

Clair Ridge

Offshore Oil Pollution Emergency Plan

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Preface

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- Reflect exercise/audit findings and recommendations
- Include changes to operational activity and procedures
- Remove any activities which are, or have become obsolete
- Incorporate current contact details

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Department of Energy and Climate Change (DECC) Letter of Approval

As approved under SI 1998/No 1056 The Merchant Shipping (Oil Pollution Preparedness, Response and Co-operation Convention) Regulations 1998 and SI 2002/No 1861 The Offshore Installations (Emergency Pollution Control) Regulations 2002.

Department of Energy and Climate Change (DECC) Reference Number: 15004

**THE MERCHANT SHIPPING (OIL POLLUTION PREPAREDNESS,
RESPONSE AND CO-OPERATION CONVENTION) REGULATIONS 1998**

**THE OFFSHORE INSTALLATIONS (EMERGENCY POLLUTION CONTROL)
REGULATIONS 2002**

APPROVAL OF OIL POLLUTION EMERGENCY PLAN

Pursuant to the above-mentioned Regulations, the Secretary of State hereby approves the **BP Exploration Operating Company Ltd, Clair Ridge** oil pollution emergency plan which was received by the Department on **23 April 2015** and updated on **23 May 2015**.

For and on behalf of the Secretary of State



Authorised to act in that behalf

4 June 2015

Glossary of Terms

Name	Description
AFEN	Atlantic Frontier Environmental Network
BAOAC	Bonn Agreement Oil Appearance Code
BST	Business Support Team
CI	Communication and Interface
CRO	Control Room Operator
DCC	Data Control Centre
DCR	Dyce Control Room
DEFRA	Department for Environment, Fisheries and Rural Affairs
DECC	Department of Energy and Climate Change
DP	Drilling and Production
DSV	Diving Support Vessel
ERC	Emergency Response Centre
ERP	Emergency Response Plan
ERRV	Emergency Response and Rescue Vessel
ETA	Estimated Time of Arrival
EUL	Environment Unit Lead
GOO	Global Operations Organisation
GWO	Global Wells Organisation
HMCG	HM Coastguard
HSE	Health and Safety Executive
Hydrocarbon	<p>As defined in <u>OPRC Regulations</u>: petroleum in any form including crude oil, fuel oil, sludge oil, oil refuse and refined products.</p> <p>As defined in the <u>OPPC Regulations</u>: liquid oil or substitute liquid oil, including dissolved or dispersed oils or substitute oils that are not normally found in the liquid phase at standard temperature and pressure, whether obtained from plants or animals, or mineral deposits or by synthesis.</p> <p>As defined in <u>OCR Regulations</u>: Oil chemicals, and substitute oil chemicals, controlled under OCR.</p>
IMT	Incident Management Team
ITOPF	International Tanker Owners Pollution Federation
JNCC	Joint Nature Conservation Committee
MARPOL	International Convention for the Prevention of Pollution from Ships, 1973 as modified by the Protocol of 1978
MCA	Maritime and Coastguard Agency
MDBRT	Measured Depth Below Rotary Table
MMO	Marine Management Organisation

Name	Description
MODU	Mobile Offshore Drilling Unit
MS	Marine Scotland
NCMPA	Nature Conservation Marine Protected Area
NORBRIT	The Norway and UK Joint Contingency Plan – joint counter pollution operations 50 miles either side of the median line
NPI	Non Production Installation
OBM	Oil Based Mud
OCR	<u>SI 2002/No 1355 The Offshore Chemicals Regulations 2002</u>
OH	Office Hours
OOH	Out of Office Hours
OIM	Offshore Installation Manager (includes Platform Manager)
OPEP	Oil Pollution Emergency Plan
OPPC	<u>SI 2005/No 2055 The Offshore Petroleum Activities (Oil Pollution Prevention and Control) Regulations 2005</u>
OSPRAG	Oil Spill Prevention and Response Advisory Group
OPRC	<u>SI 1998/No 1056 The Merchant Shipping (Oil Pollution Preparedness, Response and Co-operation Convention) Regulations 1998</u>
OSC	On-scene Commander
OSCAR	SINTEF Oil Spill Contingency and Response
OSIS	BMT Argoss Oil Spill Information System
OSRL	Oil Spill Response Limited
POB	Personnel Onboard
PON	Petroleum Operations Notice
PSV	Platform Supply Vessel
QU	Quarters and Utilities
ROff	Response Offshore (Offshore OPEP)
ROn	Response Onshore (Onshore OPEP)
RSPB	Royal Society for the Protection of Birds
SAC	Special Area of Conservation
SAR	Search and Rescue
SCG	Strategic Co-ordinating Group
SEPA	Scottish Environment Protection Agency
SG	Specific Gravity
SIC	Shetland Islands Council
SNH	Scottish Natural Heritage

Name	Description
SOPEP	Shipboard Oil Pollution Emergency Plan (all oil tankers >150 gross register tonnage and vessels >400 gross register tonnage must carry a SOPEP onboard)
SPA	Special Protected Area
SSIV	Subsea Isolation Valve
SVHA	Sullom Voe Harbour Authority
SVT	Sullom Voe Terminal
t	Metric Tonne
TCG	Tactical Co-ordination Group
TVDBRT	True Vertical Depth Below Rotary Table
UKCS	United Kingdom Continental Shelf
VOO	Vessels of Opportunity
VP	Vice President
WIG	Well Incident Group
WIV	Well Intervention Vessel
WoS	West of Shetland
WOSPS	West of Shetland Pipeline System

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Section
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Operational Section

ROff 1 Offshore Response Action Plan

Refer to the **Response Action Plan Overview** (below) for key response activities in conjunction with the **OIM Response Checklist** (below) for detailed guidance on actions to be undertaken. Further supporting information can be found on the pages listed.

Response Action Plan Overview			
Step 1 – Initial Actions			
Time	OIM		
0 to 20 min	From initial release report: <div><input type="checkbox"/> Establish safety issues</div> <div><input type="checkbox"/> Take initial safety actions</div> <div><input type="checkbox"/> Take action to stop/isolate release</div> <div><input type="checkbox"/> Establish release parameters</div> <div><input type="checkbox"/> Establish onshore support requirements</div>		
	Step 2 – Mobilise Resources and Report Release		
	Time	OIM	
	20 to 40 min	<div><input type="checkbox"/> Mobilise required teams</div> <div><input type="checkbox"/> If necessary, minimise risk to personnel/ platform safety by using Emergency Response and Rescue Vessel (ERRV) dispersant</div> <div><input type="checkbox"/> Undertake mandatory external and internal notifications</div>	
		Step 3 – Assess, Quantify, Confirm Primacy and PON1 Reporting	
		Time	OIM
40 to 60 min	<div><input type="checkbox"/> Complete and submit Petroleum Operating Notice (PON1) within 6 hours of initial sighting</div> <div><input type="checkbox"/> Assess actual/potential quantity</div> <div><input type="checkbox"/> Determine escalation potential</div> <div><input type="checkbox"/> Confirm primacy, roles and responsibilities</div>		

OIM Response Checklist			
Step 1 – Initial Actions			
Timescale: 0 to 20 minutes (or as soon as reasonably practicable)		Actioned	Page
1	Receive notification of release: location, time, source, cause, hydrocarbon type, quantity, appearance of hydrocarbon, escalation potential and weather. Record details on to the initial data collection sheet, refer to ROff 1.1 Initial Data Collection Sheet . Refer to ROff 1.5 Platform Information for supporting information.	<input type="checkbox"/>	1-5 1-10
2	Ensure Safety of personnel, as per the Clair Ridge Hook-up and Commissioning Emergency Response Plan (CLB-BP-1H-HS-PLN-0001) .	<input type="checkbox"/>	ERP
3	Assume role of On-scene Commander (OSC).	<input type="checkbox"/>	N/A
4	Muster as necessary and suspend all work permits.	<input type="checkbox"/>	ERP
5	If safe to do so, take action to stop release.	<input type="checkbox"/>	ERP
6	Notify Her Majesty’s Coastguard (HMCG). Refer to ROff 1.2.1 Initial Notifications .	<input type="checkbox"/>	1-7
7	Notify the BP Incident Management Team (IMT) Manager (via the Dyce Control Room (DCR)), refer to ROff 1.2.1 Initial Notifications . Brief them of the situation and confirm the appropriate support required. Use ROff 1.4 Tier Selection Guide to determine the tier size. If known, specify if release is from a third-party source.	<input type="checkbox"/>	1-7 1-9
Step 2 – Mobilise Resources and Report Release			
Timescale: 20 to 40 minutes (or as soon as reasonably practicable)		Actioned	Page
8	Mobilise offshore team members to support response.	<input type="checkbox"/>	ERP
9	Confirm ERRV/Platform Supply Vessel (PSV) is aware of the incident and provide release report.	<input type="checkbox"/>	ERP
10	If personnel/platform safety is at risk, instruct ERRV/PSV to spray dispersant (no endorsement from authorities needed under force majeure). Notify the Dyce IMT As Soon As Possible (ASAP) (refer to ROff 1.2.1 Initial Notifications) if dispersant has been sprayed and log the details of the dispersant use within ROff 1.16.2.2 Record of Dispersant Use .	<input type="checkbox"/>	1-7 1-34
11	Report release as per ROff 1.2 Notifications .	<input type="checkbox"/>	1-7
Step 3 – Assess, Quantify, Confirm Primacy and PON1 Reporting			
Timescale: 40 to 60 minutes (or as soon as reasonably practicable)		Actioned	Page
12	When possible (within 6 hours) complete and submit PON1. Refer to ROff 1.3 PON1 Offshore Reporting .	<input type="checkbox"/>	1-8
13	If release source is known, quantify using ROff 1.7 Hydrocarbon Inventories and Well Data .	<input type="checkbox"/>	1-15
14	If release source/hydrocarbon quantity is unknown, request ERRV to estimate release size from appearance. Refer to ROff 1.8 Release Size Estimation Guide , ROff 1.9 Conversion Table and ROff 1.10 Bonn Agreement Oil Appearance Code .	<input type="checkbox"/>	1-20 1-21 1-22
15	If unable to quantify, request surveillance flight through the Dyce IMT or utilise an infield crew change helicopter if available.	<input type="checkbox"/>	N/A
16	Confirm primacy and roles and responsibilities between BP and any third party with Dyce IMT. Request Dyce IMT to manage handover if required.	<input type="checkbox"/>	2-5

CRO/Radio Room and ERRV Checklist	
Step 1 – Initial Actions	
CRO/Radio Room	ERRV
<div><input type="checkbox"/> Raise alarm and inform Offshore Installation Manager (OIM) and Emergency Response and Rescue Vessel (ERRV)</div>	<div><input type="checkbox"/> Raise the alarm by informing the Control Room Operator (CRO)/Radio Room</div>
Step 2 – Mobilise Resources and Report Release	
CRO/Radio Room	ERRV
<div><input type="checkbox"/> If applicable, isolate release source</div> <div>Alert other assets. Refer to ROff 1.2.3 Additional Notifications for details of local fixed assets</div> <div><input type="checkbox"/></div>	<div><input type="checkbox"/> If requested by the OIM, spray dispersant</div>
Step 3 – Assess, Quantify, Confirm Primacy and PON1 Reporting	
CRO/Radio Room	ERRV
	<div><input type="checkbox"/> Locate release and quantify size using ROff 1.8 Release Size Estimation Guide</div>

Refer to the **Response Action Plan Overview** (below) for key response activities in conjunction with The **OIM Response Checklist** (below) for detailed guidance on actions to be undertaken. Further supporting information can be found on the pages listed.

Response Action Plan Overview	
Step 4 – Tracking and Sampling	
Time	OIM
60 to 70 min	<div><input type="checkbox"/> Track release</div> <div><input type="checkbox"/> Obtain evidence</div>
Step 5 – Determine Response	
Time	OIM
70 to 100 min	<div><input type="checkbox"/> Determine actual/potential tier response level</div>
	<div><input type="checkbox"/> Confirm response co-ordination for tier level</div>
	<div><input type="checkbox"/> Consider response strategy</div>
	<div><input type="checkbox"/> Identify resources required</div>
Step 6 – Ongoing Response	
Time	OIM
100+ min	<div><input type="checkbox"/> Continue to monitor and review response, weather and impact to environment</div>
	<div><input type="checkbox"/> Keep Dyce IMT updated</div>
	<div><input type="checkbox"/> Instigate investigation</div>

OIM Response Checklist			
Step 4 – Tracking and Sampling			
Timescale: 60 to 70 minutes (or as soon as reasonably practicable)		Actioned	Page
17	Task the ERRV/PSV to track the movement and parameters of the slick. ROff 1.11 Manual Release Tracking . If ERRV unable to track release, request tracking to be done through the Dyce IMT. If crew change helicopter is nearby, consider using to provide an indication of general slick size, direction of travel and colour.	<input type="checkbox"/>	1-24
18	If safe to do so direct ERRV to obtain three hydrocarbon samples using ROff 1.12 Release Sampling Guide . Photographs should also be taken of the released hydrocarbon.	<input type="checkbox"/>	1-25
Step 5 – Determine Response			
Timescale: 70 to 100 minutes (or as soon as reasonably practicable)		Actioned	Page
19	Identify any obvious environmental or commercial receptors eg birds on or near slick. Cross-reference with environmental data in this plan, refer to Section 2 Paragraph 5 Receiving Environment . Inform the Dyce IMT.	<input type="checkbox"/>	2-11
20	If the Dyce IMT has mobilised reconfirm tier level. ROff 1.4 Tier Selection Guide .	<input type="checkbox"/>	1-9
21	If the Dyce IMT has mobilised, ongoing notifications will be undertaken by the IMT. ROff 1.2 Notifications .	<input type="checkbox"/>	1-7
22	Identify appropriate response strategy (in conjunction with the Dyce IMT if mobilised), ROff 1.13 Response Strategy Options , confirm resources available ROff 1.14 Tiered Response Resources and ROff 1.15 Emergency Response Coverage for BP Assets . Refer to ROff 1.16 Response Strategy Guidance for guidance on the chosen response strategy. If release identified as Tier 2 or 3 then primacy regarding co-ordination and strategy becomes the responsibility of the Dyce IMT.	<input type="checkbox"/>	1-26 1-29 1-30 1-31
23	Monitor and record any changes to the appearance and/or quantity on the released hydrocarbon. Refer to ROff 1.8 Release Size Estimation Guide , ROff 1.9 Conversion Table and ROff 1.10 Bonn Agreement Oil Appearance Code . Report to the Dyce IMT.	<input type="checkbox"/>	1-20 1-22 1-23
Step 6 – Ongoing Response			
Timescale: 100+ minutes (or as soon as reasonably practicable)		Actioned	Page
24	If deemed a suitable response or requested by Dyce IMT, utilise dispersant stockpile onboard ERRV. Before spraying request a test of the amenability of the released hydrocarbon to dispersants ROff 1.16.2.1 Testing Dispersant Efficacy Procedure .	<input type="checkbox"/>	1-33
25	Continue tracking release using infield additional resources ROff 1.11 Manual Release Tracking .	<input type="checkbox"/>	1-24
26	If applicable, support Tier 2/3 resources arriving onsite. Maintain proximity primacy protocols.	<input type="checkbox"/>	N/A
27	If aerial surveillance aircraft is mobilised, liaise with aircraft when in area and acquire interim report, update the Dyce IMT.	<input type="checkbox"/>	N/A
28	Review the ongoing response measures with the Dyce IMT to consider the ongoing effectiveness of response operations and the level of threat posed to the environment. Where applicable obtain supporting information to justify any statements for onward discussion with DECC by the Dyce IMT.	<input type="checkbox"/>	N/A
29	If safe to do so, commence investigation.	<input type="checkbox"/>	N/A

CRO/Radio Room and ERRV checklist	
Step 4 – Tracking and Sampling	
CRO/Radio Room	ERRV
	<div><input type="checkbox"/> Track release. ROff 1.11 Manual Release Tracking</div> <div><input type="checkbox"/> Take photographs and three hydrocarbon samples</div>
Step 5 – Determine Response	
CRO/Radio Room	ERRV
<div><input type="checkbox"/> Keep assets updated (refer to ROff 1.2.3 Additional Notifications for details of local fixed assets)</div>	<div><input type="checkbox"/> Conduct response as per OIM instructions</div> <div><input type="checkbox"/> Monitor hydrocarbon appearance and re-assess quantity</div>
Step 6 – Ongoing Response	
CRO/Radio Room	ERRV
	<div><input type="checkbox"/> Feedback release parameters and fate to OIM</div>

ROff 1.1 Initial Data Collection Sheet

This form is to be completed by the OIM on receipt of initial notification of a release and can be used as a reference for notifications and when completing the PON1.

Always retain a copy for potential investigative purposes.

































Operator and Installation Information			
Date/Time of Call			Company
Name of Caller			Position
Contact Number			Alternative Contact Number
Installation Name			Licensed Operator
Field Name			Block Number
Location of Release	Latitude		Longitude
Date and Time of Incident			
What has been released to sea?	Crude	<input type="checkbox"/>	Condensate
	Diesel	<input type="checkbox"/>	Chemical
		<input type="checkbox"/>	Other
Quantity Release	tonnes		m ³
Is the release ongoing?			
Distance and Direction from Nearest Land (eg 120km east of Aberdeen)	km		
Distance and Direction from Nearest Median Line (eg 10km west Norwegian median)	km		
Water Depth	m		
Incident Information			
Confirm date and time of incident		POB	
Incident details:			
<ul style="list-style-type: none"> What has happened? What is the current situation? What initial actions have been taken? 			
Are there any casualties? Be aware of sensitive information.		Are any SAR activities ongoing?	
Is the caller at the scene of the incident? If not, where is the information sourced?			
Is there damage to the Installation? If yes, provide details.			
Have/will Personnel Onboard (POB) be downmanned? If so, by how many?			
Has the asset been fully or partially shut down and/or is there an impact on other installations?			
What has been released to sea (crude, condensate, diesel etc)?			




Confirm quantity currently released. How has this been determined?	tonnes	m ³
Confirm if release is ongoing. If yes, what is the release rate?		
What is the worst-case release potential? (Maximum inventory and flowrate.)		
Pollution appearance (rainbow, sheen etc).		
What are the dimensions of the visible release? (Length, width and coverage.)		
Is shoreline impact likely? If yes, where and when?		
Is pollution likely to reach median line? If yes, where and when?		
Nearest Installations		
Have the nearest Installations been notified?		
Wind Speed	Wind Direction	
Sea State	Wave Height	
Response Information		
Has the operator Onshore Emergency Response Team been mobilised? If so, where and when?		
Has aerial surveillance been mobilised or will be mobilised? If yes, give Estimated Time of Arrival (ETA) to scene. If no, how is pollution being monitored?		
What other response resources have been/will be mobilised to assist (Remotely Operated Vehicle (ROV), Diving Safety Vessel (DSV) etc)? Provide ETA where possible.		
Is hydrocarbon release modelling being undertaken? If yes, who is conducting modelling and when will results be available?		
Is an impact assessment being undertaken? If yes, when will it be available?		
Has PON1 been submitted?		
Have samples been taken? Have reference samples been taken? Where are samples being sent for analysis?		
What other agencies have been informed?	MCA <input type="checkbox"/>	MS <input type="checkbox"/> JNCC <input type="checkbox"/>
	Health and Safety Executive <input type="checkbox"/>	
	Other <input type="checkbox"/>	
Other Information		
What is the agreed time to receive next update and/or additional information?		

ROff 1.2 Notifications

ROff 1.2.1 Initial Notifications

The following notifications are to be undertaken from offshore, or when appropriate by the BP Onshore Incident Management Team (IMT).

Contact	Release Criteria in Tonnes			 Tel No	 Fax No
	<1	1 to 25	>25		
Statutory Notification Requirement					
HMCG HMCG will inform the Maritime and Coastguard Agency (MCA).	 	 	 	01595 692976 (Shetland)	01224 575920 (Aberdeen)
DECC		 	 	01224 254058 (Incident Desk OH) 0207 215 3234/3505 (Duty Officer OOH)	01224 254100
Joint Nature Conservation Committee (JNCC)			 	01224 266553 (OH) 0797 425 7464 (OOH)	01224 896170
Marine Scotland				N/A	01224 295524
BP Notification Requirement					
BP DCR Report all releases to the DCR and email PON1 to *****REDACTED*****	 	 	 	*****REDACTED*** **	*****REDACTED D*****
BP Sullom Voe Terminal (SVT) Emergency Response Centre (ERC)	  When over 50 litres	 	 	01806 243366	N/A

Key			
	Submit ePON1 ¹ www.og.decc.gov.uk/portal.htm		Telephone Immediately
	If the UK Oil Portal is unavailable, revert to submission of PON1 via fax.		
OH	Office Hours	OOH	Out of Office Hours

ROff 1.2.2 If Release is within or May Enter 40km of UK Shoreline

If the release is greater than 1 tonne and within 40km of the nearest UK shoreline further notifications are required to be undertaken. The BP Dyce IMT will make these notifications. Refer to **Onshore Oil Pollution Emergency Plan (UK-PLN-4.6-1002)** for details.

ROff 1.2.3 Additional Notifications

Additional notifications to third-party operators and neighbouring installations that may be required depending on the release source and the direction of travel.

Operator	Asset	Distance	Contact Number
BP	Clair	5.5km	*****REDACTED*****
BP	Foinaven	98km	*****REDACTED*****

ROff 1.3 PON1 – Offshore Reporting

Log into UK Oil Portal to access electronic PON1s at the following link:
https://itportal.decc.gov.uk/eng/fox/live/PORTAL_LOGIN/login

If the UK Oil Portal is unavailable, revert to submission of PON1 via fax. See **ROff 1.17 Example PON1 Fax Form**. Refer to **ROff 1.2 Notifications** for relevant fax numbers.

1 ePON1 is automatically received by DECC, JNCC, HMCG and Marine Scotland when submitted.

ROff 1.4 Tier Selection Guide

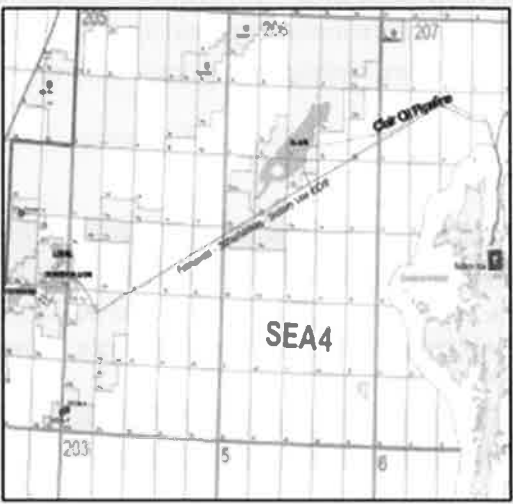
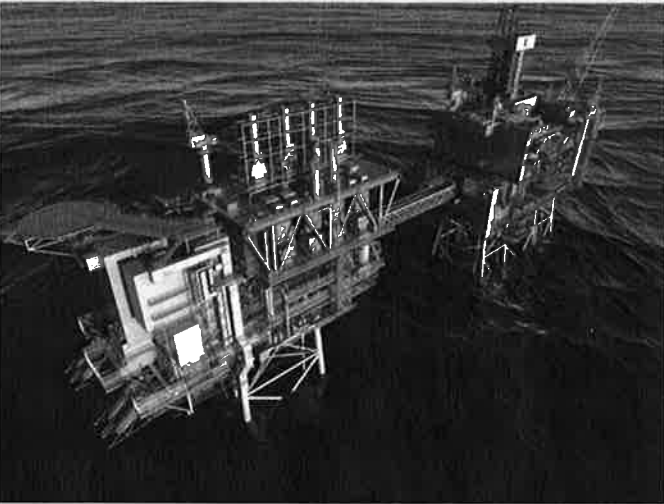
This guide assists the decision-making process by aiding to determine the appropriate Tier response level for a hydrocarbon release to sea. The method of response will depend upon several factors including (but not limited to): the type incident in question, volume of hydrocarbon, hydrocarbon type, time of year, weather, sea state and resource availability.

Refer to **ROff 1.14 Tiered Response Resources** for additional information of available resources.

Tier Selection Guide		
Tick the boxes next to all the criteria that apply. Add up the total number of ticks per Tier. Report the Tier size as the one with the most ticks. If there are an equal number of ticks in two Tiers, select the higher of the Tiers.		
Tier 1		
Actual Slick Size	Small (silver/rainbow sheen within 500m zone)	<input type="checkbox"/>
Potential Release Volume	Small (volume <0.5T)	<input type="checkbox"/>
Environmental Impact. Consult Dyce IMT (if mobilised)	Negligible	<input type="checkbox"/>
Ongoing?	No	<input type="checkbox"/>
Part of Wider Emergency?	No	<input type="checkbox"/>
Shoreline Impact Likely?	No	<input type="checkbox"/>
Hydrocarbon Very Persistent?	No	<input type="checkbox"/>
Tier 2		
Actual Slick Size	Medium (silver/rainbow sheen outwith 500m zone)	<input type="checkbox"/>
Potential Release Volume	Medium (volume 0.5 to 25T)	<input type="checkbox"/>
Environmental Impact. Consult Dyce IMT (if mobilised)	Minor/moderate	<input type="checkbox"/>
Ongoing?	No	<input type="checkbox"/>
Part of Wider Emergency?	No	<input type="checkbox"/>
Shoreline Impact Likely?	No	<input type="checkbox"/>
Hydrocarbon Very Persistent?	Yes	<input type="checkbox"/>
Tier 3		
Actual Slick Size	Large/ongoing (metallic sheen or black hydrocarbon outwith 500m zone and/or ongoing)	<input type="checkbox"/>
Potential Release Volume	Large/ongoing (volume >25T)	<input type="checkbox"/>
Environmental Impact. Consult Dyce IMT (if mobilised)	Major	<input type="checkbox"/>
Ongoing?	Yes	<input type="checkbox"/>
Part of Wider Emergency?	Yes	<input type="checkbox"/>
Shoreline Impact Likely?	Yes	<input type="checkbox"/>
Hydrocarbon Very Persistent?	Yes	<input type="checkbox"/>

ROff 1.5 Platform Information

Clair Ridge Platform



(Artist's impression)

Facility Type	Drilling and production	
Block Number	206/8	
Quarters and Utilities (QU)		
Design Position	Latitude	N 60° 44' 09.12"
	Longitude	W 002° 29' 48.64"
As-built Position	Latitude	N 60° 44' 09.11"
	Longitude	W 002° 29' 48.77"
Drilling and Production (DP)		
Design Position	Latitude	N 60° 44' 11.07"
	Longitude	W 002° 29' 39.20"
As-built Position	Latitude	N 60° 44' 11.09"
	Longitude	W 002° 29' 39.16"
Duty Holder	BP Exploration Operating Company Limited	
Installation Operator	BP Exploration Operating Company Limited	
Well Operator	BP Exploration Operating Company Limited	
Licence Holder	BP Exploration Operating Company Limited	
Tier 1 Response Primacy	Clair Ridge OIM	
The Clair Ridge platform within the Clair Field will not be hydrocarbon live until 2017. This OPEP covers this period of time in advance of platform start-up. The wells are currently suspended.		
Tier 2 or 3 Response Primacy	BP IMT	

Nearest Points of Land	Shetland Islands	55km, 114°	
	Papa Stour	59.5km, 117°	
Nearest Installations	Field	Bearing	Distance (km)
	Clair	208°	5.5
	Foinaven	245°	98
Nearest Transboundary Line	Faroes, 94km, WNW		
Nearest UK Protected Area	Faroe-Shetland Sponge Belt (Marine Protected Area), 18.4km, NNW		
Water Depth	142.6m		
Hydrocarbon Types	Crude oil, diesel. Refer to ROff 1.5.1 Hydrocarbon Properties		
Worst-case well flow rate	8235.7m ³ /day		
Maximum hydrocarbon inventory	Platform leg diesel storage – 720m ³		
Territorial Waters	Scottish		
Associated Fields	Clair		
Clair Ridge Platform Contact Number	BP OIM via Flotel Victory CCR: *****REDACTED***** BP OIM on QU: Not currently available		
Pollution Response Contractors	Oil Spill Response Ltd Briggs Environmental Services		

ROff 1.5.1 Hydrocarbon Properties

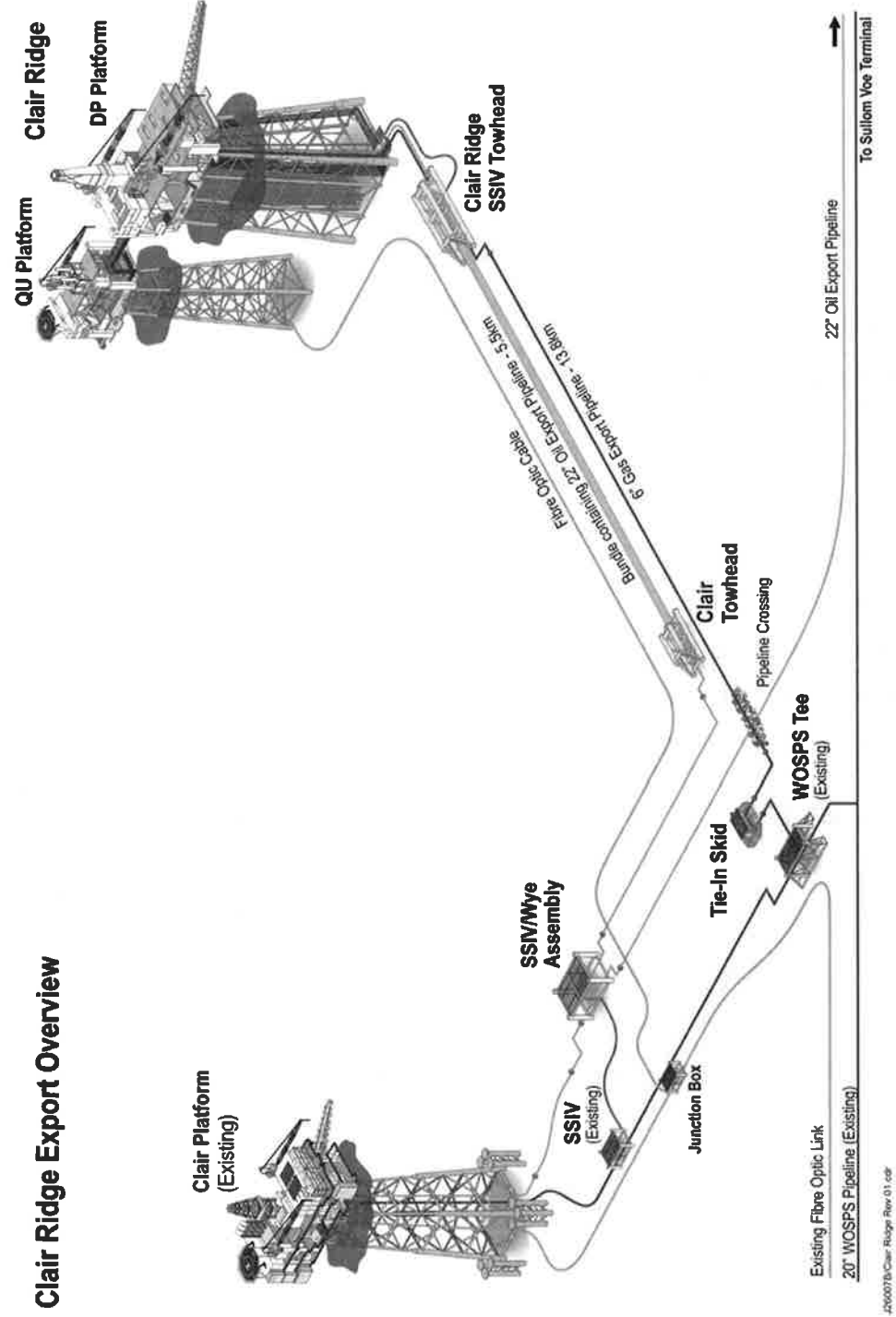
Specific Gravity at 15°C			
Light <0.8	0.8 to 0.85	Medium 0.85 to 0.95	Heavy >0.95
	Diesel (0.82)	Clair Ridge (0.9095)	
ITOPF Group I	ITOPF Group II	ITOPF Group III	ITOPF Group IV
Viscosity (cSt) at 30°C			
Thin 1.0	54.72	Medium 5000	Thick 10,000
	Clair Ridge		
Pour Point at pre heat 15°C			
Light -30°C	-24°C	Medium 0°C	Heavy +30°C
	Clair Ridge		
Asphaltene Content - Percentage Weight			
0.06 unlikely to emulsify	0.5 may form an emulsion	0.6 Stable emulsion	1.5
			Clair Ridge

Refer to **Section 2 Paragraph 4.3 Hydrocarbon Characteristics and Fate of Hydrocarbon** for further details on the hydrocarbons detailed.

ROff 1.6 Field Diagram

Refer to **ROff 1.7 Hydrocarbon Inventories and Well Data** for specific hydrocarbon inventories.

Clair Ridge Export Overview



ROff 1.7 Hydrocarbon Inventories and Well Data

ROff 1.7.1 Topside Inventories

Source	Hydrocarbon Type	Volume (m ³)
Topside Flowlines		
N/A ¹		
Separation Trains		
N/A ¹		
Topside Processing		
N/A ¹		
Export Systems		
N/A ¹		
Storage Tanks		
Drilling make secure generator, diesel fuel day tank (DP)	Diesel	6.5
Platform leg storage (QU)	Diesel	720
Miscellaneous Day Tanks (QU)	Diesel	7.5
Crane Pedestal Tank (QU)	Diesel	60
Clean Diesel Tank (QU)	Diesel	60
Emergency Generator Day Tank (QU)	Diesel	15
Fire Pump 1 Day Tank (QU)	Diesel	10.1
Fire Pump 2, 3 Day Tank (DP)	Diesel	20.2
QU Lube Oil Tank	Lube Oil	Largest single tank: 12 Total: 70
DP Lube Oil Tank	Lube Oil	Largest single tank: 5 Total: 50
Other		
Helideck	Aviation fuel	5.5

¹ The OPEP will be updated and re-submitted in advance of the asset becoming hydrocarbon live.

ROff 1.7.2 Flowline Inventories

Clair Ridge flowlines will not be hydrocarbon live until 2017.

ROff 1.7.3 Riser Inventories

Clair Ridge risers will not be hydrocarbon live until 2017.

ROff 1.7.4 Well Data

- Notes:** 1. Under normal operating conditions.
2. Worst-case well blowout data checked 2015.

Well Name	S2U3P4	S2U3P3
Field Name	Clair Ridge	Clair Ridge
Platform/Subsea	Platform	Platform
Well Type	Development Oil Producer	Development Oil Producer
Well Status	Suspended	Suspended
Latitude	N 60° 44' 12.835"	N 60° 44' 12.746"
Longitude	W 02° 29' 32.798"	W 02° 29' 32.723"
Shut-in Time (refer to Note 1)	N/A	N/A
Unconstrained Flowrate (m ³ /day) – Oil (refer to Note 2)	8235.7	8235.7

ROff 1.7.5 Pipeline Inventories

Clair Ridge will not be hydrocarbon live until 2017.

ROff 1.8 Release Size Estimation Guide

Use release size estimation guide below with the laminated **ROff 1.10 Bonn Agreement Oil Appearance Code**. A working example can be found in **ROff 1.8.1 Release Size Estimation – Example**.

Release Size Estimation Guide					
If the source/quantity is unknown then a visual estimation can be attained based on the relationship between observed hydrocarbon colour and its thickness using ROff 1.10 Bonn Agreement Oil Appearance Code . Observations can be taken from an installation, ERRV, crew change helicopter or dedicated aerial surveillance aircraft.					
Step 1: Total area: estimate total size of the area as a square or rectangle (in km ²).					
Total Area =	Average Width (km)		X	Average Length (km)	= km ²
Step 2: Hydrocarbon release area: Assess the area affected by the slick in km ² calculated as a % of the total area (eg 90% of 20km ² = 18km ²).					
Hydrocarbon Release Area (Estimated)		km ²			
Step 3: Calculate area by colour: Estimate the area covered by each colour of hydrocarbon as a % of area affected in km ² (eg 60% Silvery, 40% Metallic = 10.8km ² and 7.2km ² respectively)					
Colour	Code	Minimum (m ³ /km ²)	Maximum (m ³ /km ²)	Step 3	
				% of Area Affected	Area Covered (km ²)
Oil Sheen Silvery	1	0.04	0.3		
Oil Sheen Rainbow	2	0.3	5.0		
Oil Sheen Metallic	3	5.0	50		
Discontinuous True	4	50	200		
Continuous True	5	200	>200		
Calculation for Area Covered: This should be calculated for each code to give Area Covered by Colour km ² = Area/100 x % of Area Covered.					
Step 4: Calculate quantity by colour: Multiply the area covered by each colour (Min and Max) by the appropriate quantity of hydrocarbon in the table (eg 10.8km ² x 0.04 and 0.3 for Silvery and 7.2km ² x 5 and 50 for Metallic).					
Colour	Step 3 (as above)		Step 4		
	Area Covered km ²	Minimum Volume (m ³)	Maximum Volume (m ³)		
Oil Sheen Silvery					
Oil Sheen Rainbow					
Oil Sheen Metallic					
Discontinuous True					
Continuous True					
Step 5: Total quantity: Add all the quantity by colour figures to get total quantity of hydrocarbon/m ³ .					
Total Volume (m ³)		Minimum Volume (m ³)	Maximum Volume (m ³)		
Step 6: Conversion: If necessary you can covert m ³ to tonnes by multiplying total quantity in m ³ by the Specific Gravity (SG) of the released hydrocarbon. Refer to ROff 1.5.1 Hydrocarbon Properties for SG of hydrocarbons.					
Total Volume in Tonnes (m ³ x SG)		Minimum Volume (m ³)	Maximum Volume (m ³)		

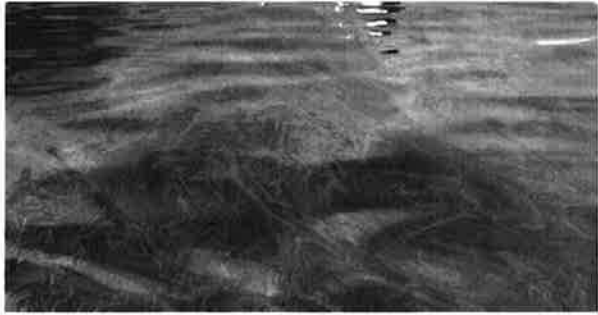




ROff 1.8.1 Release Size Estimation – Example

Average Width		5	km		
Average Length		4	km		
Total Area (Width x Length)		20	Km ²		
Oil Release Area (Estimate)		18	km ²		
Colour	Code	Minimum (m ³ /km ²)	Maximum (m ³ /km ²)	% of Area Covered	Area Covered (km ²)
Oil Sheen Silvery	1	0.04	0.3	60	10.8
Oil Sheen Metallic	3	5.0	50	40	7.2
Colour		Area Covered (km ²)	Minimum Volume (m ³)	Maximum Volume (m ³)	
Oil Sheen Silvery		10.8	0.432	3.24	
Oil Sheen Metallic		7.2	36	360	
Total Volume (m ³)			36.4	365	

ROff 1.9 Conversion Table

Conversion From	Quantity	Conversion To	Quantity
Kilometres (km)	1	Nautical Mile (nm)	0.539
Statute Mile (mi)	1	Nautical Mile (nm)	0.868
Barrel (US Petroleum) (bbl)	1	Litre (litres)	158.987
Barrel (US Petroleum) (bbl)	1	Cubic metre (m ³)	0.159
Cubic metre (m ³)	1	Gallon (US Liquid) (gal)	264.172
Gallon (US Liquid) (gal)	1	Litre (litres)	3.785
Gallon (UK Liquid) (gal)	1	Litre (litres)	4.546
m ³ to tonnes = (m ³ x SG) tonnes to m ³ = (t/SG)			

ROff 1.10 Bonn Agreement Oil Appearance Code (BAOAC)

Image	Code
	<p>Code 1</p> <p>Oil Sheen Silvery</p> <p>% Of Area Affected _____ %</p>
	<p>Code 2</p> <p>Oil Sheen Rainbow</p> <p>% Of Area Affected _____ %</p>
	<p>Code 3</p> <p>Oil Sheen Metallic</p> <p>% Of Area Affected _____ %</p>
	<p>Code 4</p> <p>Discontinuous True Colours</p> <p>% Of Area Affected _____ %</p>
	<p>Code 5</p> <p>True Colours</p> <p>% Of Area Affected _____ %</p>

Code	Description
Code 1 Oil Sheen Silvery ($<0.3\mu\text{m}$)	The very thin films of oil reflect the incoming light better than the surrounding water and can be seen as a silvery or grey sheen. Above a certain height or angle of view the observed film may disappear.
Code 2 Oil Sheen Rainbow (0.3 to $5.0\mu\text{m}$)	Rainbow oil appearance is caused by an optical effect and independent of oil type. Depending on angle of view and layer thickness, the distinctive colours will be diffuse or very bright. Bad light conditions may cause the colours to appear duller. A level layer of oil in the rainbow region will show different colours through the slick because of the change in angle of view. Therefore if rainbow is present, a range of colours will be visible.
Code 3 Oil Sheen Metallic (5.0 to $50\mu\text{m}$)	Although a range of colours can be observed (eg blue, purple, red and greenish) the colours will not be similar to 'rainbow'. Metallic will appear as a quite homogeneous colour that can be blue, brown, purple or another colour. The 'metallic' appearance is the common factor and has been identified as a mirror effect, dependent on light and sky conditions. For example blue can be observed in blue-sky conditions.
Code 4 Discontinuous True Colours (50 to $200\mu\text{m}$)	For oil slicks thicker than $50\mu\text{m}$ the true colour will gradually dominate the colour that is observed. Brown oils will appear brown, black oils will appear black. The broken nature of the colour, due to thinner areas within the slick, is described as discontinuous. Discontinuous should not be mistaken for 'coverage'. Discontinuous implies true colour variations and not non-polluted areas.
Code 5 True Colours ($>200\mu\text{m}$)	The true colour of the specific oil is the dominant effect in this category. A more homogenous colour can be observed with no discontinuity as described in Code 4. This category is strongly oil type dependent and colours may be more diffuse in overcast conditions.

ROff 1.11 Manual Release Tracking

To be undertaken by the ERRV or Vessel of Opportunity (VOO).

Manual Calculation of Surface Release Trajectory

A hydrocarbon slick on the sea surface will move under the influences of:

Wind speed/direction at 3% of the speed and the direction the wind is blowing from

Current speed and direction at 100% of the current speed and in the direction the current is flowing to

Estimating slick movement may be done manually by 'vector' addition using an estimate of current and wind effect. Use the below table to plot the track of the hydrocarbon.

Latitude

Enter the latitude of the release when first reported.

Longitude

Enter the longitude of the release when first reported.

Wind

Enter the wind bearing and speed.

Tide

Enter the tide bearing and speed.

Elapsed

Calculate 3% wind speed, tidal bearing and speed over 8-hour elapsed period.

Plot

After calculating wind and tidal bearings for each hour to a maximum of 8 hours, calculate new latitude and longitude position of slick to a maximum of 8 hours.

WIND
(20 Knots)

Spill moves from point A to B under the influences of the wind and surface current

Release at 0 Hours

Latitude	N/S		°		'		"
Longitude	E/W		°		'		"
Wind Bearing							
Wind Speed	knots						
Tidal Bearing							
Tidal Speed	knots						

Hours Elapsed	Wind Bearing (°)	Wind Speed (knots)	3% of Wind Speed (knots)	Tidal Bearing (°)	Tidal Speed (knots)
1					
Release Position	Latitude:			Longitude:	
2					
Release Position	Latitude:			Longitude:	
3					
Release Position	Latitude:			Longitude:	
4					
Release Position	Latitude:			Longitude:	
5					
Release Position	Latitude:			Longitude:	
6					
Release Position	Latitude:			Longitude:	
7					
Release Position	Latitude:			Longitude:	
8					
Release Position	Latitude:			Longitude:	

ROff 1.12 Release Sampling Guide

It is advisable to take a sample of the release hydrocarbon if it is safe and practicable to do so. Any sampling should be in accordance with the MCA Sampling Guidance SToP 4/2001. BP must, if sea state and vessel operating restrictions allow, comply with any request from DECC or the MCA to obtain sea surface samples of oil.

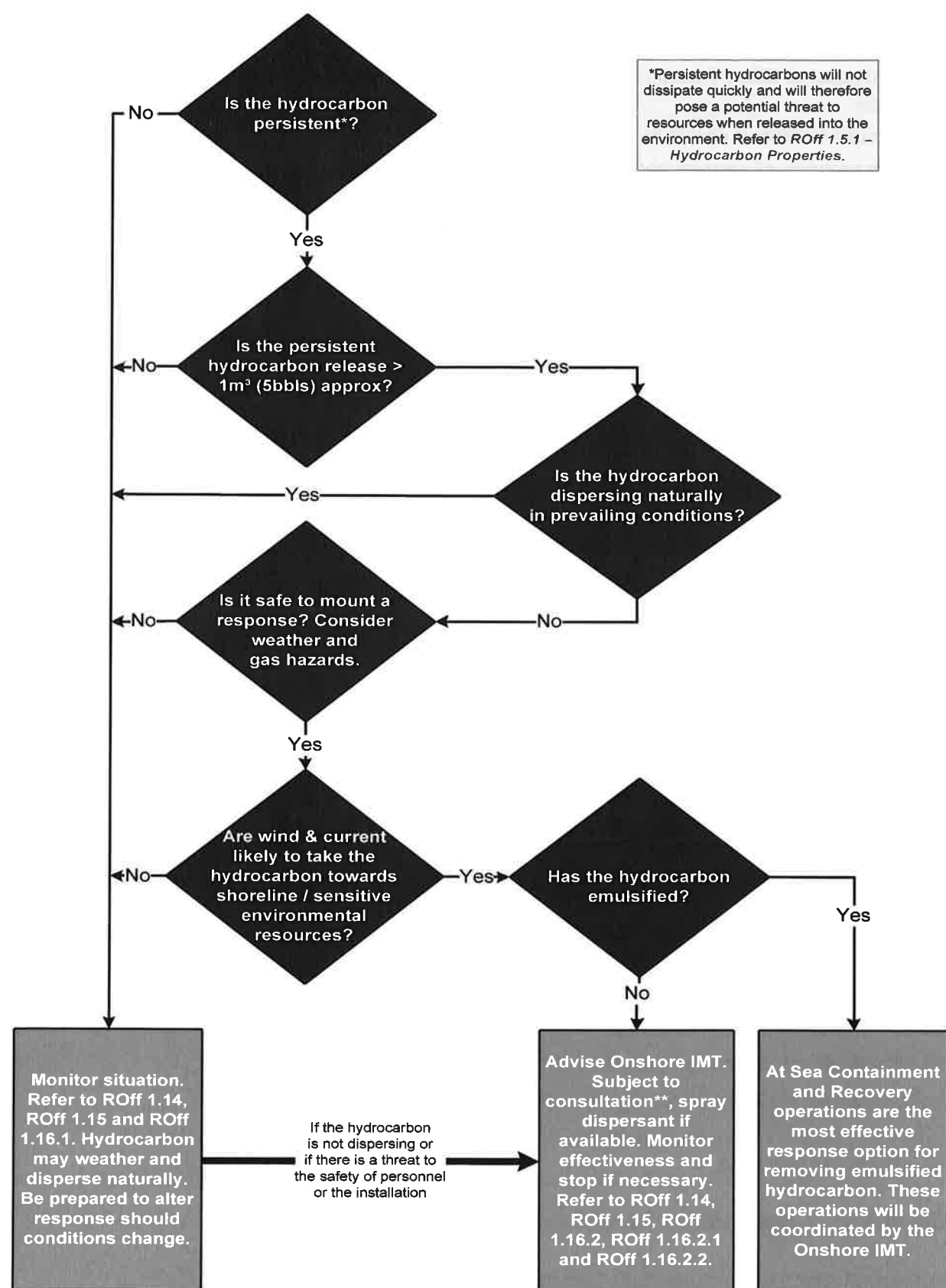
The OIM should request the Master of the ERRV to collect a sample of the hydrocarbon using the sampling kit provided. Advice on the collection and handling of hydrocarbon samples is given in the table below.

General Guidance
<p>Refer to the Oil Spill Sampling Guidelines in the sampling kit if applicable</p> <p>Avoid contamination of the sampling equipment with other sources of hydrocarbons</p> <p>Use gloves supplied when undertaking sampling</p>
Number of Samples Required
<p>The MCA recommends taking three sealed samples for the following purposes:</p> <ol style="list-style-type: none"> 1. For analysis specified by DECC or the MCA. 2. To be retained by the Responsible Persons for evidential purposes if required. 3. Retained by the Responsible Persons for their purpose.
Frequency of Sampling
<ul style="list-style-type: none"> • Offshore - A minimum of one set of samples per slick per day where possible • Onshore - Representative samples from the shoreline, in discussion with MCA's Counter Pollution Branch
Size of Sample
<ul style="list-style-type: none"> • Fresh hydrocarbon: 10ml • Hydrocarbons exposed to sea surface and forming water-in-oil emulsion: 10ml • Overside water discharge (suspected of >100ppm): 1 litre of discharge • If such quantities cannot be collected, sampling should still be attempted. In some cases larger volumes may be required for further testing of the slick
Collecting Method
<ul style="list-style-type: none"> • Skim the hydrocarbon off the surface of the water, ensuring maximum hydrocarbon content and minimum water (a bucket with a hole may be required to collect the sample initially to drain excess water) • Any collection of lumpy tar/waxy pollutant should be placed directly into sample containers, with no attempt to heat or melt these samples • Hydrocarbon collected which is attached to floating debris and seaweed should be placed along with the debris/seaweed, directly in to the sampling container • Sample containers should be sealed as soon as possible to minimise the evaporation of the hydrocarbon's higher fractions

Container Sealing, Packaging and Transporting
<ul style="list-style-type: none">• Sample containers should be glass with a large neck, a screw cover and a seal that cannot be affected by hydrocarbon, eg no waxed cap seals• Plastic/metal containers should be avoided as they can react with the sample and interfere with analysis• All sample containers should be sealed with a tamper-proof seal• Where possible, all samples should be securely packed and sealed. UN-approved fibreboard boxes should be used to ensure safe carriage of the samples• Samples should be stored in a refrigerator/cold room at less than 5°C in the dark• When transporting the materials, vermiculite should be used to surround the samples in the box for protection and to absorb any seepage• Arrange for transportation of the samples to the laboratory as soon as possible
Labelling
<ul style="list-style-type: none">• Each sample should be clearly labelled with:• An identifying number consisting of the date (yy/mm/dd) and the initials of the official in charge of taking the samples eg 02/04/12/JS = sample taken on 12 April 2002• A description of the sample• Location that the sample was taken from• Date and time of sampling• Purpose for which the sample was taken• If known, the suspected source, eg name of drilling rig• Whether or not dispersants have been used and, if known, their type and make• The method of sampling used• Name, address and telephone number of person taking sample and of anyone witnessing the sampling being done• Additional information that would be useful include:<ul style="list-style-type: none">- Wind direction and velocity- Air and water temperature- Sample descriptions ie viscosity, colour and contaminants- Description of the hydrocarbon release ie distribution and consistency
Analysis
<p>The first sample should be retained and stored in accordance with <u>MCA Sampling Guidance STOp 4/2001</u> until advised by DECC or MCA.</p> <p>The second sample should be retained by BP and stored for evidential purposes</p> <p>The third sample should be sent to the following address for analysis:</p> <p>Fugro ERT, Gait 8, Research Park South, Heriot-Watt University, Edinburgh, EH14 4AP Tel: +44 (0) 131 449 5030</p>

ROff 1.13 Response Strategy Options

Response strategy options are to be confirmed in conjunction with Dyce IMT. Refer to **Section 2 Paragraph 7.7 Available Response Strategy Options** for additional supporting information on the response strategy options available.

ROff 1.13.1 Counter-pollution Response Options

ROff 1.13.2 Source-control Response Options

Although the wells are suspended, in the event of an ongoing well release, the BP Dyce IMT will mobilise the BP Well Incident Group (WIG), who will provide technical assistance to the Dyce IMT on relief well drilling and well capping operations.

In the event of an incident involving loss of pipeline integrity, actions should be taken by offshore response personnel to minimise any hydrocarbon release, if safe to do so. In the event that a release is ongoing from a pipeline, a specialist technical adviser/team, if required, will be mobilised as part of the expanded Dyce IMT, utilising relevant pipeline emergency procedures:

WOS and Clair Gas Pipelines Emergency Procedures Manual (WOSPS-EM-001) and
Clair Oil Pipeline Emergency Procedures Manual (CLA-PLNE-PR-0165).

Refer to **Section 2 Paragraph 7.7 Available Response Strategy Options** for additional details on the response strategy options.

ROff 1.14 Tiered Response Resources

Resource	Response Location	Strategy and Capability	Response Time	Mobilised by
Tier 1 Onsite				
Surveillance				
Platform	Clair Ridge	Platform and ERRV	Immediate	OIM
Dispersant Spraying				
ERRV	Dedicated ERRV to be confirmed on the day	Dispersant type carried onboard is Type 2/3. Dispersant volume to be confirmed on the day depending on ERRV available. Type 2/3 dispersant on board the ERRVs is a minimum of 2 tonnes and maximum volume of 10 tonnes	ERRV – Immediate	OIM
Tier 2 Regional and 3 National (mobilised and co-ordinated by the onshore response team)				
Dispersant Spraying				
BP Platform Supply Vessel (PSV)	PSV when in Region	2m ³ of type 2/3 dispersant	PSV – to be confirmed on the day	OIM
Additional ERRV	Surrounding fields	Type to be confirmed on the day	Dependent on availability	IMT
Oil Spill Response Contractor Capability				
<p>Tier 2 and 3 response services such as the UKCS aerial surveillance service and aerial dispersant capability is provided by Oil Spill Response Limited (OSRL). For more details on these services including specific response times please follow the link below. The link also contains some of the information which DECC may require should BP be considering a request for the 'Standing Approval' to use the Tier 2 aerial dispersant application system. This statement does not grant approval to spray dispersant and separate Standing Approval must be granted from DECC.</p> <p>Response time for aerial surveillance is 4 to 6 hours.</p> <p>Response time for Tier 2 aerial dispersant spraying is maximum 9 hours.</p> <p>http://www.oilspillresponse.com/activate-us/ukcs-capability-statement</p>				Incident Commander Sign-off (Dyce IMT)
Containment and Recovery				
Shoreline response is detailed within Section 3 Paragraph 2.6 UK Shoreline Response and Chemical Dispersant				
Response Equipment	OSRL	Offshore booms and skimmers. Various types depending upon conditions and oil condition	48 hours dependent on vessel availability	IMT
BP Shetland Response	Scalloway harbour, Shetland	Offshore containment and recovery equipment	48 hours, dependent on vessel availability	IMT

Resource	Response Location	Strategy and Capability	Response Time	Mobilised by
Shoreline Response				
Response Equipment	OSRL	Shoreline and inshore response equipment	18 hours to Aberdeen; 48 hours to Shetland	IMT
BP Burntisland Base	Burntisland	Shoreline and inshore response equipment	24 hours	IMT

ROff 1.15 Emergency Response Coverage for BP Assets

The Clair Field is covered by the Coastguard Search and Rescue Helicopter based at Sumburgh Airport. The primary role of the Coastguard is that of rescue and recovery. The OSRL aircraft should be mobilised in the event of a hydrocarbon release to conduct Aerial Surveillance.

The Clair Field is also supported by a dedicated ERRV which has a Fast Rescue craft and dispersant application capability. Dispersant type carried onboard is Type 2/3 with a minimum volume of 2 tonnes and maximum volume of 10 tonnes.

ROff 1.16 Response Strategy Guidance

ROff 1.16.1 Surveillance and Monitoring Response Guidance

Surveillance and Monitoring Response

- Monitoring of large releases should be carried out using a dedicated surveillance aircraft. If a surveillance aircraft is required, this will be mobilised by the Dyce IMT.
- For smaller hydrocarbon releases, an ERRV/PSV should be used to help identify heaviest concentrations of oil using the BAOAC.
- All vessels in close proximity to hydrocarbon release should conduct continuous gas monitoring and only proceed if safe to do so.
- Follow patches of heaviest oil concentration and watch and report on breakup of slick. Determine and report direction of movement of other oil patches; note and report to the Dyce IMT the movement of oil towards sensitive environmental resources.
- Watch for and report any large flocks of birds on the sea surface.
- Determine progress of natural dispersion or emulsion formation. Note that crude oil hydrocarbon released at sea will undergo changes in appearance due to weathering. Thicker patches of crude oil will usually appear as dense black areas, but as emulsification occurs the colour may change to brown.
- Condensate may naturally disperse rapidly, within hours.
- Diesel and base oil will rapidly spread out to form a sheen and it is probable that releases will naturally disperse over time.
- Light crude oils will take about 1 to 3 days to naturally disperse, depending on amount spilt and sea state conditions. Heavier crude oils will take longer to disperse; depending on the type of oil, amount spilt and sea state conditions.
- Advice on this strategy can be sought through the Dyce IMT.




















ROff 1.16.2 Dispersant Spraying Operations Guidance²

Dispersant Spraying
The application of dispersant assists and accelerates the process of natural dispersion. If the Dyce IMT is considering using dispersant they must consult directly with DECC and ensure that DECC have provided approval to BP prior to use. Dispersant can be deployed from the ERRV/PSV and OSRL's aerial dispersant aircraft (Tier 2/3 response contractor).
Considerations
<ul style="list-style-type: none"> • All vessels in close proximity to hydrocarbon release should conduct continuous gas monitoring and only proceed if safe to do so. • Chemical dispersants are not recommended for use on releases of condensate or diesel³. • It is most effective to spray with the spray arms mounted on the vessel's bow as the bow wave will assist in agitating the dispersant and hydrocarbon mix. • Upper wind speed limit for spraying is 25 to 30 knots. Any stronger and the dispersant will be blown off target by the wind. • If dispersant is to be used, it will be most effective within the first few hours of the release. Dispersants may not be as effective on weathered crude oil once it has been at sea for a long period of time.
Application
<ul style="list-style-type: none"> • Hydrocarbon to Dispersant ratio should be 20:1 ie 20 tonnes of hydrocarbon should be dispersed by 1 tonne of dispersant. Depending upon the hydrocarbon type and dispersant being used, this ratio may need to be revised. • Ensure correct use of dispersant such as neat application or dilution with water. This will depend upon dispersant type (Type 2 or 3) and type of application equipment on board the ERRV/PSV. • If a dispersant strategy is to be utilised, commence operations targeting the thickest portions of the slick. • Application of dispersant should be conducted in parallel runs to optimise delivery across the slick. • As dispersion is achieved it will produce a 'smoke plume' in the water. The dispersion will vary in colour between dark and light brown. • If dispersion is ineffective, a milky white plume will appear in the water close to the surface which indicates the dispersant is not being effective and spraying should stop. Inform the OIM/Onshore IMT. • Observe all applicable safety advice and precautions when using dispersants. • Monitor the effects and report observations to the Onshore IMT as this may influence subsequent response strategies. Do not attempt to spray diesel, very viscous or semi-solid oils (unless in the event of a force majeure situation). • Keep full log of dispersant use and application times. Complete ROff 1.16.2.2 Record of Dispersant Use.

- 2 In the event of a force majeure situation where there is a genuine risk to human life or to the safety of the installation from the released hydrocarbon (for example from fire or explosion), dispersants may be used without prior guidance or approval from DECC. DECC should be informed as soon as possible.
- 3 In the unlikely event that diesel will not disperse naturally, and dependant on the nature and location of the release, chemical dispersant may be considered. DECC must be consulted and approve the use of dispersant on diesel.

ROff 1.16.2.1 Testing Dispersant Efficacy Procedure

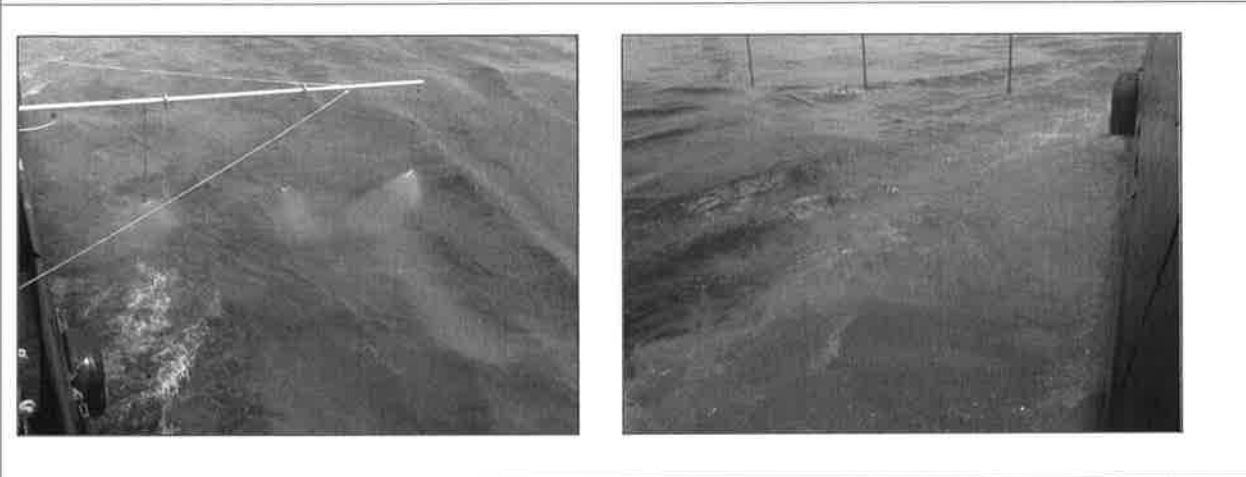
Testing dispersant efficacy procedure is to be undertaken by the ERRV. Dispersant application is not recommended for releases of condensate or diesel. DECC must give approval for dispersant use prior to a test spray being undertaken (unless in the event of a force majeure situation).

Step	Action
1	<div><div><div>Conduct basic field dispersant effectiveness test – Test the amenability of the released hydrocarbon to dispersants following the sampling of the slick. This should be done as quickly as possible after taking the sample.</div><div>Tools required:<div><div> 2 x clear glass containers (with lids)</div><div> Plastic bottles are not adequate as the oil will adhere to the plastic and affect your results.</div><div> Seawater</div><div> Dispersant (small quantity)</div><div> Oil (same that has been released, or potentially released)</div><div> Pipette (optional)</div></div></div><div><p>The test should be carried out as follows (instructions below cover one control sample for comparison and one test sample):</p><ol style="list-style-type: none">Take one glass jar and fill 3/4 with seawater.Add 20 drops of oil to the water using the pipette, or if not available gently pour a small amount to cover the water surface to about 1 mm thickness.Cap the jar and shake the oil and water mixture lightly about 10 times.The oil and water should not mix very well and the droplets should rise to the surface quickly leaving the water fairly clear. This is your comparison mixture.Take the second clean jar and repeat Steps 1 to 3, but also add one drop of your dispersant to the mixture before shaking. This is your test sample.The oil and water mixture should now mix to form a cloudy mixture in the jar, with very small droplets that rise to the surface very slowly (longer than an hour) if left undisturbed.Compare your comparison mixture with the test sample. If the dispersant is effective you should see a marked increase in water cloudiness and less surface oiling. The greater the difference the more effective the dispersant has not been effective and alternative strategies should be explored.<div><div><div>Comparison Mixture: Physically dispersed</div><div> +  =  +  +  Shake x10 Times =  ❌</div></div><div><div>Test Sample: Chemically dispersed</div><div> +  =  +  +  +  Shake x10 Times =  ✅</div></div></div><div><p>Pictures and text courtesy of Oil Spill Response Limited, Vessel Dispersant Application Field Guide, Version 1, 2011</p></div></div></div></div>

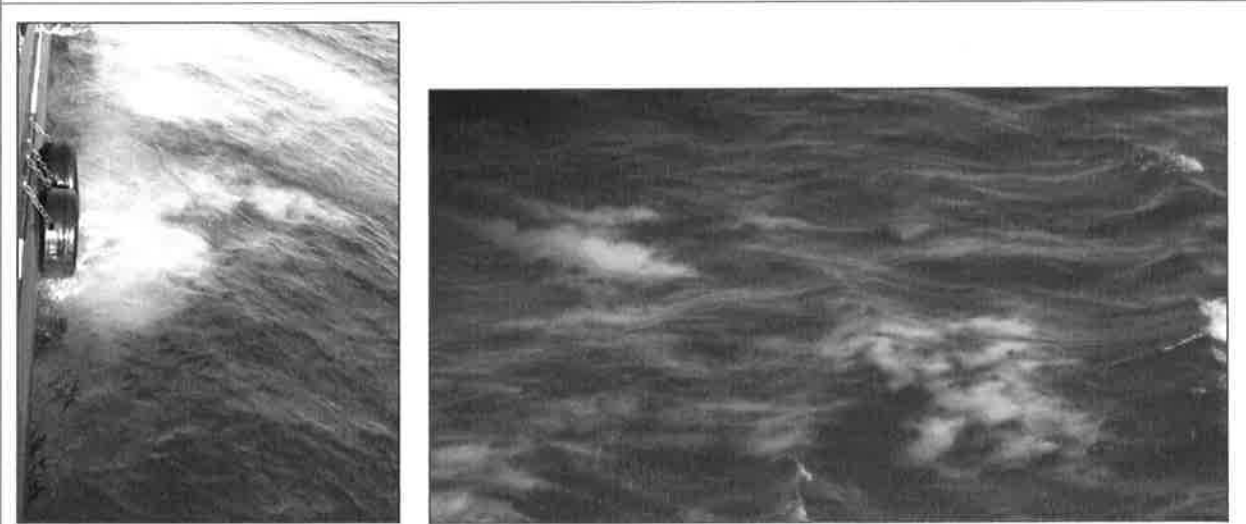
Step	Action
2	Identify spray parameters – Undertake calculations to select correct pumping rate and vessel speed in relation to nozzle size (delivery rate) and effective swath width of the equipment. Commence spraying operations with a ratio of 20:1 hydrocarbon to dispersant.
3	Conduct a test spray – Identify a patch of continuous true coloured hydrocarbon as defined in the BAOAC. Prepare vessel for spraying operations, enter the slick at the recommended speed and commence spraying at a consistent rate. Observe hydrocarbon/dispersant interaction – During spraying operations look for evidence of dispersion. If dispersion is achieved it will produce a grey or coffee coloured plume in the water. There may also be noticeable movement of oil from the surface into the water column.
4	Further observation – Once the test spray run is complete, shut off the dispersant application system and manoeuvre vessel to return back along the test spray path to further evaluate effectiveness.
5	Report findings – Document findings and report to the OIM and Onshore Dyce IMT for discussion with regulatory authorities. Only commence spraying once further approval has been sanctioned through Dyce IMT.

Dispersant Application Photographs

Example of where dispersion has been achieved (grey or coffee coloured):



Example of where dispersant application has been ineffective (milky white coloured):



ROff 1.16.2.2 Record of Dispersant Use

Use the **Record of Dispersant Use** table to record the use and effectiveness of dispersant in accordance with the PON1 guidance.

All dispersant spray runs should be recorded in the **Spray Operator’s Log**. This log must be completed in full for any dispersant operations.

All information should be retained for 5 years and submitted to DECC accordingly if requested.

Record of Dispersant Use			
Name of Installation Operator responsible for incident		Name/ID of field/installation	
Reportee name		Reportee contact details	
Location of Incident Latitude/Longitude		Quadrant(s)/block(s)	
Name of vessel applying dispersant		Type of vessel applying dispersant	
Vessel IMO Reg No		Aerial surveillance used?	Yes No
Location of application (quadrants/blocks)		Visibility	
Weather at time of use: Wind speed Wind direction Wave height		Other conditions	
Dispersant and Hydrocarbon Information			
Type of oil being treated		Est volume of oil (m ³)	
Name/type of dispersant		Date of manufacture	
Last efficacy test date		Volume used (m ³)	
Spray times – Start – Finish		Method(s) of application	
Location of application (quadrants/blocks)			
Reason for use			
Was approval or advice obtained prior to use?		Est quantity of oil treated	
Comments on effectiveness of treatment			
Other relevant observations/comments on use			
Date/time report was completed			

Spray Operators Log									
Run Number									
Start Time									
Finish Time									
Start Position (Latitude/Longitude)									
Finish Position (Latitude/Longitude)									
Course Bearing									
Volume of dispersant used (m ³)									
Dispersant to Oil Ratio									
Observed Effects of Dispersant									

If it is not possible to submit the PON1 electronically via the UK Oil Portal, use the PON1 form below. For a usable version of this form, please [click here](#).

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