

Equinor Canada Ltd. Offshore Newfoundland Oil Spill Response Plan

1	Objective, target group and provision.....	3
1.1	Target Group	3
1.2	Warrant	3
2	Oil Spill Response Plan Overview	3
2.1	Plan Structure	3
2.2	Command Authority – Incident Commander – Incident Command Post	5
2.3	Updating the Oil Spill Response Plan	5
2.4	Regulatory Consideration	5
2.5	Geographic Area for Plan Implementation	6
3	Regulatory Context	7
3.1	Atlantic Accord.....	7
3.2	Canada Shipping Act (CSA)	8
3.3	National Environmental Emergencies Centre	8
3.4	Other Federal Legislation.....	9
4	Offshore Oil Spills	9
5	Oil Spill Response Personnel.....	10
5.1	Offshore Personnel.....	12
5.2	Onshore Personnel.....	12
5.3	Contract Resources	13
5.4	Mutual Aid.....	15
5.5	Production Operator Tier 2 OSR Equipment Sharing Agreement.....	16
6	Oil Spill Response Management.....	16
6.1	Oil Spill Management Approach	16
6.2	Priorities in Response Management.....	17
6.3	Response Cycle.....	18
6.4	Notification for All Offshore Spills.....	19
6.5	Level of Response Management by Tiers.....	19
6.6	Tier 1 Spill Response Management.....	22
6.7	Tier 2 & 3 Spill Response Management.....	24
6.8	Incident Command System in an Equinor Oil Spill Response.....	28
6.9	Equinor, ECRC and OSRL Management Integration.....	29
6.10	Phases in an Oil Spill Response.....	31
7	Offshore Response Actions	32
7.1	Generic Operational Actions	32
7.2	Initial Response Actions.....	33
7.3	Operational Response Options.....	34
8	Environmental Issues	42
8.1	Seabird Distribution	42
8.2	Other Wildlife	44
8.3	Fisheries	44
8.4	Indigenous Groups	46
8.5	Environmental Effects Monitoring (EEM)	47
9	Health and Safety	47
9.1	General Health and Safety Procedures	47
9.2	Risks	49
9.3	Work Permits	49
9.4	Personal Protective Equipment.....	49
9.5	Confined Space Entry	50
9.6	Transportation Safety.....	50
9.7	Decontamination.....	50
9.8	Housekeeping Rules.....	51
9.9	Good Advice.....	51
9.10	Supervisor's Responsibilities	51
9.11	Worker's Responsibilities.....	51
10	Oil Spill Response Training.....	52
10.1	Modular Training Approach.....	52
10.2	Oil Spill Response Management Training.....	53
10.3	Operational Training	54
10.4	Joint Operators' Equipment Exercise (Synergy)	54
11	Additional information	54
11.1	Definitions and abbreviations.....	54
11.2	Changes from previous version	55
11.3	References	55

Objective, target group and provision

This Oil Spill Response Plan (OSRP) covers the management, countermeasures, and strategies that will be used in the response to spills originating inside the safety zone at any offshore Newfoundland exploration drilling sites operated by Equinor Canada Ltd. (Equinor or the Company).

This document details the response actions to be taken by Equinor in the event of an oil spill during drilling operations offshore Newfoundland. The Equinor procedures are consistent with the guidance established by the Canada-Newfoundland and Labrador Offshore Petroleum Board (C-NLOPB) for oil spill contingency planning.

The analysis conducted for the Flemish Pass Exploration Drilling Program Environmental Impact Statement, under Canadian Environmental Assessment Registry No. 80129 (Statoil 2017) predicted that there is a low probability of a major crude oil spill occurring during exploration drilling operations. The probability of small batch spills of fuel or hydraulic fluids during routine operations is slightly higher. Equinor has a “zero tolerance” policy towards all spills and emphasizes prevention in the design of facilities, procedures employed offshore, and training of personnel.

The Company has in place the policies, procedures, equipment, and trained personnel necessary to reduce the probability of oil spill incidents and to minimize the effects of spills should they occur. Regardless, Equinor maintains the capability for an immediate response to an oil spill incident that may occur during drilling operations.

Equinor’s operating priorities during the proposed drilling program offshore Newfoundland will be:

- Health and safety of all personnel
- Protection of the environment
- The integrity of all Equinor, contractor, and third party assets

Four principles are considered paramount in all aspects of an oil spill response:

- The health and safety of the public, Equinor personnel and contractors are top priorities and should never be compromised
- The emphasis of the response should be on identifying and protecting sensitive environmental and human resources
- Response planning decisions should be based on Spill Impact Mitigation Assessment (SIMA) considerations to the maximum extent that is practical
- Operations response actions cover a wide range of effort and technology, depending upon the nature of the spill. No response option should be ruled out or limited in advance

1.1 Target Group

The target group for this document is everyone engaged in Equinor’s activities offshore Newfoundland, including offshore and onshore staff and facilities that may be involved in supporting an emergency response event.

1.2 Warrant

This document is warranted in *FR10 – Safety and Security* and *SF700 –Preparedness and response*.

2 Oil Spill Response Plan Overview

2.1 Plan Structure

This response plan provides a comprehensive overview of:

- Equinor’s philosophy and policies concerning oil spill response
- The organization of Equinor’s response efforts, and the evolution of those efforts with the

increasing scale of the spill response

- Arrangements for assistance from contractors, other operators and corporate resources
- Environmental issues resulting from an offshore oil spill
- Equinor's policies concerning safety, oil spill waste management, and training

The appendices provide detailed information in the following areas:

Appendix	Description
A	Contact List
B	Oil Spill Glossary
C	Oil Spill Notification Procedures
D	Personnel Action Checklists
E	Oil Spill Equipment
F	Vessel Specifications
G	Oil Spill Fate
H	Oil Spill Trajectories
I	Oil Spill Waste Management
J	Surveillance and Observation Procedures
K	Sorbent Boom Procedures
L	Sampling
M	Legislation to Oil Spill Response in Canada
N	Additional Information
O	Tier I Dispersant Procedures (Placeholder for Anticipated Future Use)

These appendices provide more detailed information including the following areas:

Actions - Personnel checklists and the forms to be used both in the field and by the onshore Equinor Line 2 IMT during oil spill response.

Resources - Details of the personnel, equipment and vessel resources available to Equinor for use in oil spill response.

Oil Spill Fate - Anticipated fate and characteristics of spilled crude.

Procedures - Stand-alone detailed procedures which describe specific actions that may be undertaken during oil spill response. Some of these procedures are used directly as training materials.

Glossary - A dictionary of oil spill terms and acronyms. (App B).

Contacts – Key Contact information for: (App A)

- Equinor emergency personnel;
- Key Equinor contractors;
- Oil spill consultants and contractors;
- Government agencies;
- Other offshore Operators' emergency personnel; and
- All Grand Banks offshore platforms and support vessels.

2.2 Command Authority – Incident Commander – Incident Command Post

The Incident Commander in Equinor's Incident Command Post (ICP) in St. John's will have decision making authority in relation to the provision of support based on the focus/priorities established by the Asset Manager on board the facility (reference is made to the Equinor Canada Ltd. Line 2 Incident Management Plan).

2.3 Updating the Oil Spill Response Plan

The Safety and Sustainability Unit (SSU) Manager in St. John's will have the overall responsibility for ensuring the Oil Spill Response Plan (OSRP) is current and that future amendments are forwarded to each person named in the distribution list.

2.4 Regulatory Consideration

Under the Atlantic Accord, the C-NLOPB is responsible for the regulation of all drilling and production activities offshore Newfoundland and Labrador. The Canadian oil spill regulatory regime is described in more detail in Section 3.0 and Appendix M. Figure 2-1 outlines the parties who may be involved in the response to an oil spill offshore.

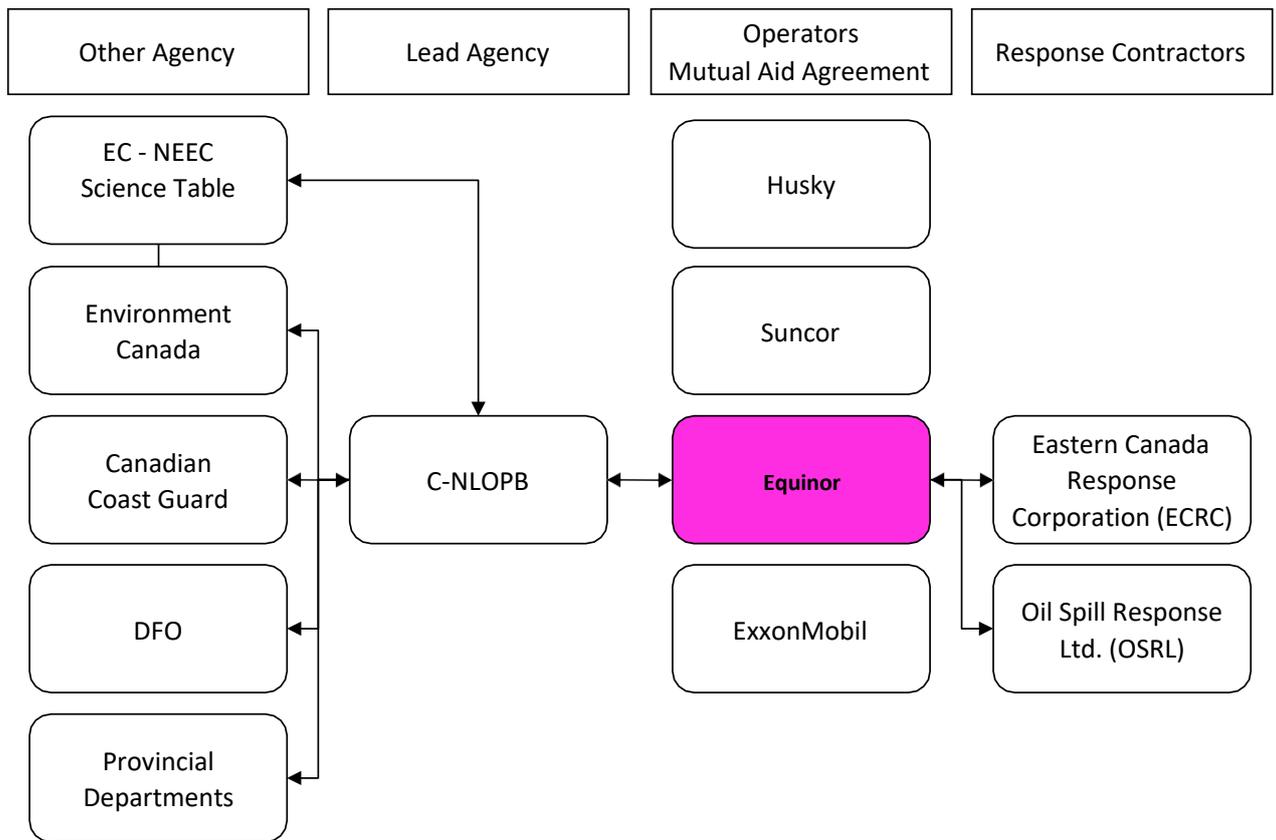
As Operator, Equinor will always assume a responsible role for oil spills which originate within the designated safety zone for the facility, regardless of the cause of the spill.

Eastern Canada Response Corporation (ECRC) has been contracted as Equinor's prime spill response contractor thereby providing a pool of equipment consistent with all other offshore Newfoundland and Grand Banks Operators. Equinor has a formal Sharing Agreement for access to Production Operator Tier 2 Oil Spill Response Equipment and facilities.

In addition, Equinor is a Participant member with Oil Spill Response Limited (OSRL), and therefore has immediate access to Tier 3 technical advice, resources and expertise 365 days a year on a 24-hr basis.

Equinor is also a participating party and signatory to the current Grand Banks Operators Mutual Emergency Assistance Agreement.

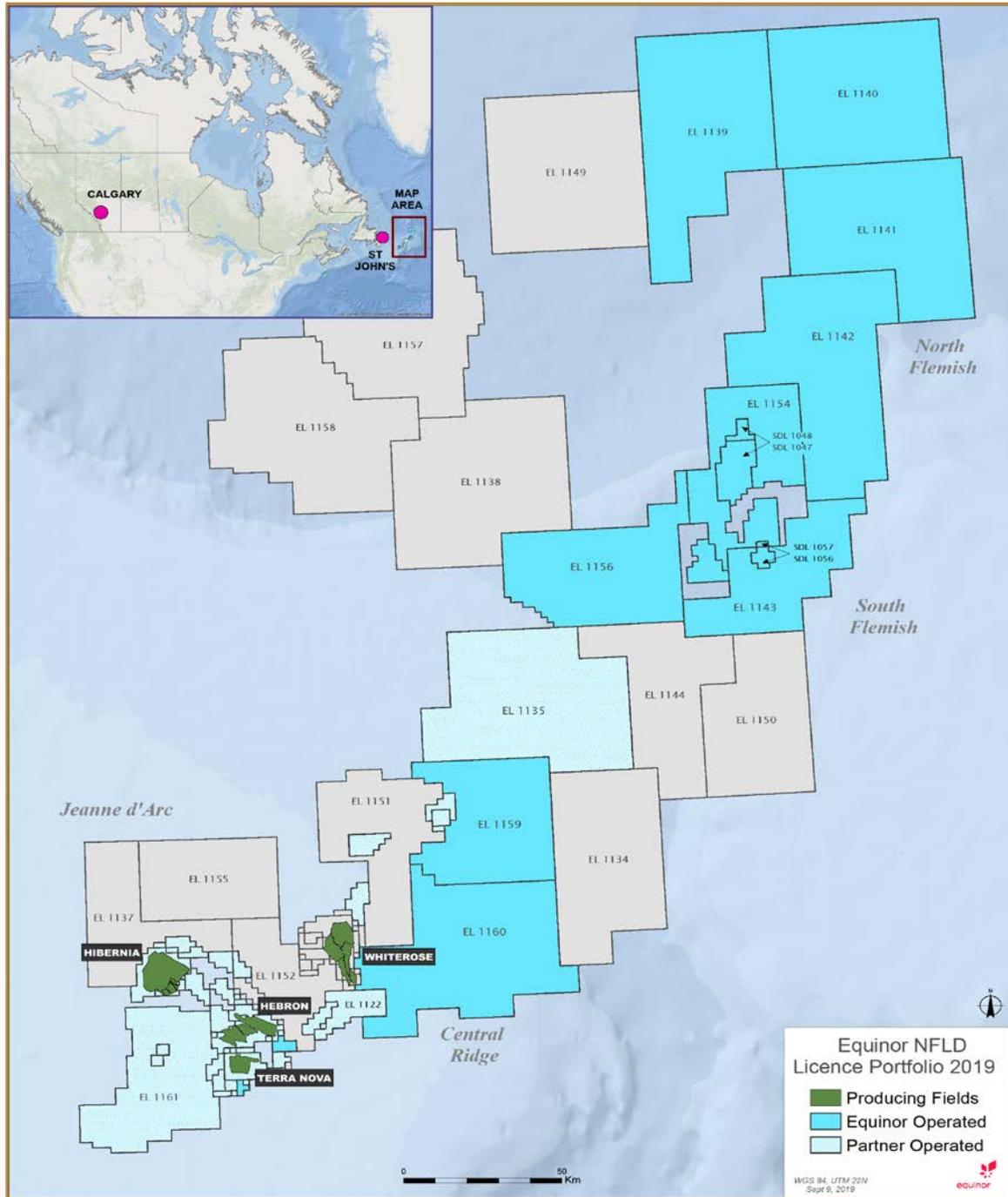
Figure 2-1: Organization of Participants in Oil Spill Response



2.5 Geographic Area for Plan Implementation

This plan has been specifically developed to support Equinor exploratory drilling operations for oil spill events associated with Equinor operations offshore Newfoundland. The techniques, procedures, and policies outlined herein are also sufficiently flexible to allow Equinor to continue to respond to a spill as it moves away from its point of origin. Equinor currently holds licenses offshore Newfoundland within Canada’s 200 nautical mile exclusive economic zone (EEZ), and on the high seas on the outer Canadian Continental Shelf. The current acreage held by Equinor are shown in Figure 2-2.

Figure 2-2: Equinor Canada Ltd. Offshore Newfoundland Licenses



3 Regulatory Context

Legislation which regulates offshore oil spill issues is covered below. More detailed information is provided in Appendix M.

3.1 Atlantic Accord

All oil and gas activities are regulated by the Canada-Newfoundland and Labrador Offshore Petroleum Board (C-NLOPB). The C-NLOPB derives its regulatory authority from the *Canada-Newfoundland Atlantic Accord Implementation Act* and the *Canada-Newfoundland and Labrador Atlantic Accord Implementation Newfoundland and Labrador Act* (the Accord Acts). Pursuant to Section 161 of the Accord Acts, oil spill response at an offshore facility in the Newfoundland and

Labrador offshore area falls under C-NLOPB jurisdiction. The offshore area is defined per Section 2 of the *Accord Acts* as:

“offshore area” means those submarine areas lying seaward of the low water mark of the Province and extending, at any location, as far as

- (a) any prescribed line, or
- (b) where no line is prescribed at that location, the outer edge of the continental margin or a distance of two hundred nautical miles from the baselines from which the breadth of the territorial sea of Canada is measured, whichever is the greater.

The C-NLOPB is designated the lead agency in offshore spill incidents under the National Environmental Emergencies Contingency Plan and the Canadian Coast Guard (CCG) Environmental Response Marine Spills Contingency Plan - National Chapter. The C-NLOPB has a specific regulatory mandate to ensure the operator is taking all reasonable measures to prevent further spillage and to mitigate the effects and impacts of the spill. Where reasonable measures are not being taken, the C-NLOPB's Chief Conservation Officer (CCO) can direct those measures be taken or can take over management of the response effort. The C-NLOPB is the designated lead agency in offshore spill incidents at the drilling site under memoranda of understanding with a variety of federal and provincial ministries. These federal and provincial agencies may act in supporting roles in the event of a spill. These agencies may include:

- CCG
- Fisheries and Oceans Canada (DFO)
- Environment and Climate Change Canada (ECCC)
- Transport Canada
- Provincial government departments

The C-NLOPB expects that Equinor will have a credible response capability including:

- Designated response personnel
- A training program for Equinor personnel and Equinor contractors
- Spill tracking and clean-up equipment at the offshore site

In addition to specific requirements under formal guidelines, the C-NLOPB has expressed a series of expectations or policies that pertain to drilling operations. Specifically, the offshore Operator shall have:

- On-site oil spill response capability
- Access to third party oil spill personnel and equipment
- Mutual aid agreements with other Grand Banks operators.

3.2 Canada Shipping Act (CSA)

If the source of the spill is a supply vessel or a shore-based facility, the vessel or facility operator is the Responsible Party under the *Canada Shipping Act (CSA)* (S.C. 2001, c.26). The CSA requires that the vessel or facility operators have response plans, designated and trained personnel, and contract arrangements with a Response Organization (RO) certified by Transport Canada. In every applicable case, Eastern Canada Response Organization (ECRC) is the RO retained by Equinor's drilling and vessel contractors.

3.3 National Environmental Emergencies Centre

In the event of an offshore spill, the C-NLOPB may call upon the National Environmental Emergencies Centre (NEEC) to provide expert advice. The NEEC is ECCC's focal point for the provision of scientific advice, such as weather forecast, contaminant dispersion and trajectory modelling, fate and behavior of hazardous substances, the establishment of clean-up priorities and techniques, as well as the protection of sensitive ecosystems and wildlife such as migratory birds and fish. The NEEC can avail of the services and expertise of centres within ECCC, such as the Emergencies Science and Technology Section (ESTS), the Meteorological Service of Canada

(MSC) and the Canadian Wildlife Service (CWS), to provide scientific support in the event of a spill.

3.4 Other Federal Legislation

3.4.1 Canadian Environmental Protection Act

The *Canadian Environmental Protection Act, 1999* (CEPA) (S.C. 1999, c.33) allows for regulation of product storage, handling and transportation. The Act also requires the issuing of a permit before any designated substance is disposed of at sea.

3.4.2 Fisheries Act

The *Fisheries Act* (R.S.C., 1985, c.F-14) prohibits serious harm to fish that support commercial, recreational or Aboriginal fisheries. The Act also prohibits the deposit of a deleterious substance in waters frequented by fish. Sections of the Act provide for civil liability for an unauthorized deposit of a deleterious substance, except where the discharge is attributable to a ship covered by the CSA.

3.4.3 Transportation of Dangerous Goods Act

The Transportation of Dangerous Goods Act, 1992 (TDG) (S.C. 1992, c.34), requires that:

- Dangerous Goods are identified as such during transportation and are packaged and handled so as to avoid accidental release
- Emergency response plans are developed, and an inspection system is established
- Information needed in an emergency is readily available

The Act does not apply to the transportation of dangerous goods in bulk, in vessels within the meaning of the *Canada Shipping Act*.

3.4.4 Migratory Birds Convention Act, 1994

The sections of the Migratory Birds Convention Act (MBCA) that pertain directly to Equinor's offshore operations include:

- The MBCA prohibits the discharge of discharge of oil into waters that are frequented by migratory birds
- Seabirds may not be handled in any way without prior permission (permit) from the Canadian Wildlife Service (CWS)

In preparation for drilling programs offshore Newfoundland, on an annual basis Equinor will obtain a Seabird Handling and Salvage permit from CWS. The permit will be renewed annually as required and copies will be available on the Drilling Unit and any support vessels under contract to Equinor.

4 Offshore Oil Spills

Refer to Appendix G for detailed information regarding oil spills including:

- Environmental assessment (EA) and associated spill trajectory modelling undertaken;
- Oil ate and behavior including spreading and drifting, evaporation, dispersion and dissolution, emulsification, sedimentation and biodegradation; and
- Spill trajectory modeling undertaken for the EA including the approach (i.e. stochastic and deterministic), model input data, summary of spill scenarios modelled (e.g. blowouts, batch spills) and a summary of modelling results.

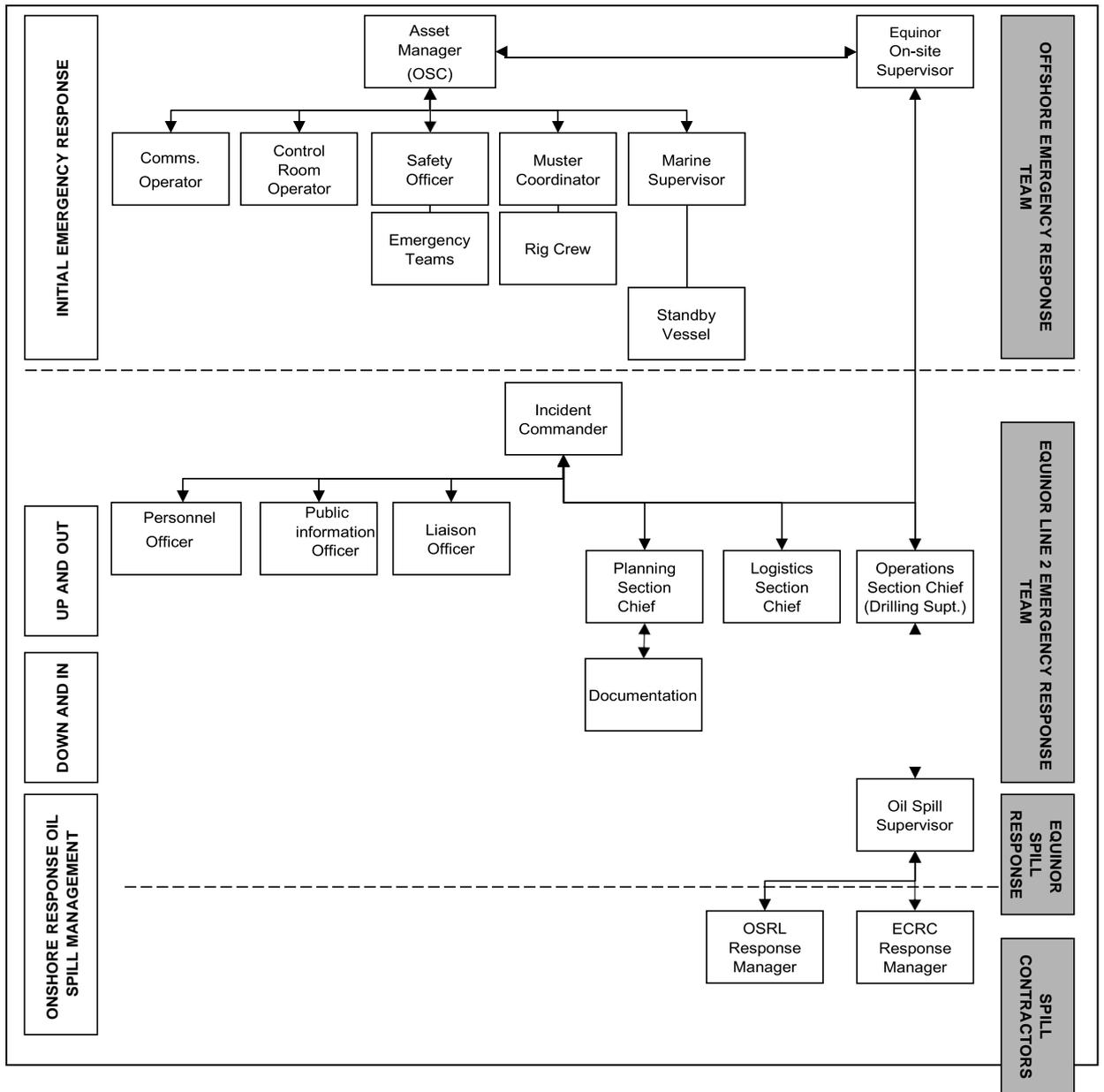
In addition to Appendix G, Appendix H provides select figures associated with the trajectory modelling completed for the EA.

5 Oil Spill Response Personnel

Response to an oil spill will escalate based on the severity of the spill and the resources needed to control it. The requirement for personnel will increase with this escalation. In anticipation of increasing personnel requirements, Equinor has an established response structure that can be activated to an appropriate level to meet the demands of a spill. This section identifies the personnel in this structure. The actions to be taken by these personnel at the time of a spill are described in Section 7.0 and Appendix D.

Figure 5-1 presents the team structures for the project's offshore and onshore emergency teams that will be activated during an oil spill response and illustrates the transition from an offshore-managed emergency response to an onshore-managed oil spill response.

Figure 5-1: Project Emergency and Spill Response Teams



5.1 Offshore Personnel

5.1.1 First Person on Scene

All Equinor and contractor personnel offshore are aware of the responsibility to report any discharge of oil to the central control room or bridge. The first person on the scene should report the spill and then, if they can do so safely, stop the flow of oil, secure the source of the spill, and then remain at the site to assist response efforts.

5.1.2 Facility Management

The facility Asset Manager (the MODU OIM or Vessel Master) assumes the initial role of On-Scene Commander (OSC) in any spill incident. As the oil moves away from the facility, the onshore Equinor Line 2 Incident Management Team (IMT) will assign a dedicated OSC.

On a MODU, the OIM will be supported by:

- The Equinor On-site Supervisor who will provide the communications link to onshore support personnel (Onshore Equinor Line 2 IMT)
- The Standby Vessel Master who will direct on-water operations while oil is in the vicinity of the MODU

5.1.3 Incident Teams

The offshore drilling facility has designated Incident Teams trained to deal with onboard emergencies, including the escape of oil from rig systems. The team's primary objective will be to prevent any oil from escaping onboard containment systems.

5.2 Onshore Personnel

5.2.1 Onshore Incident Management Team

The onshore Incident Command Post (ICP) will be staffed initially by on-call onshore Equinor Line 2 IMT personnel. If required, additional staff will be mobilized by the Incident Commander. The Incident Commander will direct the actions of the onshore Equinor Line 2 IMT. The onshore Equinor Line 2 IMT meets in the ICP in Equinor's offices located in St. John's. The emergency response process is described in the Equinor's Line 2 Incident Management Plan.

5.2.2 Oil Spill Supervisor

In the event that an offshore emergency includes an associated marine oil spill, an Oil Spill Supervisor in the Operations Section of the ICP will coordinate all oil spill response activities.

The Oil Spill Supervisor will be selected from a group of emergency response personnel who have been provided with oil spill response training.

5.2.3 Incident Commander

The Incident Commander has the overall responsibility for Equinor's response to an oil spill incident. This responsibility includes the following:

- Clean-up – operational response to the marine oil spill.
- Casualty – issues relating to the integrity of the facility following the incident;
- Community – issues affecting parties directly or indirectly impacted by the incident;
- Corporate – concern for company business and reputation issues;

5.2.4 Equinor Corporate Personnel

Equinor ASA will assist and provide oil spill response support to the ICP as requested. Examples may include a wide variety of technical, management, and administrative expertise to support Equinor's response. The Equinor ASA Global Incident Management Assistance Team (GIMAT) could also be mobilized, as required, in support of the response.

5.3 Contract Resources

Equinor can rely on assistance from competent contractors in the response to an offshore oil spill. ECRC is located in St. John's and can be immediately available in the event of a spill and can coordinate the provision of additional resources from outside the province if required.

In addition, Equinor is a Participant member with Oil Spill Response Limited (OSRL), and therefore has immediate access to Tier 3 technical advice, resources and expertise 365 days a year on a 24 hr basis.

5.3.1 Eastern Canada Response Corporation

Eastern Canada Response Corporation (ECRC) will be engaged in all Tier 2 and Tier 3 spills (see Section 6.7). ECRC is a full-time oil spill Response Organization (RO) certified by Transport Canada under Chapter 36 of the *Canada Shipping Act*. ECRC can provide comprehensive response management services, equipment and trained field personnel to implement technical operations in the field. As Equinor's RO, ECRC would be responsible for the direction of resources provided by Equinor or ECRC. Oil spill response equipment available to Equinor is listed in Appendix E.

Arrangements have been made in order to utilize ECRC's pool of personnel resources, including Operator owned equipment, outside the Canada's 200 nautical mile EEZ.

ECRC Notification

Equinor has a contract with ECRC that can be initiated if assistance is required during a spill response. The normal call out procedure is to contact the ECRC (CanPage) Call Centre. When activating ECRC, it is critical that the call out be made by a Equinor representative named in the contract. The following roles within the Equinor ICP will be authorized to mobilize ECRC:

- Incident Commander
- Deputy Incident Commander
- Oil Spill Supervisor

Furthermore, it is important that the caller refer to the contract number stated below.

ECRC Call Centre – (613) 930-9690
ECRC Contract No. E004-00036

5.3.2 Canadian Coast Guard

The Canadian Coast Guard (CCG) Environmental Emergencies Branch has a pool of equipment and trained personnel at its Newfoundland Region Depot in Donovan's Industrial Park in Mount Pearl. If available to Equinor at the time of the spill, these resources would be provided on a commercial basis independent of CCG's role as a resource agency to C-NLOPB. Coast Guard equipment that may be available to Equinor is listed in Appendix E.

5.3.3 Oil Spill Response Ltd.

Equinor is a participant member of Oil Spill Response Ltd. (OSRL), therefore has immediate access to Tier 3 technical advice, resources and expertise 365 days a year on a 24 hr basis. OSRL is a large oil spill response cooperative that specializes in providing global Tier 3 oil spill response services from their base in Southampton, England.

The following table summarises the service level agreement that defines the level and

performance of the response services offered by OSRL.

Table 5-1: OSRL Service Level Agreement Summary

Service	Service Standard
Response notification service/advice	In an incident a call should be placed to one of the following numbers: Emergency Contact: UK/Bahrain +44 (0) 2380 331 551 TELEPHONE Singapore +65 6266 1566 Emergency Contact: UK/Bahrain +44 (0) 2380 724 314 FAX Singapore +65 6266 2312
	The Duty Manager will speak and advise EQUINOR immediately, or call EQUINOR back within 10 minutes.
Spill response equipment	Response equipment is housed in secure facilities in Southampton, Fort Lauderdale, Bahrain and Singapore. Response equipment is customs cleared response ready. Refer to: OSRL Yearbook for a complete list of equipment available, www.oilspillresponse.com and refer to the equipment stockpile status report http://www.oilspillresponse.com/activate-us/equipment-stockpile-status-report
	As per the Service Level Agreement (SLA), EQUINOR can mobilise up to 50 % of the global stockpile. If there is more than one spill EQUINOR can mobilise 50 % of what remains.
Dispersant stockpile	If there was an incident, the spiller is entitled to 50% of the dispersant located in Southampton, Singapore, Fort Lauderdale and Bahrain. OSRL may be able to obtain further dispersant through the Global Response Network (GRN) and other organisations, if required.
World-wide transportation of equipment	Two Boeing 727's are available for a Tier 3 response and will be used for aerial dispersant application and transportation of Tier 3 response equipment. The aircraft are available for loading at the nominated base within 4 hrs from notification.
	24-hour access to global network of cargo and passenger charter services through a dedicated broker.
	Access to non-dedicated aircraft in the Middle East to support aerial dispersant operations and equipment freight.
Oil spill trajectory and tracking	Trajectory and stochastic modelling services for surface or subsurface oil spills on request, and backtrack services for surface oil spills using commercial modelling software: Oil Spill Information System (OSIS) OILMAP Oil Spill Contingency and Response Model (OSCAR) Satellite imagery services can be provided on request.
Response Personnel	OSRL can respond to 2 major oil spills simultaneously, each with a maximum of 18 OSRL responders: 1 x Incident Manager 1 x Response Manager 1 x Administrator 14 x Spill Response Specialists 1 x Technical Specialist

Service	Service Standard
---------	------------------

	A Technical Advisor can be dispatched to offer support to EQUINOR when they have an oil spill incident or the potential for an incident to occur. This is provided free of charge for the initial assessment period of up to 48 hrs. If a full response team is then mobilised, the technical advisor will form part of the available team headcount.
--	-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

The list of OSR equipment can be found at: http://www.oilspillresponse.com/activate_osrl.html

The activation of OSRL will always be made via the Equinor ASA 3rd Line Crisis Management Team (CMT) Chief of Staff in Stavanger, Norway as requested by the Equinor Canada Ltd. 2nd Line Incident Commander in St. John's.

5.3.4 Other Response Organizations

In addition to the services that ECRC and OSRL can provide directly, Equinor can access other international oil spill cooperatives through the Global Response Network of which both ECRC and OSRL are members.

5.4 Mutual Aid

Effective December 1, 2007, Equinor became party to a formal *Mutual Emergency Assistance Agreement* with Grand Banks Operators to provide assistance to each other in the event of an emergency. Local offshore operations have considerable logistics resources that can be used in the event of a spill offshore. Supply vessels (Maersk, Secunda, Atlantic Towing, DOF), surveillance aircraft (Provincial Aerospace Ltd.), and all rig helicopters (Cougar Helicopters) can all be considered as potential resources to assist in spill response.

5.4.1 Parties

Other parties named in the agreement along with Equinor include:

- Hibernia Management and Development Company Ltd.
- Suncor
- ExxonMobil Canada Properties
- Husky Energy

5.4.2 Resources

Assistance may take the form of:

- Exchanging current or forecast ice, weather, or oceanographic information
- Providing MedEvac support from an offshore location
- Providing personnel, vessels, equipment, facilities, and other company or contracted resources to assist during the emergency response operation

5.4.3 Terms

Suitable notice of the emergency and a formal request for the resources are required before the resources can be released. The initial request may be made by telephone, provided that it is promptly followed by a written confirmation signed by the Equinor Incident Commander in the ICP. Under the Mutual Emergency Assistance Agreement, each Party agrees to use reasonable effort to make available designated resources in the event of an actual or imminent emergency. Resources will be provided to a requesting party only to the extent that responding operator's operation is not jeopardized or its personnel or facilities put at risk. The recipient of the resources

will pay for the use of the resources including, but not limited to: day rates; fees; prorated rent; fuel; and consumables.

5.4.4 Liability

The recipient will be responsible for all First Party Losses and Third Party Claims resulting from the use of the resources.

5.5 Production Operator Tier 2 OSR Equipment Sharing Agreement

ECL maintains a current Sharing Agreement with Suncor (Operator of the Terra Nova Project), on behalf of the Grand Banks long-term production Operators (HMDC, ExxonMobil Canada Properties and Husky Oil Operations Limited), for Operator owned Tier 2 Oil Spill Response Equipment. This allows Equinor access to the equipment for training exercises or in the event of responding to an oil spill. This equipment is stored and maintained by ECRC, but not subject to any geographical limitations of the Canada Shipping Act (i.e. may be used outside of Canada's EEZ). This arrangement is made outside of the Mutual Aid Agreement and is a contractual relationship.

6 Oil Spill Response Management

6.1 Oil Spill Management Approach

Equinor employs a structured, systematic, and proportional management process in the response to any uncontrolled release of hydrocarbons at any offshore site. Priorities in managing the response will be:

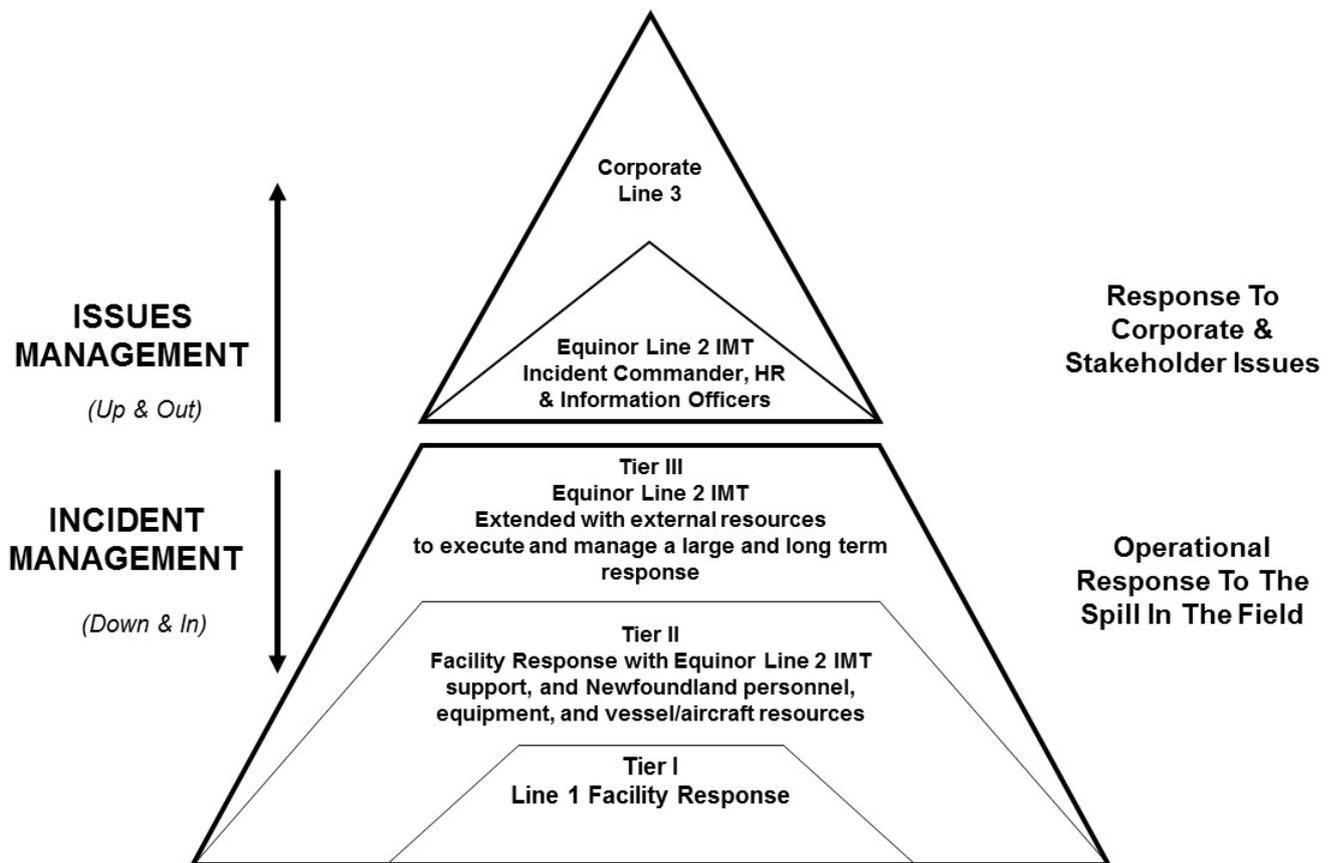
- Protection of personnel
- Protection of the environment
- Protection of assets (as it may affect human or environmental safety)
- Protection of company reputation

Any oil spill response will be managed at two levels regardless of the magnitude of the incident or the number of participants (see Figure 6-1 and Sections 6.1.1 and 6.1.2):

Incident Management - the management of field activities to contain, recover, and clean up the spill based on an escalating scale of required response. This level is often referred to as the "down and in" perspective.

Issues Management - the management of the community, the business and communications aspects of the response at a corporate level. This level is often referred to as the "up and out" perspective.

Figure 6-1: Equinor Oil Spill Response Management Model



6.1.1 Incident Management

Incident Management directs the operational response to the oil spill. Management may be either offshore or onshore, depending upon the level of the response (see Section 6.5). The objectives of Incident Management include:

- Coordinate the planning and direction for the protection of resources at risk, and the containment, recovery, and clean-up of the spill
- Collate information concerning the spill
- Make arrangements for temporary handling and disposal of recovered oil
- Monitor short and longer term environmental effects

6.1.2 Issues Management

Issues Management directs the corporate-level strategic response to the issues which result from the oil spill. Actions will include:

- Prompt notification and ongoing updates to C-NLOPB
- Notification to CCG, Marine Communications and Traffic Services (MCTS)
- Communication of Equinor's actions to stakeholders including the media, Equinor employees and contractors, affiliates, partners, vendors, support contractors, governmental authorities, and non- governmental organizations
- Management of the business, risk, compensation, and legal implications resulting from an incident

6.2 Priorities in Response Management

In any spill response, Equinor's response priority will be people, environment, assets and

reputation. Following this philosophy, Equinor will safely mitigate the effects of the spill in a way that results in the greatest net environmental benefit (see Section 7.3.2). The measures implemented will be reasonable and will be taken after consultation with Regulators. Reasonableness will be based on safety, impact to the environment, practicality, and cost-effectiveness. Response strategies, including cost, are determined by ECRC through the ICS planning process. Equinor may consult with and seek input from C-NLOPB who will, in turn, consult with supporting federal and provincial government agencies and NEEC.

6.2.1 Oil Spill Response and Emergency Response

Oil spills may occur in conjunction with other facility emergencies such as fires or explosions, loss of well control, marine or aircraft incidents. Response to an emergency event which threatens personnel will always be Equinor's first priority. During an emergency, oil spill response actions will be limited to preparations for onshore management and the activation of corporate resources, response contractors, equipment, and personnel. Active spill response operations will be undertaken after the emergency has passed (see below).

In the event of an emergency that results in a General Platform Alarm, any spill response will be secondary to the emergency response. Safety of personnel will be the priority.

6.2.2 Realistic Expectations for Government and the Public

During an offshore oil spill, government agencies and the public will have high expectations for response activity. It is important that Equinor develops a clear idea of what constitutes a reasonable response (see Section 7.3.3) in the current operating situation and communicates this expectation to external stakeholders.

6.2.3 Prioritized Objectives

In line with the response priorities of people, environment, asset and reputation, it is important that clear response objectives be established by the Incident Commander to ensure that both environmental and stakeholder issues are addressed. These objectives will become guidelines for all subsequent planning and for tactical decision making. The prioritized objectives will be especially helpful when conducting a Spill Impact Mitigation Assessment (SIMA) (see Section 7.3.2) or in making Triage decisions (see Section 7.3.3).

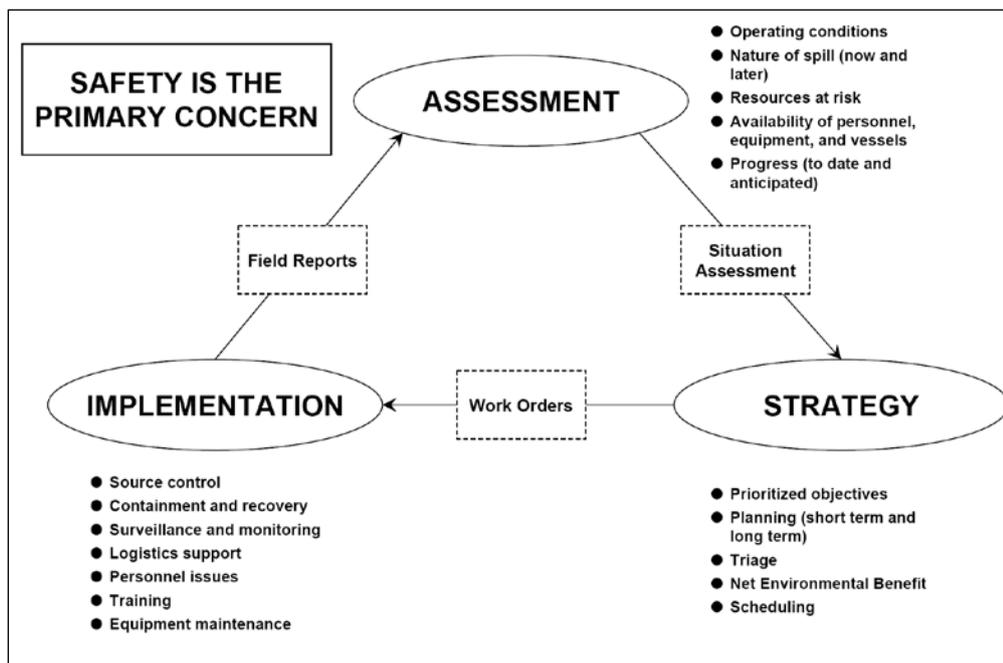
The list of objectives will depend upon circumstances at the time of the spill. Following are three objectives that will always be guidelines for any spill response:

- To ensure the safety of all personnel affected by the spill or the response
- To implement actions to counter and reduce the adverse impacts of the oil spill or the response effort on the environment
- To ensure that company, private, and public property are not placed at risk as a result of Equinor's response actions

6.3 Response Cycle

Response management is a cycle in which you understand the problem, develop a solution, and then complete the task (see Figure 6-2). In a larger oil spill incident, this process may be repeated many times as conditions change.

Figure 6-2: The Response Cycle



6.4 Notification for All Offshore Spills

Oil spill notification procedures are described in detail in Appendix C and are included as part of the Tier 1 process diagram in Figure 6-3. In summary, the notification process is:

- As soon as is practicable following the spill event, the Asset Manager (or designate) will notify the Canadian Coast Guard via the Marine Communications and Traffic Services (MCTS). This will be confirmed by either the operational line HSE or, if activated, the Liaison Officer as part onshore Equinor Line 2 IMT.
- At the same time, the Equinor On-Site Supervisor will contact the on-call Operations Section Chief.
- After the call, the Equinor On-Site Supervisor will send the completed spill notification form (see Appendix C) to the Equinor office.
- Equinor will notify the C-NLOPB Duty Officer, as per the C-NLOPB *Incident Reporting and Investigation Guidelines*.
- Internal Equinor notifications will be completed by either the operational line HSE or, if activated, the Liaison Officer in the onshore Equinor Line 2 IMT as per the Equinor Canada Ltd. Offshore Line 2 Incident Management Plan.

6.5 Level of Response Management by Tiers

For response planning purposes, the severity of potential oil spills has been divided into three levels, or Tiers. This classification allows for an appropriate initial response to each level of spill, and explicitly provides for the escalation of the response should the potential impact of the spill increase. Each Tier will involve a successively higher level of management and response effort. The parameters to be considered in selecting the appropriate Level of Response (Tier) include:

- Size and nature of the oil spill
- Environmental and operational conditions at the time of the spill
- Vessel and equipment availability
- Numbers and qualifications of personnel available at site
- On-site waste oil storage
- Corporate exposure to risk and liability as a result of the oil spill

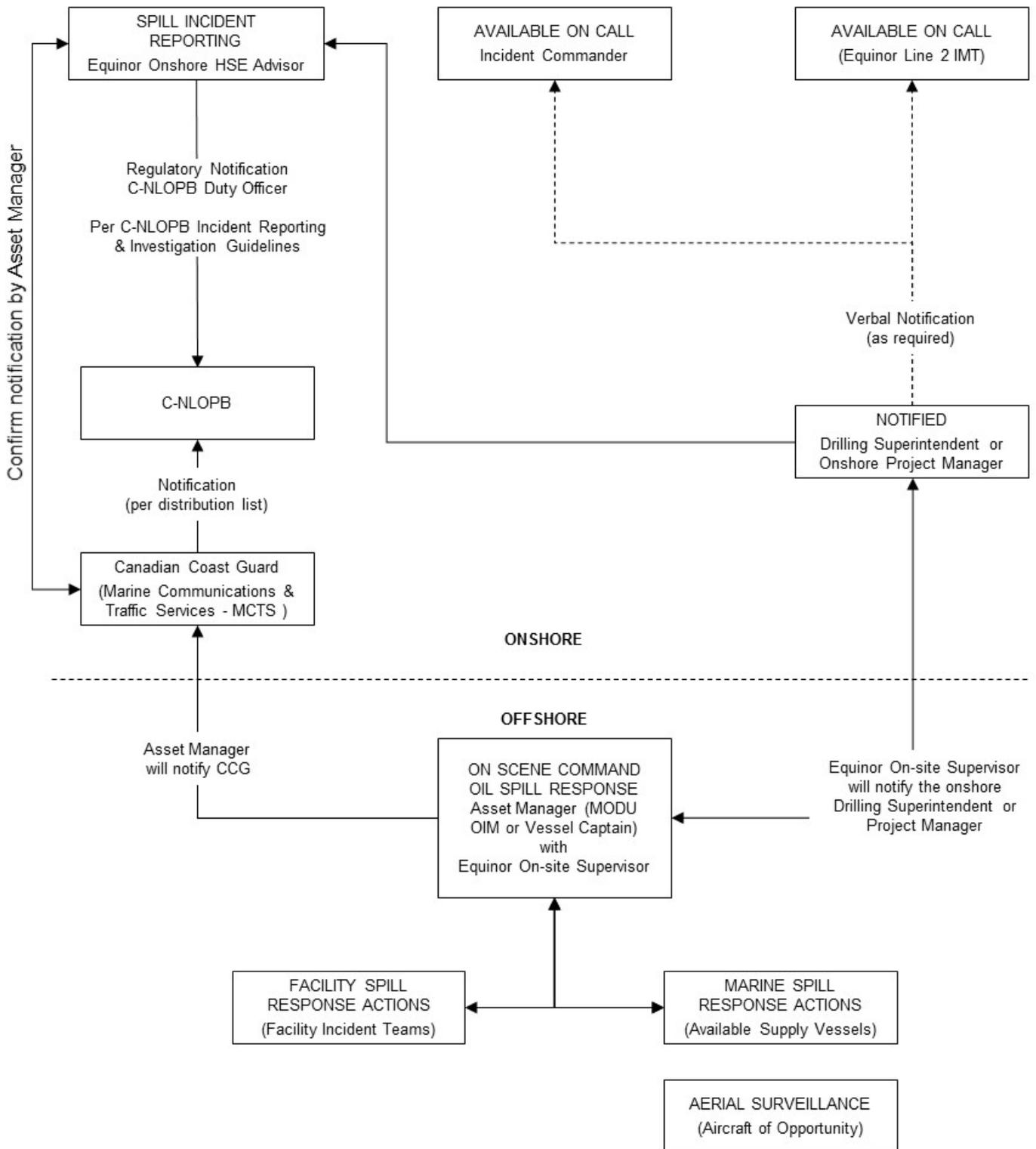
6.5.1 Tier Definitions

A **Tier 1** spill poses the least threat of impact, and can be managed using resources available on site.

A **Tier 2** spill response requires local shore-based support and contract resources in addition to those offshore already.

A **Tier 3** oil spill has the potential to significantly impact the environment and affect the future of the Equinor and partner companies. A Tier 3 response involves considerable corporate and contract resources, drawn from local, regional, and international sources.

Figure 6-3: Tier 1 Oil Spill Response Management Organization



6.5.2 Communications Links

An important action in any spill incident is that the next level of response support is immediately alerted to the incident, and maintained on standby status in case the need for response escalates. The ability to summon additional management, personnel, and physical resources in an escalating response situation is critical. If there is any doubt regarding the classification of a spill, the worst credible case will be assumed. Figure 6-4 illustrates the evolution of the response as an incident escalates in scale.



In a General Platform Alarm (GPA) event, formal response-related communications between the facility and onshore will be between the Equinor On-site Supervisor and the Operations Section Chief in the onshore ICP. At this stage, through the Operations Section, the Oil Spill Supervisor in the ICP will begin preparations for an anticipated oil spill response effort that will follow any emergency actions. If there is no emergency, the Oil Spill Supervisor or the ECRC Operations Supervisor onshore will communicate with the designated On-Scene Commander offshore (see Figures 6-3 and 6-5).

Overall management will require interaction and consensus between many participants. Communication between the onshore Equinor Line 2 IMT and the ECRC functional groups will occur (as described in the following sections).

6.6 Tier 1 Spill Response Management

Response to the spill will be managed offshore. Involvement of shore-based resources will be at the discretion of the onshore Incident Commander and would typically be limited to stakeholder and media support, and incident reporting. Onshore Tier 2 response personnel and response contractor will be notified. Management structure will expand with time to meet the needs of an escalating spill incident.

A Tier 1 Response is characterized by:

- Spill is small and under control
- Response Command and management by facility personnel
- Operational response by supply vessel(s) at site at the time
- Environmental impact is minor and only in the immediate area of the spill
- Potential/actual media attention

6.6.1 Onshore involvement does not include the activation on the Equinor Line 2 IMT. Tier 1 Command

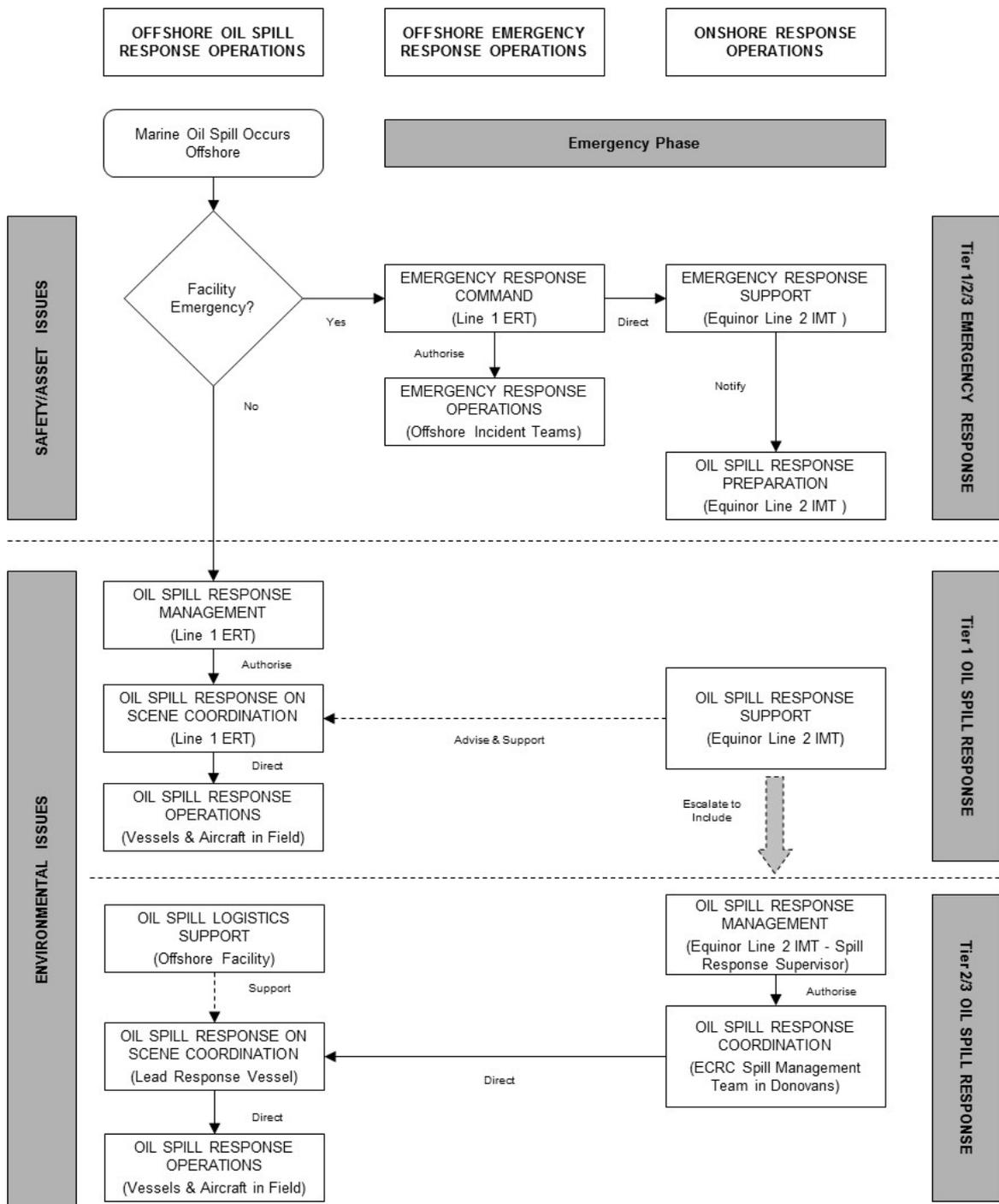
The facility Asset Manager (OIM or Vessel Master) will be designated as the On-Scene Commander, and will assume command and control of the response. Any operations undertaken in response to the spill will be coordinated from the offshore facility's Central Control Room or bridge.

Spill response operations on the facility will be executed by facility Incident Teams or other designated operations personnel under a local On-Scene Coordinator.

6.6.2 Tier 1 Onshore Support

Although a Tier 1 spill response will be undertaken using resources available at the site, onshore personnel may be tasked with support actions. Actions could include regulatory notifications, follow-up investigation, and activities associated with resumption of operations.

Figure 6-4: Transition from Emergency Management to Oil Spill Management



6.7 Tier 2 & 3 Spill Response Management

At Tier 2, the response will require onshore management through the activation of the onshore Equinor Line 2 IMT. This could include additional personnel, equipment and/or logistics resources that can be sourced locally. Figure 6-5 illustrates the command structure for Tier 2 and Tier 3 level of response.

A Tier 2 Response is characterized by:

- Spill is moderate and under control
- Potential for impact extends beyond the spill site
- Probable media attention
- Designation of an Oil Spill Supervisor and activation of Eastern Canada Response Corporation (ECRC)
- Oil spill command transferred to onshore Oil Spill Supervisor under the authority of the Operations Section Chief
- Mutual Aid response capability may be activated (see Section 5.4)

At Tier 3, the incident has the potential to significantly impact the environment and affect the future of the Equinor and partner companies. A Tier 3 Response is characterized by:

- Spill is large and not under control
- Potential for significant environmental and/or navigation impact
- Corporate personnel are activated
- Significant business disruption
- Community and/or public safety impact
- Regional or global media attention

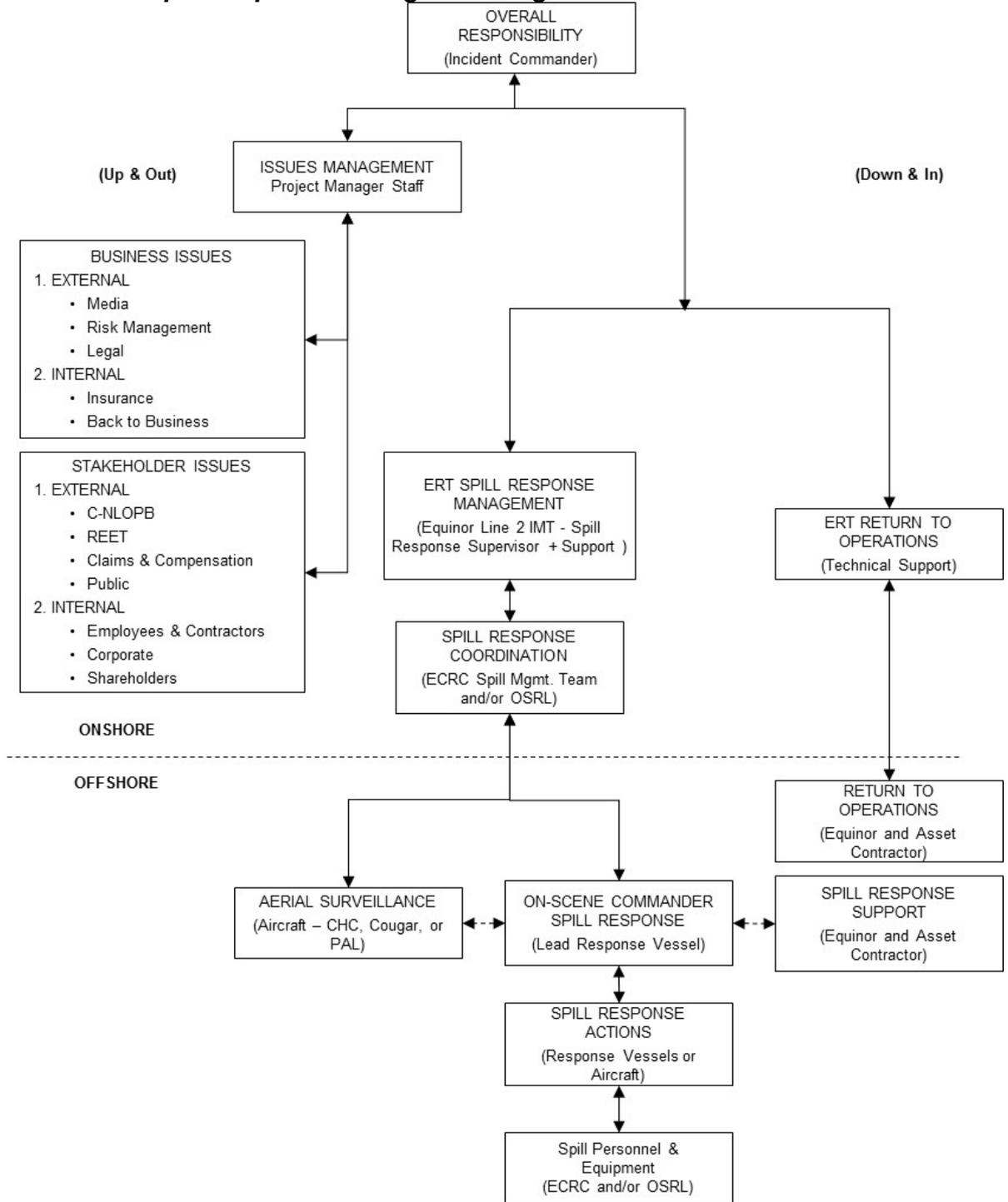
6.7.1 Tier 2 & 3 Onshore Management

At the time of a Tier 2 or Tier 3 incident, the offshore facility will seek onshore assistance from the onshore Equinor Line 2 IMT through the on-call Operations Section Chief. If the anticipated oil spill response requires significant support from shore, the Incident Commander will designate an Oil Spill Supervisor within the onshore Equinor Line 2 IMT.

Once the emergency situation has passed and as the oil moves away from the facility of origin, onshore Equinor Line 2 IMT will direct the operational response (“Down and In”) and the offshore facility will make efforts to get back to normal operations. The role of the facility on the response will then be to provide logistics support. The onshore Oil Spill Supervisor will activate the Eastern Canada Response Corporation Spill Management Team (ECRC SMT). The Incident Commander and his staff will respond to the “Up and Out” issues resulting from the incident offshore.

If deemed necessary, OSRL will be activated to provide Tier 3 technical advice, resources and expertise, with a focus on chemical dispersants (if warranted by a NEBA / SIMA), and source control.

Figure 6-5: Tier 2 & 3 Oil Spill Response Management Organization



The roles of each of these teams will be integrated as follows: The onshore Equinor Line 2 IMT will:

- Be responsible for providing operational support to the offshore facility emergency response
- Maintain contact with the offshore facility after the emergency phase has passed and while the oil spill response continues
- Support the offshore facility in its efforts to return to normal operations
- Provide the infrastructure for Equinor's long term operational spill response management effort
- Support specific oil spill response efforts directed by the onshore Equinor Line 2 IMT Oil Spill Supervisor and the ECRC Spill Management Team

The onshore Equinor Line 2 IMT Oil Spill Supervisor will:

- Have responsibility for any operations related to any Tier 2 or 3 oil spill response
- Have specific roles for overseeing the efforts of contractors in managing and implementing the response effort and to interact with government regulators
- Be responsible for coordinating, planning and budgeting of response operations and presentation of these plans to the Incident Commander for financial approval

The Incident Commander's Staff (Issues Management) will:

- Be responsible for direct interaction with internal and external stakeholders affected by the spill (corporate, community, and media) and for non-operational interaction with government regulators
- Be responsible for interaction with regulatory agencies (C-NLOPB, CCG, Environment Canada, DFO, etc.)
- Rely on the Oil Spill Supervisor for information from the field; therefore, close interaction between these two teams is essential

The ECRC Spill Management Team (SMT) will:

- Monitor conditions and response activities offshore
- Develop tactical and strategic plans for field operations (ECRC plans must be authorized by the Equinor Incident Commander before implementation)
- Coordinate response actions in the field

OSRL will:

- Provide Tier 3 technical advice, resources and expertise, particularly as it relates to chemical dispersants and source control.

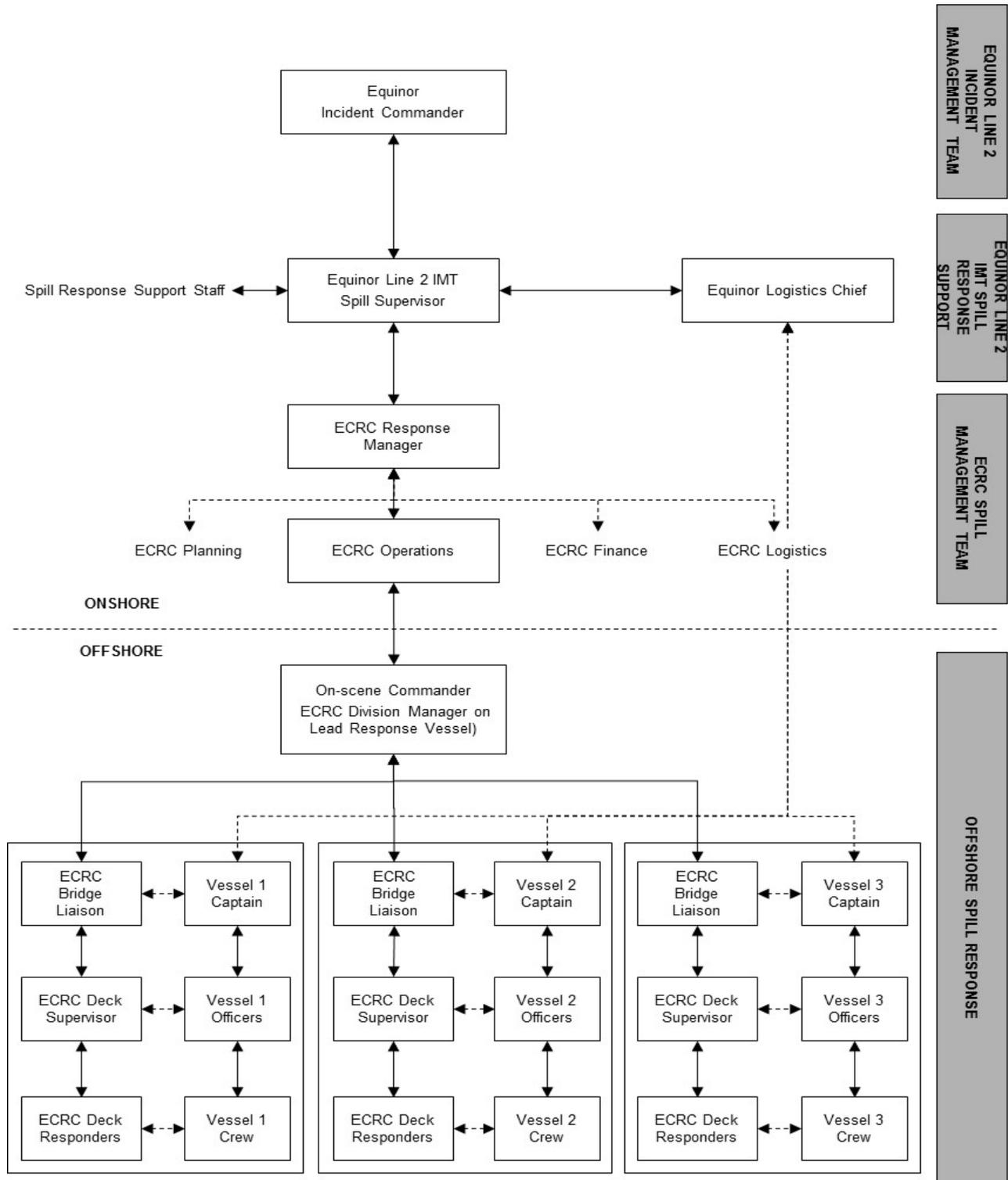
6.7.2 Tier 2 and 3 Issues Management

In larger oil spills, a number of corporate and community issues will arise that require attention simultaneously with the operational spill response. While the onshore Equinor Line 2 IMT and the Oil Spill Supervisor support the operational response, the Incident Commander's Staff must address such corporate issues as:

- Employee and shareholder concerns
- Insurance
- Risk management
- Legal affairs
- Community issues represented by public concern, the media, One Ocean members, and government

While there are a number of government agencies that will have concerns during an offshore spill response, the C-NLOPB, under its mandate defined by the Accord Acts, will act as Lead Agency (see Figure 2-1 and Section 5.4 of Appendix M).

Figure 6-6: Oil Spill Response Field Management



6.7.3 Coordination in the Field

Field activities will be directed at site by an On-Scene Commander (OSC) (see Figure 6-6). ECRC lead field person on-scene would be a Division Manager. The OSC will be the formal interface between the Oil Spill Supervisor or the ECRC Operations Supervisor onshore and the vessels implementing the response offshore. All plans authorized by Equinor onshore will be transmitted to the OSC for execution. The OSC will then be responsible for ensuring that tactical operations are consistent with those plans in the context of the local operating environment and for issuing all field progress reports. Apart from issues relating to the ultimate safety of each vessel (Master's responsibility) and charter issues (Equinor Logistics Section Chief's responsibility), all vessel operations will be directed by the OSC.

6.8 Incident Command System in an Equinor Oil Spill Response

Equinor's management of the planning, coordinating, and documenting of the oil spill response will be influenced by the principles of the Incident Command System (ICS), the management structure that is used in spill response management by ECRC. Key features of this system include:

- Management is divided into five functional groups (Command; Planning; Operations; Logistics and Finance). While each group has its own responsibilities, considerable interaction between groups is necessary to ensure efficiency in the response operation
- Regardless of the phase of the response, the ICS process relies on a continuing cycle of planning and implementation (see Section 6.3, - Response Cycle)
- Plans are developed for a defined period and are focused on meeting defined objectives in consideration of operating conditions, available resources, and performance during previous operating periods
- The planning cycle provides the basis for both tactical and strategic resourcing. When plans are authorized by Equinor, ECRC receives both financial and operational authority to proceed with the next stage of the response

Equinor has established a Global Incident Management Assist Team (GIMAT) that can support the local Incident Management Teams in all locations. The GIMAT is built upon an Incident Command System (ICS) oil spill response model and comprises people from the Equinor group who are trained to lead Sections, Branches and Units in the ICS organization, as well as Deputy Incident Commanders and the Command Staff.

The GIMAT has response competence relevant to the respective functions. Implementation of GIMAT will not cause any changes to line responsibility in the company.

The GIMAT is deployable as necessary, depending on scale of the incident such as:

- Tier 3 level oil spill incident when a full IMS structure and operational planning cycle is required.
- Tier 2 level oil spill incident which could be long lasting and resource intensive.
- At incidents of a magnitude larger than the incident management team is able to handle.

The GIMAT will muster if the Incident Management Team asks for such assistance. The Incident Commander together with the Crisis Manager (Line 3 CMT), are the ones that initiate the mobilization of these extra resources.

The GIMAT is not on call and mustering and arrival on location will be as soon as practicably possible based on available resources from the GIMAT organisation and Equinor Functional Support Teams (FST).

The details of the roles and checklists with the Equinor Incident Management System are included in the Equinor Incident Management Handbook (published August 2015). This process is described in Equinor work requirements SF700.

The roles of the five ICS functional groups are described briefly in Sections 6.8.1 – 6.8.5.

6.8.1 ICS Command

- Focus – What are the prioritized objectives?
- Duties – Overall vision, clarity of purpose, health and safety of all personnel

6.8.2 ICS Planning

- Focus – What has happened? What is happening now and in the future?
- Duties – Information management and action plans

6.8.3 ICS Operations

- Focus – What is being done to meet the objectives?
- Duties – Organize and manage all operations directed at containing and recovering spilled oil, protecting sensitive resource areas, cleaning impacted areas and disposal of waste

6.8.4 ICS Logistics

- Focus – What is needed to support operations?
- Duties – Provide personnel, vessels, aircraft, trucking, equipment, communications and security

6.8.5 ICS Finance

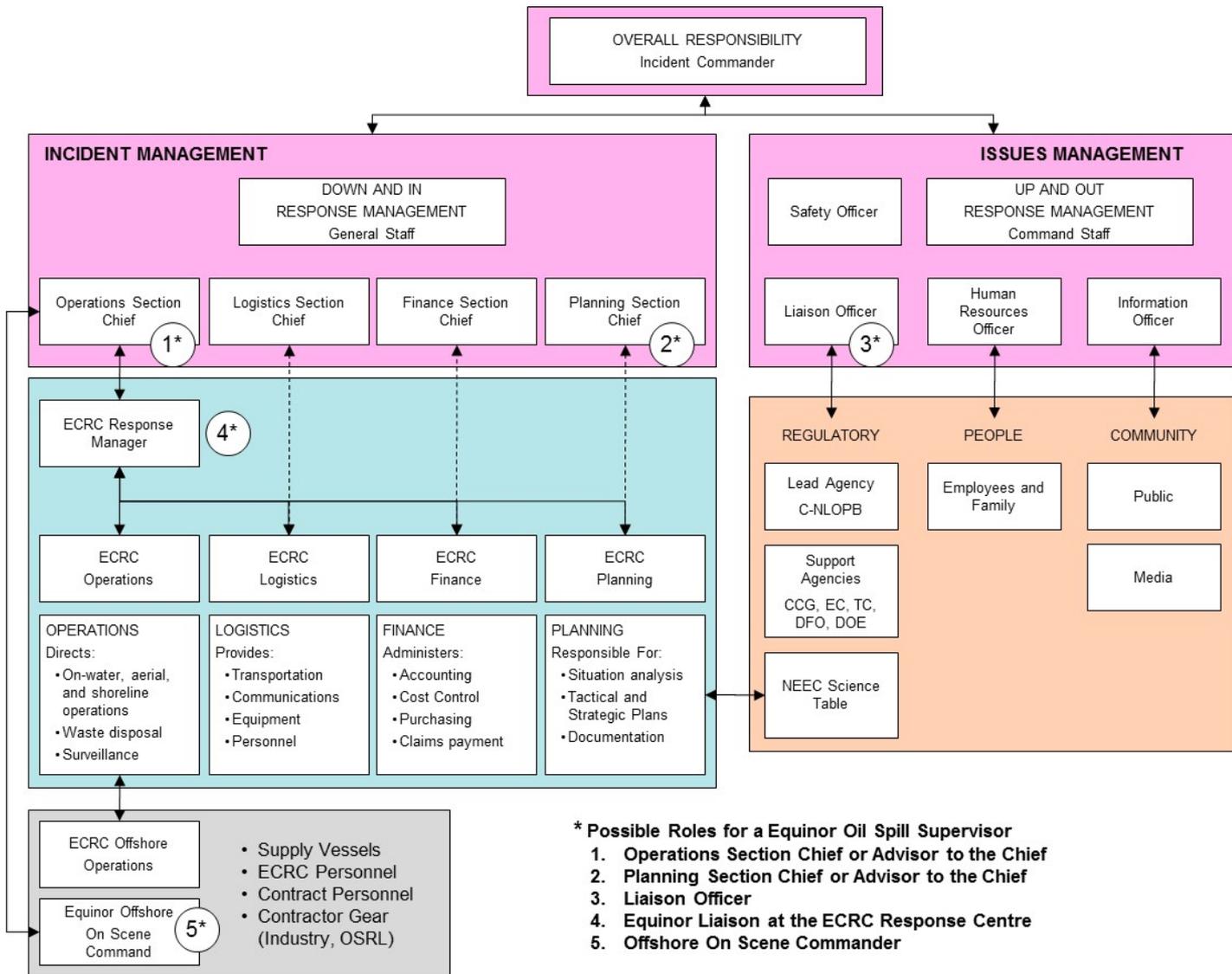
- Financial Control
- Accounts payable, insurance claims, cash flow and cost monitoring

6.9 Equinor, ECRC and OSRL Management Integration

Response to a Tier 3 oil spill will require the integration of Incident Management and Issues Management (see Section 6.1). Figure 6-7 explains how:

- The ECRC and OSRL ICS-based spill management systems links to the onshore Equinor Line 2 IMT through the Equinor Oil Spill Supervisor to create an infrastructure to address the response to the offshore incident
- The Equinor Oil Spill Supervisor and his staff addresses the issues that result from the original incident
- Equinor will assist as requested including internal oil spill expertise. Corporate support may be integrated into the local response infrastructure created by the liaison between the Equinor ICP, ECRC Spill Management Team and OSRL.

Figure 6-7: Equinor Integrated Tier 2 & 3 Oil Spill Response Management Structure



6.10 Phases in an Oil Spill Response

Regardless of the size or duration of the incident, the planning activities in an oil spill response can be characterized by an Emergency Period (reactive first response followed by tactical actions) and a Proactive Period (longer-term planning). Evolution of planning is shown in Figure 6-8

6.10.1 Emergency Period

Activation Phase: Identification of the incident; alerting of all personnel; securing the site; and first response at site.

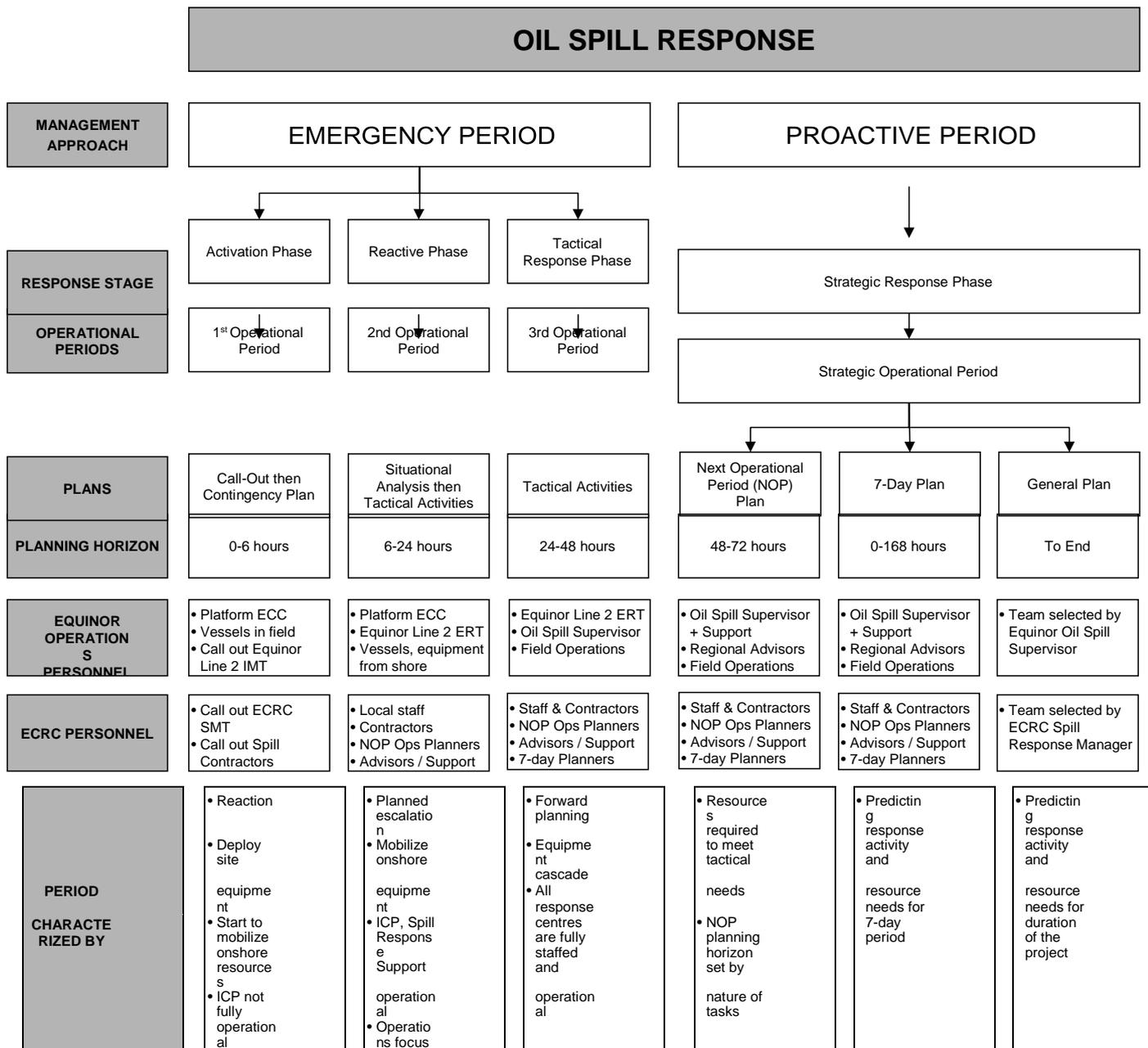
Reactive Phase: Characterized by the implementation of pre-determined plans using resources that are pre- staged or immediately available.

Tactical Response Phase: Planning horizons are relatively short; resources may be a limiting factor.

6.10.2 Proactive Period

Strategic Response Phase: Longer-term strategic planning.

Figure 6-8: Planning Process at Each Stage of a Tier 2 & 3 Oil Spill Response



7 Offshore Response Actions

7.1 Generic Operational Actions

Although every oil spill is a unique event requiring its own approach and methods, most oil spill response actions follow a common course. The generic steps in most oil spill response actions are outlined in Sections 7.1.1 to 7.1.6.

7.1.1 Immediate Actions

- Alert facility management, emergency responders, onshore line management (for Tier 1 spills), onshore Equinor Line 2 IMT (for Tier 2 and 3 spills), and the CCG MCTS
- Secure spill site, ensure personnel safety, and stop the flow of product

- See Appendix C – Oil Spill Notification Procedures

7.1.2 Development of Tactical and Strategic Response Plans

- Assess situation and available resources
- Identify prioritized objectives
- Determine the best strategy for immediate response
- See Section 7.4 – Response Strategy

7.1.3 Response Options

- Implement response actions
- See Section 7.3 – Operational Response Options

7.1.4 Spill Response Management

- Management through transition from a reactive to a proactive approach
- Address internal and operational issues as well as external, corporate, regulatory, and community issues as part of a standard process
- Document all plans and activities
- See Section 6.0 – Oil Spill Response Management

7.1.5 Monitoring (Ongoing Situation Assessment)

- Monitor effectiveness of actions
- Monitor environmental effects of spill
- See Appendix J – Surveillance and Observation Procedures.

7.1.6 Waste Oil Storage and Disposal

- Store waste temporarily
- Dispose of waste
- See Appendix I - Oil Spill Waste Management

7.2 Initial Response Actions

The initial actions to be taken in the event of a spill may be severely restricted or impossible if the platform is in a General Platform Alarm (GPA) situation (see Section 6.2.1, and Appendix D). During a GPA, all facility crew will have proceeded to muster stations; the spill itself will assume secondary importance to the cause of the GPA. In spill situations that do not result in a GPA, the sequence of actions listed in Table 7-1 is recommended.

Priorities are: Safety; Environment; Property; Notification; and then Action (only after the situation is understood and if conditions permit).

Table 7-1: Initial Actions in Any Offshore Oil Spill Response

Personnel	Action
Workers at Spill Site	<ul style="list-style-type: none"> ▪ Notify Central Control Room and seek assistance; ▪ Secure spill site for safety; and ▪ If safe to do so, stop the flow of oil and ensure that oil does not reach sea surface.

Asset Manager	<ul style="list-style-type: none"> ▪ Assess spill (type of oil, volume, on deck/water); ▪ Conduct situation analysis (weather/sea state conditions, platform activities, standby vessel status, equipment availability, potential slick trajectory); ▪ Determine practical response strategy (see Section 7.4); and ▪ Notify Canadian Coast Guard Marine Communications and Traffic Services at (709-772-2083)
Equinor On-site Supervisor	<ul style="list-style-type: none"> ▪ Advise the on-call Operations Section Chief via Telelink @ 757-7707; ▪ Complete and send the Equinor Oil Spill Notification form to the Equinor ICP; and ▪ Be point of contact between rig and Equinor ICP in St. John's.
Standby Vessel Master	<ul style="list-style-type: none"> ▪ Evaluate spill and operating conditions; ▪ Advise Asset Manager in developing response strategies (see Section 7.3); and ▪ Implement on-water response (see Section 7.3)
ICP Operations Section Chief	<ul style="list-style-type: none"> ▪ Provide assistance as required to the operation offshore; ▪ Determine if level of response is appropriate and revise as necessary; ▪ In a Tier 2 spill, notify the Equinor Oil Spill Supervisor; and/or ▪ Activate the onshore Equinor Line 2 IMT
ICP Liaison Officer or operational line HSE	<ul style="list-style-type: none"> ▪ Advise C-NLOPB Duty Officer of the spill; ▪ Provide written notification of spill to C-NLOPB within 24 hours of incident; ▪ Complete internal Equinor notifications; and ▪ Confirm notification of CCG-MCTS by Asset Manager.
ICP Oil Spill Supervisor	<ul style="list-style-type: none"> ▪ Activate ECRC if required; and ▪ Establish onshore support to oversee all Tier 2 or 3 oil spill response actions;

7.3 Operational Response Options

At the time of an oil spill, appropriate countermeasures, based on present conditions, must be implemented quickly. While every spill response will be unique, there are only a few basic techniques that can be practically considered. The response options available during a spill offshore Newfoundland are listed in Table 7-2. The capability at site for any of these options is limited to response to small (Tier 1) spills only. For larger spills (Tier 2 or 3), greater resources from other facilities or from shore will be required. Equipment available offshore to respond to a spill incident is listed below in Table 7-3.

Table 7-2: Potential Response Options at Site

Option	Comments
Natural Dispersion / Degradation (Appendix G)	<ul style="list-style-type: none"> ▪ Weathered oil breaks into small droplets by wave action ▪ Droplets are naturally metabolized by micro-organisms ▪ Effectiveness improves as wind and seastate increase ▪ Only option when winds > 25-30 kts, sea state > 2.5-3.0 m
Surveillance and Monitoring (Appendix J)	<ul style="list-style-type: none"> ▪ Always necessary ▪ Helps determine scope of problem prior to forming a strategy ▪ Confirms effectiveness of response actions ▪ More difficult in darkness or low visibility ▪ Monitoring is the only response option in poor conditions ▪ Oil spill tracker beacons are on the Equinor supply/standby vessels

Mechanical Dispersion	<ul style="list-style-type: none"> ▪ Prop washing ▪ High pressure water spray (Fire Monitor) ▪ Good for small spills/thin layers of oil, not good for crude ▪ Quick implementation, no equipment required
Chemical Dispersion (Appendix Q)	<ul style="list-style-type: none"> ▪ Authorization required from C-NLOPB before application, subject to the acceptance of the Equinor Flemish Pass NEBA / SIMA ▪ Airborne application will be considered in a Tier 2/3 spill situation
Containment and Recovery (Appendix K)	<ul style="list-style-type: none"> ▪ Effective but limited by sea state, encounter rate of boom system, and need for high logistics support ▪ Low recovery rates as slick spreads ▪ Two available options: <ul style="list-style-type: none"> - Sorbent boom on Equinor supply/standby vessels; and - Single Vessel Side-Sweep System containers stored on the <i>SeaRose FPSO</i>, the <i>Hibernia Platform</i>, the <i>Hebron Platform</i> and <i>Terra Nova FPSO</i>.
Wildlife Measures (Section 8.0 and App. L)	<ul style="list-style-type: none"> ▪ Surveillance necessary to determine distribution of wildlife and potential for impact by floating oil ▪ Techniques for deterring wildlife are limited to loud noise ▪ Consult onshore Equinor Line 2 IMT Oil Spill Supervisor in any incident involving wildlife
Oil and Wildlife Sampling (Appendix L)	<ul style="list-style-type: none"> ▪ Sampling kits have been placed on Equinor's supply/standby vessels for the collection of oil and water, oil on wildlife, and oiled wildlife samples ▪ ECCC requires that all oiled birds collected be retained as samples for further assessment on shore ▪ A permit is required for collection; Equinor will obtain permit annually

7.3.1 Tier 1 Response Options

Table 7-3 below outlines the various response equipment available at site that would be used in a Tier 1 spill situation.

Table 7-3: Oil Spill Response Equipment Available at Site

Equipment	Storage Location	Deployment Time
GPS/Satellite spill tracking buoys	1 MetOcean iSphere buoy on each Equinor supply/standby vessel	Less than 5 minutes
8" sorbent boom (Appendix K)	320 ft. of boom and 100 ft. of pom poms stored onboard Equinor supply/standby vessels	Less than 30 minutes
Oil sampling kit (Appendix L)	Facility; all Equinor supply/standby vessels	Immediate. Suggest use of FRC, if safe

The only oil spill equipment to be stored or used on the facility will be that material staged for deck spills as documented by the facility's Shipboard Oil Pollution Emergency Plan (SOPEP).

7.3.2 Tier 2/3 Response Options

In the event of a Tier 2/3 spill situation, there a number of response equipment options available through Equinor contractual arrangements with ECRC and OSRL. The list of Tier 2/3 equipment

can be found in in Appendix E.

7.3.2.1 Chemical Dispersants

Equinor is assessing the option of adding chemical dispersant usage as a Tier 1 and Tier 2 operational spill response tool.

The Accord Acts have been amended to enable the use of dispersants during Tier 1 events. The amended act (Bill C-22) has been passed by Parliament of Canada and new regulations pursuant to Bill C-22, pertaining to the use of dispersants, have also be enacted. These regulations prescribe a list of dispersants approved for use and detail the requirements for a Spill Impact Mitigation Assessment (SIMA) review prior to dispersant approval.

ECL maintains a strategic SIMA to determine if the Tier 1 and Tier 2 use of dispersants has a net environmental benefit and will present this to the C-NLOPB Chief Conservation Officer (CCO) for consideration within the regulatory timeline requirements.

It is likely for a larger Tier 2 or Tier 3 spill, that resources may be mobilized to support an offshore oil spill response, including the potential use of chemical dispersants. As part of this effort, OSRL may be asked to provide an airborne chemical dispersant capability to Equinor's response. Airborne operations will only be considered in cases where a large volume of oil can be effectively treated. An operational plan will be required before dispersants are applied.

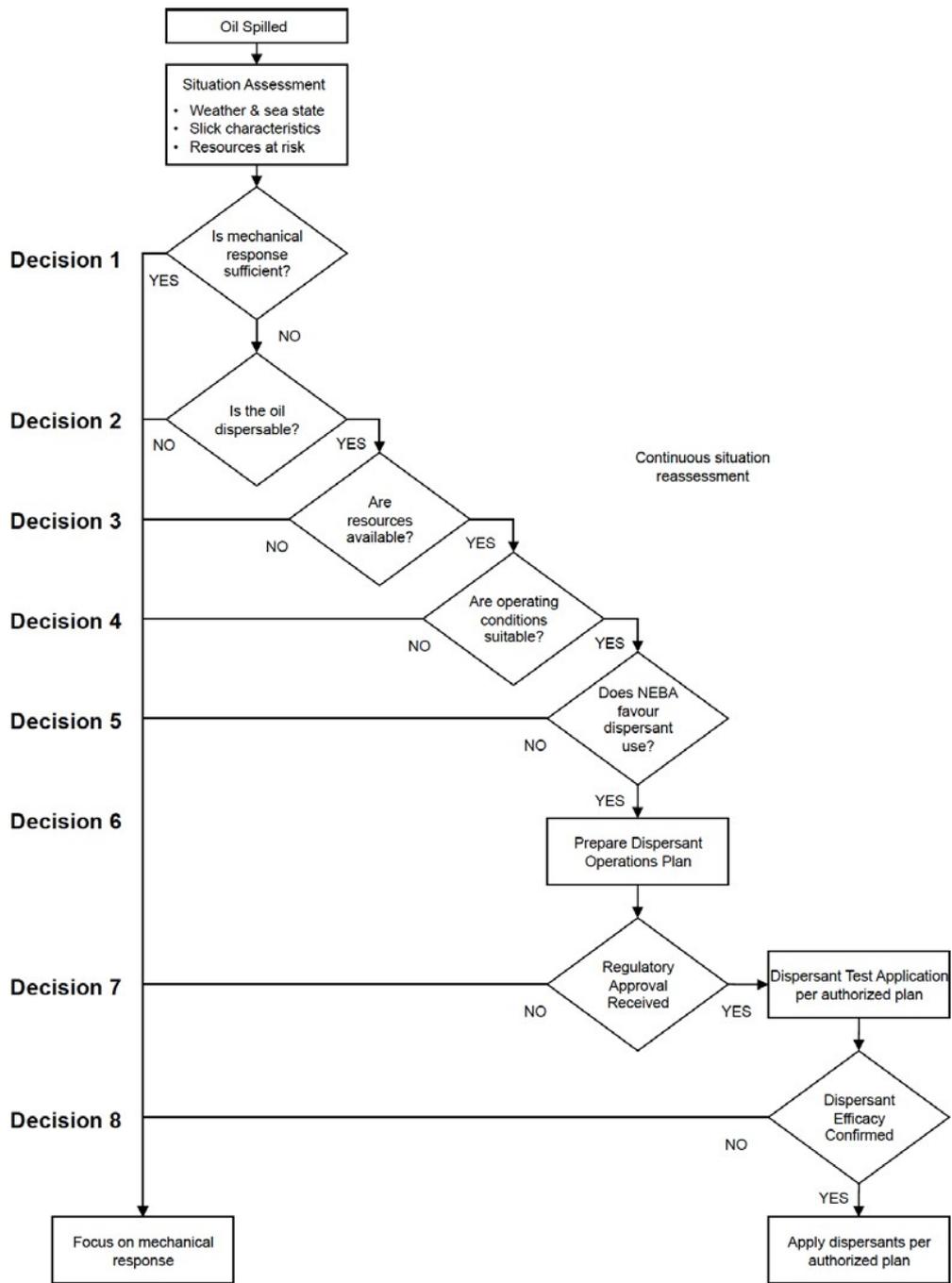
Equinor will apply to C-NLOPB for a permission to use dispersants should this application be considered to be an appropriate countermeasure. Dispersant application will commence as soon as operationally possible after written approval is received.

The content of Equinor's application will address the critical information required in following the decision making process outlined in *Figure 7-1*. The decision to use chemical dispersants will be based on two basic questions:

- Will the chemical be effective in dispersing the oil on water?
- Will the use of dispersants result in a net environmental benefit?

OSRL will be tasked with providing aircraft, spray equipment, chemical dispersant, and operational personnel. OSRL will also take the lead in planning dispersant missions and in on water monitoring of dispersant efficacy. OSRL personnel will be attached to the Operations and Planning Sections and will work closely with ECRC.

Figure 7-1: Dispersant Decision Making Process



7.3.3 Response Strategy

7.3.3.1 Situation Assessment

No action should be taken in response to a marine oil spill without an understanding of the nature of the incident (see Section 6.3). This appreciation will provide managers with the information required to decide:

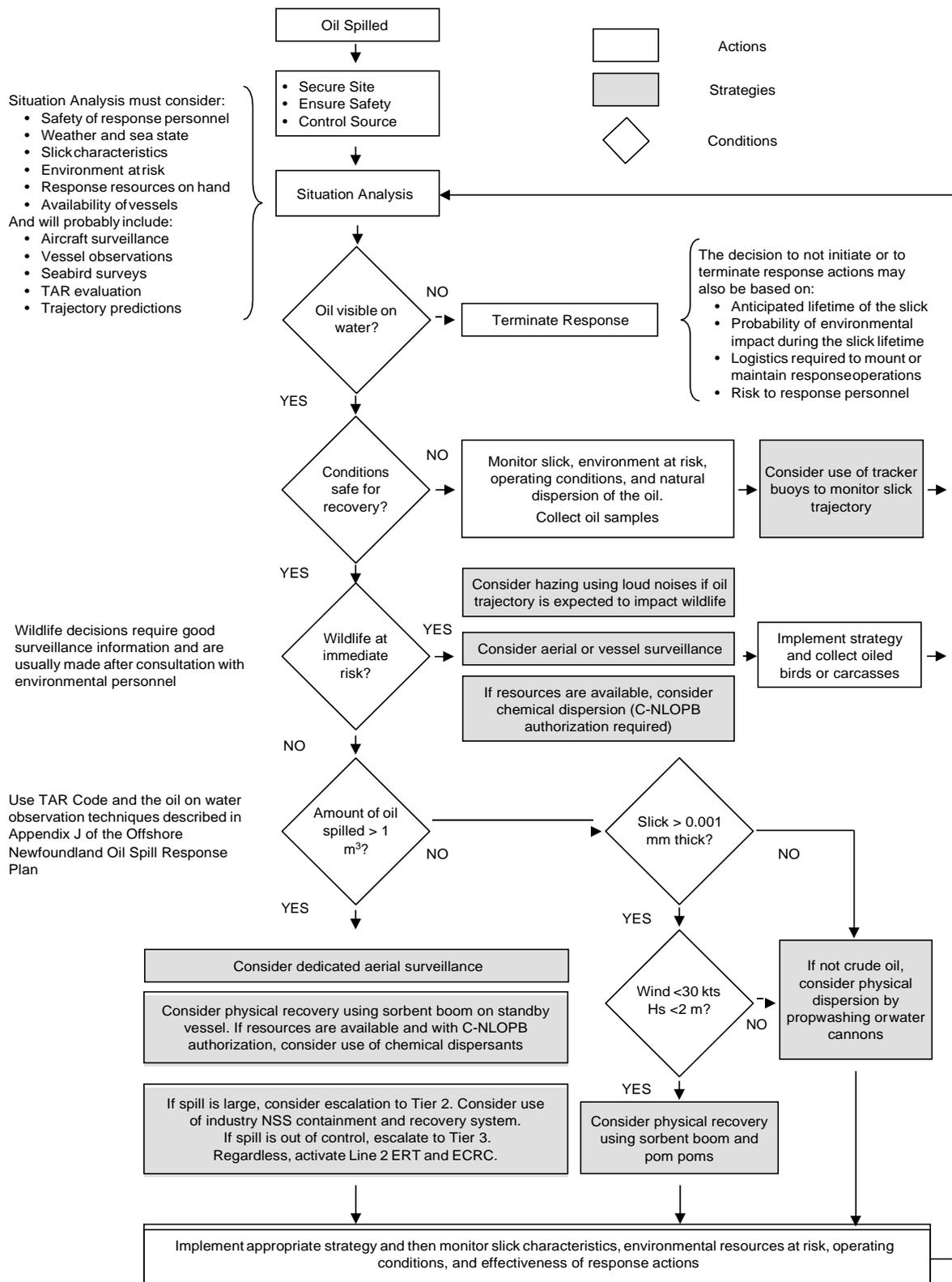
- Whether a response is necessary
- The safest manner to conduct that response
- Where and how to implement that response in the most effective manner

The decision process (see Figure 7-2) requires ongoing collection and assessment of information from the spill site, including:

- Nature and type of spill
- Trajectory, volume, and weathering of oil
- Weather and environmental conditions
- Resource sensitivity
- Logistics, equipment and personnel availability
- Effectiveness of the response to date

Based on this assessment, a response option is selected that can best achieve the response objectives, and the selected option is evaluated for operational feasibility.

Figure 7-2: Decision Making Process for Oil Spill Response



7.3.3.2 Spill Impact Mitigation Assessment (SIMA)

Each spill response option, or combination of options, can have some impact on the site environment beyond that of the spill itself. The Equinor response strategy is based on the principle of SIMA. SIMA takes into consideration the advantages and disadvantages of response actions and their impact on the environment. Some response methods have the potential to cause adverse

environmental impacts, but may be justifiable because of overriding benefits and/or the avoidance of further, more serious, impacts.

When determining the SIMA, Equinor will consult with ECRC and C-NLOPB to:

- Weigh relative importance of resources at risk
- Consider local and regional priorities
- Lead to decisions that are best for a particular location

Three steps to ensuring that the SIMA is achieved include:

- Identify and prioritize resources at risk according to environmental sensitivity and resource value
- Compare available response options to each other and to natural recovery
- Select the response options that result in the greatest environmental benefit and/or least adverse effects on key resources

7.3.3.3 Triage

The process of triage is a way of setting priorities in an emergency as the basis for allocation of resources to achieve the greatest benefit. In a response, resources will be limited and actions will be severely affected by the time frame of the spreading oil. By recognizing these constraints, the triage process can focus decision making on:

- Allocation of resources for maximum benefit
- Monitoring issues that may require attention later
- Where NOT to use resources because of anticipated relative ineffectiveness

7.3.4 Response Options

Strategy development should consider the range of offshore spill response options detailed in Section 7.3. The decision when to use each of these is based on an evaluation of the current and forecast operating conditions, the anticipated characteristics of the oil, the effectiveness of the option, and effects on the environment.

Table 7-4 provides guidelines for possible actions at each level of response.

Table 7-4: Possible Actions at Each Response Level

		Spill Description	Offshore Response		Onshore Response
Tier 1	Type:	<ul style="list-style-type: none"> • Batch • Instantaneous 	Facility:	<ul style="list-style-type: none"> • Control spill source • Notify onshore Drilling Superintendent or Project Manager • Notify CCG MCTS • OIM is On Scene Commander 	<ul style="list-style-type: none"> • Notify C-NLOPB • Ensure CCG MCTS been notified • Notify the operational line HSE or, if activated, the Liaison Officer in the onshore Equinor Line 2 IMT
	Volume:	<ul style="list-style-type: none"> • Small 			
	Source:	<ul style="list-style-type: none"> • Identified • Stopped 	On Water:	<ul style="list-style-type: none"> • Mechanical dispersion • Sorbent side sweep • Monitor slick/sheen • Waste management 	
	Continued Risk:	<ul style="list-style-type: none"> • Negligible 			
	Examples:	<ul style="list-style-type: none"> • Process, equipment, offloading, flaring or fuel transfer leaks 			
	Type:	<ul style="list-style-type: none"> • Batch 	Facility:	<ul style="list-style-type: none"> • Tier 1 actions plus • Activate onshore 	<ul style="list-style-type: none"> • Tier 1 actions plus • Onshore Equinor
	Volume:	<ul style="list-style-type: none"> • Moderate 			

	<p><i>Source:</i></p> <ul style="list-style-type: none"> Identified Controlled 			<p>Equinor Line 2 IMT</p> <ul style="list-style-type: none"> Incident Commander in ICP is responsible for overall management of response On Scene Commander may be sent from shore to be on lead response vessel to be responsible for directing field operations 	<p>Line 2 IMT mobilizes onshore ICP.</p> <ul style="list-style-type: none"> Onshore Equinor Line 2 IMT mobilizes ECRC to advise on or direct all field operations. Mobilize additional personnel and equipment resources Incident Commander interaction with onshore Equinor Line 2 IMT & stakeholders Dispersant approval application to C-NLOPB, unless pre-approval in place
	<p><i>Continued Risk:</i></p> <ul style="list-style-type: none"> Diminishing 				
	<p><i>Examples:</i></p> <ul style="list-style-type: none"> Larger leaks from process or pipeline or offloading system 	<p>On Water:</p>	<ul style="list-style-type: none"> Large on-water response effort with equipment and vessels mobilized from shore, as required Possible dispersant usage Monitoring and surveillance 		
Tier 3	<p><i>Type:</i></p> <ul style="list-style-type: none"> Batch or continuous 	<p>Facility:</p>	<ul style="list-style-type: none"> Increased Tier 2 actions plus Provide operational support, as required Possible well control Possible down-manning or abandon 	<ul style="list-style-type: none"> Tier 2 actions plus Dispersant approval application to C-NLOPB Mobilize OSRL Mobilize Equinor Corporate Line 3 Oil Spill Response Support from outside St. John's May require extended well and source control effort 	
	<p><i>Volume:</i></p> <ul style="list-style-type: none"> Large 				
	<p><i>Source:</i></p> <ul style="list-style-type: none"> Loss of well control May be unidentified May be uncontrolled 				
	<p><i>Continued Risk:</i></p> <ul style="list-style-type: none"> Persistent Increasing 	<p>On Water:</p>	<ul style="list-style-type: none"> Large on-water response with equipment and vessels mobilized from shore Possible dispersant usage Monitoring and surveillance Well and source control may be required 		

7.3.5 Countermeasures Decision Making

Figure 7.2 provides a process for deciding initial countermeasures to be used in developing a strategy. Critical to the process is constant situation analysis (see Section 7.3.3.1) to determine the nature of the problem posed by the spill and the effectiveness of response actions. Guidelines to be followed when developing a strategy include:

SAFETY IS FOREMOST

- The Asset Manager should make an informed decision in consultation with the Master of the standby vessel and local observers
- Background information or technical advice can always be provided by the Equinor Oil Spill Supervisor, ECRC and OSRL
- When high sea states prohibits a response, natural dispersion of oil is enhanced
- Prop washing or high pressure water spray is the best solution for a thin oil sheen. Prop washing does not work well for crude oil

- Sorbent boom should be considered in the initial stages because of the speed of deployment and the high probability of capturing the slick before spreading
- Dispersant application may be an appropriate response; application process should be initiated as early as possible to avoid delays with possible execution
- Every planned task should include frequent situation analysis
- Aerial surveillance is very useful. Use aircraft (contracted helicopters, PAL, Transport Canada flights, etc.) working in the area at the time of the spill. If the volume of oil spilled is unknown, arrangements should be made for dedicated aerial reconnaissance
- Waste disposal will be a problem in every spill response and could create bottlenecks in operations. Wherever possible, oily waste products should only be handled once to prevent secondary contamination
- Personnel handling oily waste should ensure that clothing and personal protective equipment are protected by a disposable suit

8 Environmental Issues

In the event of an offshore spill incident, Environment and Climate Change Canada (ECCC) Canadian Wildlife Service (CWS) is focused on the potential impacts to marine birds in the vicinity of the spill. Seabirds that live on or close to the sea surface are vulnerable to an offshore oil spill event. Small amounts of oil on feathers will affect a bird's buoyancy and insulation. The degree of impact would be determined by their seasonal distribution, behavioral characteristics and reproductive strategy. Prey is obtained by a variety of feeding methods: foraging at the surface, at shallow depths, and by diving deep underwater. Prey type and feeding method will affect the susceptibility of various species.

Fisheries and Oceans Canada (DFO) mandate is to protect fish or invertebrate populations and marine mammals from possible oiling. Marine mammals and sea turtles are not considered to be at high risk from the effects of oil exposure. For marine mammals and sea turtles, it is probable that only small proportions of populations are likely at risk at any one time, as they are typically present in low numbers.

8.1 Seabird Distribution

While seabirds occur off eastern Newfoundland throughout the year, the abundance and distribution of species varies considerably. Some taxa, notably large gulls and kittiwakes, many alcid species, fulmars and shearwaters, are abundant year-round. Others are absent or scarce in the winter months, such as the northern gannet, terns, cormorants and phalaropes. Ivory gulls and waterfowl (including harlequin duck and Barrow's goldeneye) are most likely to be present in the winter months, outside the breeding season. At several hundred kilometres offshore, the Flemish Pass is outside of the reported foraging range of most species breeding at the major seabird colonies in coastal Newfoundland, although northern gannets and Leach's storm-petrels will travel hundreds of kilometres from their colonies over multi-day foraging trips (Garthe et al. 2007; Pollet et al. 2014a).

Figure 8-1 illustrates the seasonal presence of marine-associated bird species as described in the preceding sections. In the summer months, the greatest abundance of seabird species breeding in Newfoundland is concentrated around nesting colonies (Fifield et al. 2009). However, seabirds are relatively long-lived, and for many species, individuals do not breed until four or five years of age. Large numbers of these non-breeding birds may be found far offshore during the breeding season. Some Southern Hemisphere-breeding species spend their winter in the northwest Atlantic, including most of the world's great shearwaters (Brown 1986).

The fall months are an important time for Leach's storm-petrels and migrating landbirds (e.g., passerines, which tend to be nocturnal migrants). The Leach's storm-petrel is the species most frequently found stranded on platforms and vessels in and near the Regional Study Area, with the vast majority of strandings occurring in September and October, following the departure of fledglings from nearby breeding colonies (Davis et al. 2015).

During the winter months, tens of millions of dovekies travel several thousand kilometers from their breeding grounds to their core winter distribution within the highly productive waters off eastern Newfoundland (Fort et al. 2012, 2013). In the winter months, the waters off eastern Canada support a large proportion of the Icelandic population of great skuas (Magnusdottir et al. 2012). A recent tracking study of black-legged kittiwakes has shown that the northwest Atlantic, especially the shelf edge off Newfoundland, is an important wintering area for kittiwakes, with most of the Atlantic population overwintering in this region (Frederiksen et al. 2012). Most of eastern Canada's population of Common Murres and approximately a third of the region's Thick-billed Murres overwinter in the waters off eastern Newfoundland (McFarlane Tranquilla et al. 2013).

Refer to section 6.2 Flemish Pass Exploration Drilling Program Environmental Impact Statement (EIS) (Statoil 2017) for discussions regarding individual bird species.

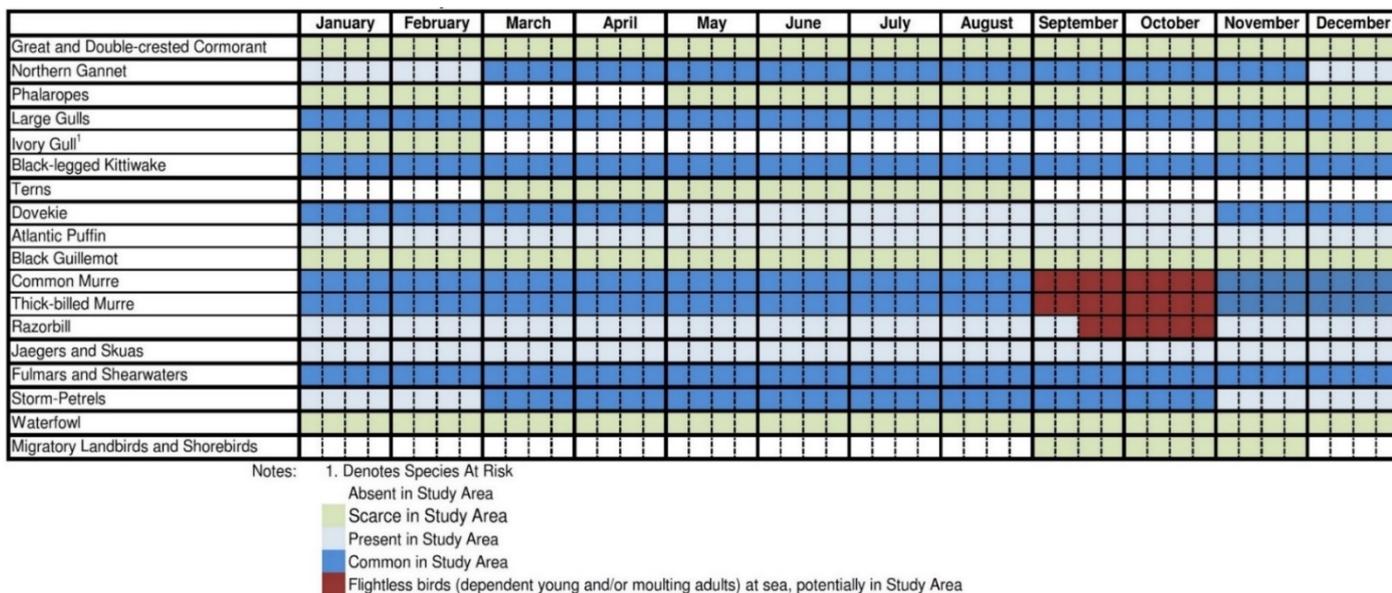


Figure 8-1 Summary of Seasonal Presence of Marine-associated Birds off Eastern Newfoundland

March to April

8.1.1 Seabird Operations

Due to seabird and marine mammal populations offshore Newfoundland, wildlife monitoring operations will be a critical component of offshore oil spill response.

The following wildlife monitoring activities will be undertaken in the event of an offshore spill:

- Downwind aerial and vessel surveillance in advance of the drifting slick to identify presence seabirds and mammals at risk.
- Employment of bird hazing techniques to deter seabirds from the affected area, using vessels, aircraft, and noise making devices. The intention is to scare birds away from oil on water.
- Recovery, evaluation, and appropriate treatment for affected seabirds (collect carcass, euthanize, or recover for rehabilitation) and delivery of birds to a central location for shipment to shore.

8.1.2 Monitoring

Wildlife deterrent techniques can be used to encourage wildlife to move from or avoid locations that are in the projected pathway of the spill. All deterrent techniques will be determined in consultation with CWS.

Hazing techniques can be used to deter wildlife from entering into spill areas. Hazing should be

carefully planned and executed, with guidance from CWS, since hazed wildlife could move into other areas of the spill. Hazing techniques include:

- Noise, including pyrotechnics, shotgun or pistol-launched projectiles, air horns, motorized equipment, and recorded bird alarm sounds;
- Scare devices, including deployment of Mylar tape and scarecrows (either human or predator effigies) on affected beaches;
- Herding wildlife using aircraft, boats, or other vehicles; and
- Hazing by human presence.

Deterrent programs should consider the potential effects of human activity and disturbance on sensitive habitats and species. Disturbance of breeding areas should be avoided if possible.

8.1.3 Handling

Seabirds affected by a spill incident may be collected in the field for transport to shore and rehabilitation. Seabird handling procedures are outlined in the *Equinor Canada Ltd. Seabird Search, Handling and Observation Protocol*

Equinor has access to the industry seabird rehabilitation centre and has a pool of trained responders that can assist the on-call veterinarian in cleaning and caring for oiled seabirds.

If required, Equinor will establish an additional temporary bird cleaning centre near St. John's. The proposed process for cleaning birds will be based on the guidelines established by Tri-State Bird Rescue and Research, Inc. for the establishment and operation of a treatment facility for oiled birds.

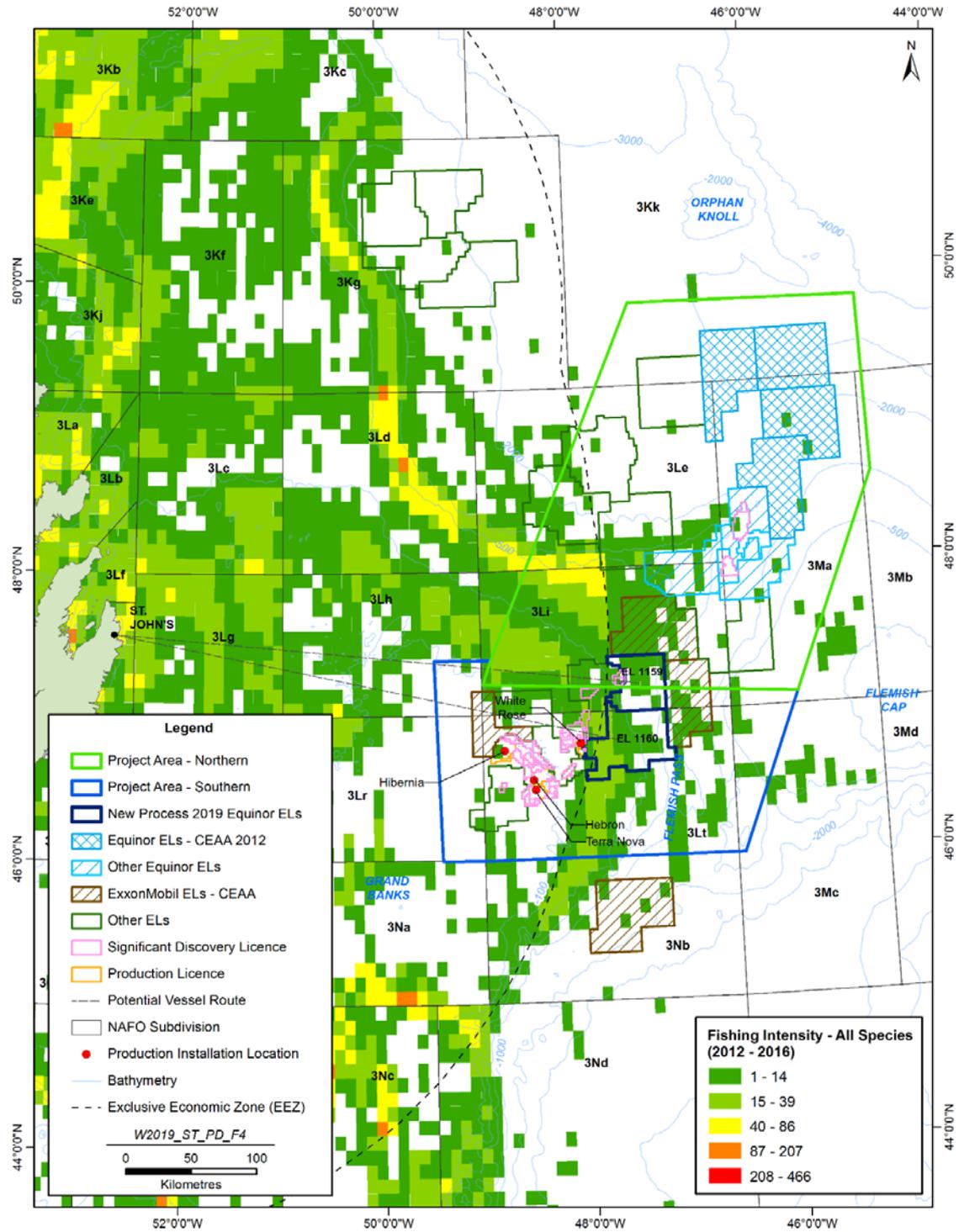
8.2 Other Wildlife

Whales, dolphins, seals and turtles also occur in the operations area. In general, cetaceans and seals do not exhibit large behavioral or physiological reactions to limited surface oiling, incidental exposure to contaminated food, or ingestion of oil. Effects of oil on sea turtles are reversible, but there is a possibility that foraging abilities may be inhibited by exposure to oil. The very small number of sea turtles transiting the area makes exposure to spilled oil unlikely.

8.3 Fisheries

Profiles of the principal commercial fisheries undertaken in the Project Area are provided in the Flemish Pass Exploration Drilling Program EIS (Statoil 2017) and will also be included in the 2020 EA Update that will be submitted to the C-NLOPB. Figure 8-2 shows the distribution of fishing activities from 2016. It is noted that this figure will be updated and included in the 2020 EA Update.

Figure 8-2: Annual pattern of fishing activity for all species based on 2016 data



There is the potential for the environmental effects of an oil spill to have an impact on human activities and employment in the offshore, primarily as the spill might affect surface transportation (fishing and support vessels) and the activities of other offshore operators. In the unlikely event of a vessel transiting the spill area, there is also the potential for health effects on crew, and the logistics of vessel decontamination.

Equinor has and will continue to work to minimize any interference with the established fishing industry operating in the Offshore Newfoundland area. This will be done through various means including, but not necessarily limited to:

- Engagement via Newfoundland and Labrador's One Ocean that brings together oil and fishing industry representatives to discuss plans and issues of mutual interest and concern
- Develop and implement a compensation program for damages resulting from Project activities. This compensation program will be developed in consideration of *the Compensation Guidelines Respecting Damages Relating to Offshore Petroleum Activities* (C-NLOPB and CNSOPB 2017) and as revised. This program will outline compensation procedures for actual loss or damages to commercial fishers, including Commercial-communal fishers, attributable to the operator resulting from a spill or debris, or expenses incurred in taking remedial action. Actual loss or damage includes loss of income or future income; loss of hunting, fishing, or gathering opportunities; and costs and expenses incurred for action taken to remedy a situation involving a spill, including measure to control or clean a spill. In addition, where circumstances require, Equinor will comply with the *Canadian East Coast Offshore Operators Non-Attributable Fisheries Damage Compensation Program* (CAPP 2007)
- Develop the compensation program in consultation with Indigenous groups with communal-commercial licenses that overlap with the Project Area prior to commencing the first exploration drilling program.
- A single point of contact (SPOC) will be established during project activities to facilitate communications between fishers and Equinor regarding gear loss/damage and other compensation matters.

8.4 Indigenous Groups

Equinor has engaged with identified Indigenous groups since September 2017 regarding the proposed approach to emergency preparedness and response, as well as a number of other topics. Engagement has included notification of participation in the federal environmental assessment process, project updates, and a series of workshops held in collaboration with other operators seeking to drill exploratory wells offshore eastern Newfoundland.

In addition to individual meetings with Indigenous groups in Nova Scotia and New Brunswick in 2017, Equinor and various other offshore exploration operators met with Indigenous groups in April and October 2018 in six separate workshops in St. John's, NL, Moncton, New Brunswick and Quebec City, Quebec. One component of the sessions was to discuss oil spill prevention and spill response planning in detail. The content developed for discussion at the workshops was based on each company's and industry best practices, regulatory requirements and concerns and questions raised by Indigenous groups participating in the environmental assessment process - during the review of the EIS and through information requests.

Oil Spill Response topics discussed with Indigenous groups at the workshops included the following:

- Overview of oil spill modelling (i.e. what is modelling, why do we do oil spill modelling, what is the approach and overall conclusions);
- Oil fate processes in water;
- Spill preparedness and response (e.g. regulatory requirements associated with preparedness, control and barriers, response and recovery, Spill Impact Mitigation Assessment (SIMA), surveillance and monitoring, etc.);

-
- Well control and emergency response (i.e. blowout preventer [BOP], capping and containment, and relief well);
 - Overview of response options (i.e. natural attenuation, mechanical containment and recovery, in-situ burning, and dispersants);
 - Shoreline monitoring and response;
 - Response capabilities (e.g. tiered response, exercises, etc.);

In response to concerns expressed by Indigenous groups that they be notified and maintained informed of operations and in the case of an emergency (such as an oil spill), Equinor along with four other operators, developed an Indigenous Fisheries Communication Plan in consultation with Indigenous groups that outlines a protocol to be followed in the event of an incident or spill that may result in adverse environmental impacts.

Refer to Appendix C for notification requirements to Indigenous groups as per the *Indigenous Fisheries Communication Plan* with various other exploration drilling operators (Equinor et al. 2019).

As per the conditions in the EA Decision Statement (CEA Registry 2019), Equinor will provide Indigenous groups a copy of the final OSRP. Equinor will also provide Indigenous groups with results of spill response exercises, once reviewed by the C-NLOP.

8.5 Environmental Effects Monitoring (EEM)

The initial biophysical conditions of exploration and production sites are assessed as a baseline for comparison of environmental effects following an oil spill. The level of environmental monitoring activity following a spill is determined by spill volume, wind and sea conditions, the nature of the product spilled; the resources at risk and observed environmental impacts (i.e. oiled birds). The C-NLOPB will recommend if an EEM program relating to the spill should be undertaken, and Equinor, in cooperation with the C-NLOPB will determine the temporal and spatial scope.

- As outlined in the Decision Statement conditions (CEA Registry 2019), in the event of a spill that may cause adverse environmental effects, and as required by and in consultation with the C-NLOPB, EEM may include: Sensory testing of seafood for taint, and chemical analysis for oil concentrations and any other contaminants, as applicable;
- Measuring levels of contamination in recreational, commercial and traditionally harvested fish species with results integrated into a human health risk assessment, to be submitted to relevant authorities, to determine the fishing area closure status;
- Monitoring for marine mammals, sea turtles and birds for signs of contamination or oiling and reporting results to the C-NLOPB; and
- Monitoring benthic organisms and habitats in the event of a spill or other event that could result in smothering or localized effects to the benthic environment.

9 Health and Safety

In any oil spill response, Equinor's primary focus will be on personnel safety. Ultimate responsibility for safety will rest with the Asset Manager. At any time, regardless of the environmental severity of the oil spill or planned response actions, operations may be terminated if conditions are deemed to be unsafe by the Asset Manager.

9.1 General Health and Safety Procedures

Promotion of human health and safety is a fundamental objective of any Equinor operation. Safe work practices help to minimize health and safety risks to responders and the surrounding community. In addition to being familiar with the basic health and safety procedures outlined in this section, workers should refer to the site health and safety plan as well as company HSE manuals

for additional information.

Training is a key element in maintaining worker health and safety. All response workers should have basic oil spill response training, including, but not limited to:

- Site-specific safety and health rules
- Emergency procedures

9.1.1 Basic Safety Rules

The following basic safety and health rules should be followed by all spill response workers:

- Consider the potential safety and health hazards of the spill prior to responding
- Respond in teams, i.e. use the buddy system
- Incorporate safety and health risk evaluations into all action plans
- Obtain health hazard data from supporting industrial hygiene, safety and/or medical personnel
- Always inform someone of your next actions
- Refrain from entering or traveling in spill areas unnecessarily
- Avoid skin contact with spilled material – use gloves and protective clothing provided
- Do not rely on your senses (e.g., smell) to determine hazardous conditions; use detection devices
- Limit access to affected areas to designated responders only

9.1.2 The Buddy System

To provide a flexible and safe approach for response workers, a buddy system should be used during all response efforts. The minimum response team should include two people who perform the activity within direct line of sight of a third person who has communication or personnel resources to affect a rescue, if required.

9.1.3 Hand Communications Signals

Communications will be an essential part of any oil spill response field operation. In most cases, workers will be able to use radio or direct verbal communications. Under some circumstances, however, there may be difficulties in using electronic communications. For each operation, only hand communication signals known to all personnel should be used. For this reason, it is desirable that workers be in sight of each other as much as possible. Examples of occasions when hand communications will be necessary include:

- Directing winch or crane operations on deck
- When personnel are wearing masks or other protective equipment that will impair their ability to communicate verbally
- When background noise levels make use of verbal or radio communication impossible

Hand signals must be reviewed prior to the operation as part of the Pre-Job HSE meeting (see 9.1.4).

9.1.4 Pre-Job HSE Meetings

Even in an emergency no action is so urgent that workers cannot take the time to plan each task in advance. It is Equinor policy that all hazardous or non-routine work offshore be preceded by a Pre-Job HSE Meeting.

This practice includes all oil spill response operations. The purpose of the Pre-Job HSE meeting is to ensure that:

- All workers understand the task to be completed, associated risks and management of change
- All workers understand who is in charge and are aware of communications procedures
- The roles, procedures, and equipment required to complete the task are reviewed

-
- All anticipated hazards are discussed
 - Mitigative and contingency measures are established in the event that the operation does not proceed as planned
 - All workers understand that they have the authority and duty to stop any job if the task is or becomes unsafe

9.2 Risks

The potential health and safety risks associated with oil spill response efforts include (but are not limited to):

- Chemical exposures (may include exposure to oil mist, chemical dispersants, weathered crude oil, benzene and other volatile organic compounds, polycyclic aromatic hydrocarbons, and fumes)
- Physical hazards (may include ergonomic hazards, excessive noise levels, sun exposure and heat stress. Injuries may occur due to slips, trips, and falls on slippery or uneven working surfaces)
- Biological hazards (may include possible exposure to biting or venomous insects or other animals)
- Psychological hazards (may include witnessing traumatic injuries, inability to help affected wildlife)
- Fatigue (may result from working in a fast-paced environment, working extended shifts, and doing heavy labor or demanding cognitive tasks such as problem-solving and decision-making)
- Other safety hazards associated with the use of tools, equipment, machinery, and vehicles

9.3 Work Permits

Some of the work activity during an oil spill response offshore may require a work permit to be issued by the offshore facility or by the response vessel. The permit will document pre-work checks to be followed and precautions to be taken prior to commencing a task. Some activities that may require a permit include:

- Enclosed or confined spaces
- Outboard work
- Use of cranes, winches, or machinery on deck
- Use of chemicals
- Welding or cutting activities
- Mooring operations

The permit to work will be issued and monitored by a single authority. It is a written authorization which specifies:

- Work to be completed
- Specific risks and precautions
- Authorizing officer
- Name of the person to whom it is issued
- The period of time
- Protective clothing

Only persons named in the permit will be allowed to conduct the work. Those personnel must be made aware of the safety issues related to the work and working place instructions must be available.

9.4 Personal Protective Equipment

Protective equipment suitable for the exposures and risks should be used by all spill response personnel. Protective equipment will typically consist of:

-
- Hard hats
 - Gloves
 - Coveralls (Fire Retardant)
 - Boots
 - Safety glasses with side shields (or full face shield)

In some cases, additional protection may be required in the form of:

- Outer protective clothing (Tyvek or rain gear)
- Masks or respirator

The type of protective equipment selected is determined by the material that has been spilled, the tasks to be performed, and environmental factors. PPE to be used in a specific job will be specified during the planning for a task based on ship and ECRC policies. The use of PPE will be discussed during the pre-job HSE meeting.

9.5 Confined Space Entry

Spill response efforts sometimes require workers to enter confined spaces such as tanks or cargo holds that have limited access and poor ventilation. Prior to entry, the facility or vessel Safety Officer should establish entry procedures and the required protective equipment. The atmosphere must be tested before entry and continuously throughout the work. Portable equipment with pre-set audible and visual alarms should be used by workers in the confined space.

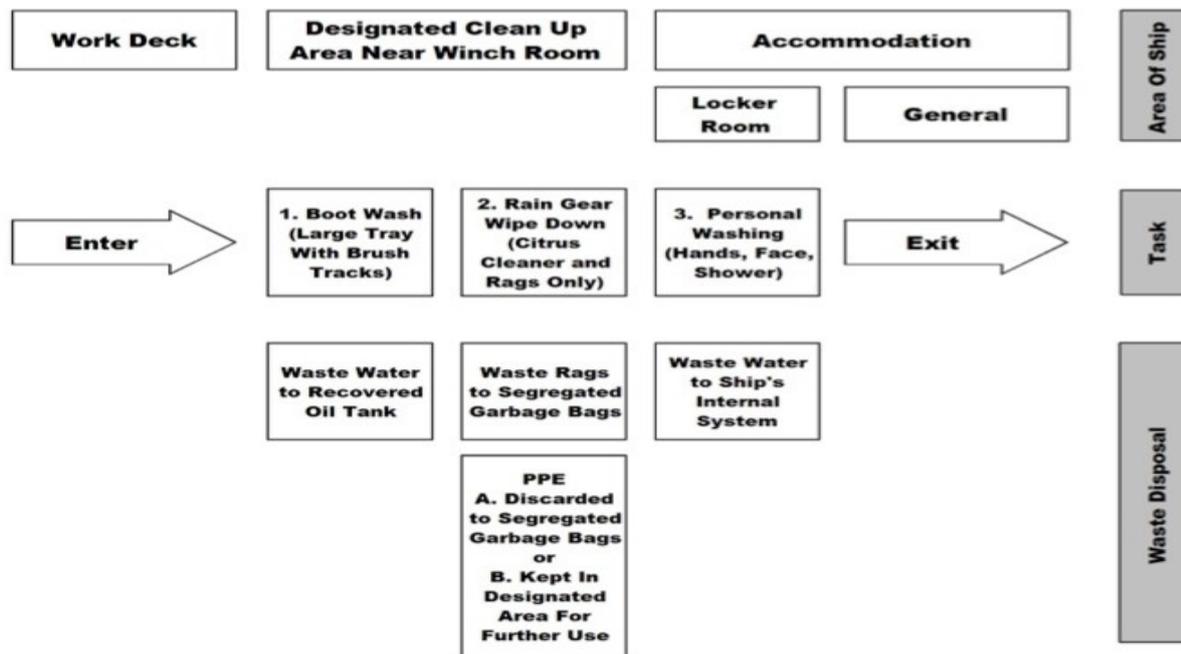
9.6 Transportation Safety

At some point, all offshore responders will be required to travel by vessel and/or helicopter as part of their assigned tasks. Equinor has well-established procedures for offshore travel which will apply to oil spill response actions. Responders will be expected to have a current offshore medical assessment and either current BST (helicopter transportation) or MED A-1 certification (Vessel work) prior to traveling offshore. All helicopter passengers or vessel supernumeraries will be properly briefed prior to travel either by Cougar or by the Safety Officer on the vessel.

9.7 Decontamination

Personnel involved in any oil spill cleanup operation can get very dirty. It is important to keep oily gear and dirty personnel out of berthing facilities in order to maintain satisfactory living conditions. One way to do this is to set up personnel decontamination facilities for workers coming off the job. This includes showers and lockers for workers to change into clean clothes as well as facilities for cleaning and storing soiled rain gear and rubber boots. A typical design of a decontamination facility can be set up in a serial arrangement as presented in Figure 9-1.

Figure 9-1: Progression in a Decontamination Facility



9.8 Housekeeping Rules

- Keep the work area as clean and tidy as possible
- Clean up any oil on deck immediately and dispose of waste properly
- Keep tools and equipment that are not in use must in their proper place

9.9 Good Advice

- Use the right tools for the job according to the manufactures directions for use
- Look where you put your feet / check your footing at all times;
- Watch for wet floors and deck areas
- Look up for suspended objects
- Never stand in the bight of any line or step over any line under tension
- Use the correct route between two locations and do not cut corners

9.10 Supervisor's Responsibilities

- Set a good safety example and emphasize safe work practices
- Ensure that workers understand their tasks and the associated risks
- Evaluate the capabilities and limitations of personnel and equipment
- When allocating work, include specific safety instructions to all those concerned
- Regularly inspect your area of responsibility and watch for potential hazards
- Supervise individuals in their work, correct dangerous practices; and be alert to the dangers and symptoms of fatigue.

9.11 Worker's Responsibilities

Every individual has a legal responsibility to act in a safe manner while making every effort to carry out the specified job.

- Stop work immediately if a hazardous situation develops or is recognized
- Always wear the specified protective clothing
- Follow approved safe working practices and use only appropriate tools
- Assess the capabilities, limitations and skills of yourself and your colleagues. Do not take on

-
- more that you can handle
- Prevent your colleagues from acting unsafely or dangerously
 - Be appreciative of any colleague who corrects you when you work unsafely and tactfully correct others
 - Participate actively in safety discussions and ask questions
 - Immediately report all accidents, injuries, near misses, and dangerous occurrences, no matter how trivial they may seem
 - Keep your workplace clean and tidy
 - Always inspect equipment and tools before use
 - When moving around the vessel, never run, jump or take unsafe shortcuts
 - Never let time pressure tempt you to take any chances
 - Ask “How Can I Make This Job Safer” and “What if the Unexpected Happens?”

10 Oil Spill Response Training

10.1 Modular Training Approach

The oil spill response training program is modular and structured to provide a variety of skills to the team that may be assembled in the event of an offshore oil spill. The overall program takes into account the following general areas:

- Safety
- Response Management
- Response Operations and Equipment training

All personnel who may be employed in the response to an offshore oil spill will receive training that will meet specific standards. The training program is aligned with those of the other Grand Bank Operators and reflects the close relationship between all Grand Banks Operators. A summary of training modules is presented in Table 10-1.

Table 10-1: Oil Spill Response Training Matrix

Emergency Response Role	Management Training			Operational Training		
	Tier 1 Spill Response Orientation	General Spill Response Orientation /	ICS 300 or Equinor Line 2 MT Training	Surveillance and Monitoring	Oil Sampling	Sorbent Boom System
ONSHORE PERSONNEL						
Incident Commander		X	X			
Operations Chief		X	X			
Liaison Officer		X	X			
Safety Officer		X	X			
Oil Spill Supervisor		X	X			
Human Resources Officer		X	X			
Information Officer		X	X			
Contractor Representative		X				
OFFSHORE PERSONNEL						
Facility Management	X					
Facility Weather/Environmental Observer	X			X	X	
Supply/Standby Vessel Crew	X			X	X	X

10.2 Oil Spill Response Management Training

Oil spill response management training is presented to the pool of onshore responders from which the Oil Spill Supervisors may be selected from. The training is delivered in four sessions (see 10.2.1-10.2.4).

Participants will include the onshore Equinor Line 2 IMT, appropriate external agencies, the ECRC Newfoundland Spill Management Team, and designated contractors. Offshore personnel will participate as required by the scenario.

10.2.1 Tier 1 Oil Spill Response Overview

This session will be provided to all rig and supply vessel personnel designated as spill responders offshore. The focus of this overview will be to provide an appreciation of:

- The Equinor’s response process
- The nature of offshore oil spills
- Notification procedures
- Roles of individual oil spill responders
- A review of response techniques and the decision process to use them
- Determining first response strategies

10.2.2 General Oil Spill Response Overview

This session is intended to provide onshore personnel with an overview of:

- Introduction to the Oil Spill Response Plan - offshore Newfoundland
- Nature of marine oil spills
- Oil Spill regulations Canada
- Offshore environmental issues
- Basic concepts of oil spill planning and management
- Offshore oil spill response operations
- Equinor spill management structure

10.2.3 ECRC Workshop – Oil Spill Supervisors

This session is intended to provide an understanding of the services which ECRC can provide during a spill response. This is a ½ day workshop between the Equinor Oil Spill Supervisors and ECRC with the objective to:

- Review ECRC Capabilities, Spill Management System and how they relate to Equinor’s ER management process

10.3 Operational Training

Equinor will ensure that key offshore personnel receive practical instruction in oil spill operations. Training will be done as soon as vessel crews are available at the beginning of the drilling program or during their first shifts offshore while under charter to Equinor. Emphasis will be in response to small (Tier 1) spills or the initial response to larger spills. Marine personnel will become familiar with on-water equipment through routine sessions with Equinor’s chartered offshore supply/standby vessels. Each crew of Equinor chartered vessels will receive hands-on training in:

- Oil on water observations
- Use of the sorbent boom
- Decontamination recommendations
- Oil and wildlife sampling procedures
- Seabird handling and observation protocols

In the event that dispersants prove to be a viable option, crew training will also be provided for that countermeasure technique.

10.4 Joint Operators’ Equipment Exercise (Synergy)

Equinor, in conjunction with other Grand Banks Operators, will participate in a full scale equipment deployment exercise near St. John’s on an annual basis. The exercise will include mobilization of Operator and ECRC equipment and personnel.

As required by the EA Decision Statement conditions (CEA Registry 2019), any deficiencies observed during this exercise will be provided to the C-NLOPB for review, and this OSRP will be revised to reflect the deficiencies identified during the exercise. As outlined in Section 8.4, results of this exercise will be provided to Indigenous groups once reviewed by the C-NLOPB.

11 Additional information

Appendices to this oil spill response plan are contained in a separate document - Equinor Canada Ltd. Offshore Newfoundland Oil Spill Response Plan Appendices

11.1 Definitions and abbreviations

Definition and abbreviations can be found in Appendix B of Equinor Canada Ltd. Offshore Oil Spill Response Plan Appendices

11.2 Changes from previous version

- Minor updates to text throughout (housekeeping updates)
- Update tables, data and maps

11.3 References

Equinor Canada Ltd. Offshore Newfoundland Oil Spill Response Plan Appendices

Equinor Canada Ltd. Seabird Search, Handling and Observation Protocol

Brown, R.G.B. 1986. Revised Atlas of Eastern Canadian Seabirds. Canadian Wildlife Service, Ottawa, ON.

CAPP. 2007. Canadian East Cost Offshore Operators Non-attributable Fisheries Damage Compensation Program. Available online: <https://www.capp.ca/publications-and-statistics/publications/117754>. Accessed September 2019.

C-NLOPB and CNSOPB. 2017. Compensation Guidelines Respecting Damages Relating to Offshore Petroleum Activity. Available online: <https://www.cnlopb.ca/wp-content/uploads/guidelines/compgle.pdf>. Accessed September 2019.

Davis, R. A., A.L. Lang, and B. Mactavish. 2015. Study of Seabird Attraction to the Hebron Production Platform: A Proposed Study Approach. Rep. No. SA1190. Rep. by LGL Limited, St. John's, NL, for Hebron Project, ExxonMobil Properties Inc., St. John's, NL. 28 pp. + appendices.

Equinor, ExxonMobil, BP Canada, CNOCC and Husky. 2019. Indigenous Fisheries Communication Plan: Operations and Emergency Response – Offshore Exploration: Eastern Newfoundland. June 26, 2019.

Fifield, D.A., Lewis, K.P., Gjerdrum, C., Robertson, and G.J., R. Wells. 2009. Offshore Seabird Monitoring Program. Environment Studies Research Funds Report, No. 183: 68 pp

Fort, J., Beaugrand, G., Grémillet, D., Phillips, R.A. 2012. Biologging, Remotely-Sensed Oceanography and the Continuous Plankton Recorder Reveal the Environmental Determinants of a Seabird Wintering Hotspot. PLoS ONE, 7(7): e41194.

Fort, J., Moe, B., Strøm, H., Grémillet, D., Welcker, J., Schultner, J., Jerstad, K., Johansen, K.L., Phillips, R.A., and Mosbec, A., 2013. Multi-colony tracking reveals potential threats to little auks wintering in the North Atlantic from marine pollution and shrinking sea-ice cover. Diversity and Distributions, 19(10), 1322-1332.

Frederiksen, M., Moe, B., Daunt, F., Phillips, R.A., Barrett, R.T., Bogdanova, M.I., Boulinier, T., Chardine, J.W., Chastel, O., Chivers, L.S., Christensen-Dalsgaard, S., Clement-Chastel, C., Colhoun, K., Freeman, R., Gaston, A.J., Gonzalez-Solis, J., Goutte, A., Grémillet, D., Guilford, T., Jensen, G.H., Krasnov, Y., Lorentsen S.-H., Mallory, M.L., Newell, M., Olsen, B., Shaw, D., Steen, H., Strøm, H., Systad, G.H., Thorarinsson, T.L and T. Anker-Nilssen. 2012. Multicolony tracking reveals the winter distribution of a pelagic seabird on an ocean basin scale. Diversity and Distributions, 18, 530-542.

Garthe, S., Montevecchi, W.A., Chapdelaine, G., Rail, J.F., and Hedd, A. 2007. Contrasting foraging tactics of seabirds breeding in different oceanographic domains. Marine Biology, 151: 687-694.

Magnusdottir, E., Leat, E.H.K., Bourgeon, S., Strøm, H., Petersen, A., Phillips, R.A., Hanssen, S.A., Bustnes, J.O., Hersteinsson, P. and R.W. Furness. 2012. Wintering areas of Great Skuas *Stercorarius skua* breeding in Scotland, Iceland and Norway. *Bird Study*, 59:1, 1-9.

McFarlane Tranquilla, L.A., Montevecchi, W.A., Hedd, A., Fifield, D.A., Burke, C.M., Smith, P.A., Regular, P.M., Robertson, G.J., Gaston, A.J. and R.A. Phillips. 2013. Multiple-colony winter habitat use by murrelets *Uria* spp. in the Northwest Atlantic Ocean: Implications for marine risk assessment. *Marine Ecology Progress Series*, 472: 287-303.

Pollet, I. L., Ronconi, R. A., Jonsen, I D., Leonard, M. L., Taylor, P. D. and Shutler, D. 2014. Foraging movements of Leach's storm-petrels *Oceanodroma leucorhoa* during incubation. *Journal of Avian Biology*, 45: 305-314. doi: 10.1111/jav.00361

Statoil. 2017. Flemish Pass Exploration Drilling Program Environmental Impact Statement. Available online: <https://www.ceaa-acee.gc.ca/050/evaluations/document/121309?culture=en-CA>. Accessed September 2019.