan-maritime>

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Department of Transport 2018. DOT307215 Provision of Western Australian Marine Oil Pollution Risk Assessment – Protection Priorities. Protection Priority Assessment for Zone 1: Kimberley – Draft Report. Department of Transport, Perth, WA.

DoT 2020. Offshore Petroleum Industry Guidance Note: Marine Oil Pollution - Response and Consultation Arrangements.

BAOAC 2007 Bonn Agreement Oil Appearance Code. Bonn Agreement Aerial Operations Handbook.

Appendix A Forms

The following forms are available on Western Gas's Network Drive:

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