

# DRAFT SPILL RESPONSE CAPABILITY ASSESSMENT

## 2020 NEWFOUNDLAND AND LABRADOR OFFSHORE AREA

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CANADIAN ASSOCIATION  
OF PETROLEUM PRODUCERS



Environmental  
Emergencies

# **SUMMARY OF “DRAFT - SPILL RESPONSE CAPABILITY ASSESSMENT, 2020 NEWFOUNDLAND AND LABRADOR OFFSHORE AREA”**

- Introduction
- Purpose
- Approach
- Capability Assessment
  - ✓ Preparedness
  - ✓ Response
  - ✓ Restoration
- Conclusions
- Lessons learned/Planned improvements

- TRIOX offers emergency preparedness, training and response services for oil and HNS spills
- Strategic, policy and environmental studies
- Extensive spill experience
- Offer practical and innovative solutions based on internationally recognized best practices
- Government and industry



# Pertinent projects

- RO Verifications for Offshore NS (Shell and BP)
- Oil Spill Response Plans and Tactical Response Plans for Offshore Operators
- IPIECA Oil Spill Monitoring and Sampling Good Practice Guide
- Deepwater Horizon Response
- Developed IMO OPRC Training Modules
- MPRI
- Develop and conduct annual training for Transport Canada Marine Safety Inspectors for Response Organization Certification
- Marine Oil Movement Study for Transport Canada
- Support for the Development of NEBA Guidance for the Offshore Petroleum Industry for ECCC
- Emergency Response-Related Communications Products for DFO
- RO Standards and Guidance Documents review for Transport Canada

# Introduction

The report “*Draft - Spill Response Capability Assessment 2020, Newfoundland and Labrador Offshore Area*” was prepared by TRIOX on behalf of Canadian Association of Petroleum Producers (CAPP) and included the following companies (the Operators):

- BHP
- CNOOC International
- Equinor
- Exxon Mobil Canada Properties (EMCP)
- Hibernia Management and Development Company (HMDC)
- Husky Energy
- Suncor Energy

# Purpose

- Augment CAPP and the Operators' commitment to continuous improvement with respect to spill response capability
- Meet the C-NLOPB's requirement to update the 2009 report on spill response capability "*Marine Hydrocarbon Spill Response Capability Assessment, Jeanne d'Arc Production Operations*" (2009 Assessment Report)

# Approach

- TRIOX reviewed the 2009 Assessment Report and the IPIECA-IOGP Guidance Document *“Oil spill preparedness and response: An Introduction, Guidance document for the oil and gas industry, 2019”*.
- TRIOX worked with the CAPP project authority and the Operators to review current and planned spill response capabilities and processes.
- The Operators provided TRIOX with information on key elements taken from the IPIECA-IOGP Guidance Document regarding their collective and individual capabilities and information regarding updates or knowledge gained since 2009

# Approach

## Why The IPIECA-IOGP Guidance Document?

- provides an international guidance framework for effective oil spill preparedness, response and restoration
- summarizes consensus views on good practice for oil spill preparedness and response elements



## Oil spill preparedness and response: An introduction

Guidance document for the oil and gas industry





# Approach

- Regulatory requirements and approvals apply to all operators therefore there are many similarities in the way in which they ensure compliance and capability ie. Operations Authorization, Environmental Assessment, plans, etc.

Note: BHP, CNOOC and Equinor are not in the production phase - their capability and plans are in various stages of development.

# Approach

- Concurrency tables were used to summarize Operators capability for key elements taken from the IPIECA-IOGP Guidance Document

| Operator | Exercises  |
|----------|--|
| BHP      | BHP is currently preparing exercise requirements as part of the Oil Spill Response Plan<br>OA requirements<br>ECRC – Operator’s Offshore Preparedness Program. (Practical drills conducted as a component of the Tier 1 Training Program)<br>Offshore Operators Annual On-water Oil Spill Countermeasures Synergy Exercise Program                                   |
| CNOOC    | OA requirements<br>ECRC – Operator’s Offshore Preparedness Program. (Practical drills conducted as a component of the Tier 1 Training Program)<br>Offshore Operators Annual On-water Oil Spill Countermeasures Synergy Exercise Program  |
| Equinor  | OA requirements<br>ECRC – Operator’s Offshore Preparedness Program. (Practical drills conducted as a component of the Tier 1 Training Program)<br>Offshore Operators Annual On-water Oil Spill Countermeasures Synergy Exercise Program  |
| EMCP     | Hebron conducts weekly exercise for emergency response; part of the ER exercise program includes spill response exercises<br>OA requirements<br>ECRC – Operator’s Offshore Preparedness Program. (Practical drills conducted as a component of the Tier 1 Training Program)<br>Offshore Operators Annual On-water Oil Spill Countermeasures Synergy Exercise Program |
| HMDC     | HMDC conducts weekly exercise for emergency response; part of the ER exercise program includes spill response exercises<br>OA requirements   |

|        |  |
|--------|--|
| Husky  | Incident Coordination and Response Management Plan, Section 10<br>Offshore Installation Emergency Drills and Exercises (Standard)<br>OA requirements<br>ECRC – Operator’s Offshore Preparedness Program. (Practical drills conducted as a component of the Tier 1 Training Program)<br>Offshore Operators Annual On-water Oil Spill Countermeasures Synergy Exercise Program |
| Suncor | Oil Spill Response Plan, Section 11<br>Business Process for Emergency Management, Section 4.1<br>OA requirements<br>ECRC – Operator’s Offshore Preparedness Program. (Practical drills conducted as a component of the Tier 1 Training Program)<br>Offshore Operators Annual On-water Oil Spill Countermeasures Synergy Exercise Program                                     |

# Capability Assessment



Key Elements that were assessed:

| Section 4.0 | Preparedness                       |
|-------------|------------------------------------|
| 4.2         | ✓ Tiered Preparedness and Response |
| 4.3         | ✓ Incident Management System       |
| 4.4         | ✓ NEBA/SIMA                        |
| 4.5         | ✓ Situational Awareness            |
| 4.6         | ✓ Contingency Planning             |
| 4.7         | ✓ Sensitivity Mapping              |
| 4.8         | ✓ Training                         |
| 4.9         | ✓ Exercises                        |
| 4.10        | ✓ Stakeholder Engagement           |

# Capability Assessment



Key Elements that were assessed:

| Section 5.0 | Response   |
|-------------|--|
| 5.2         | ✓ Oil Spill Responder Health and Safety  |
| 5.3         | ✓ Source Control   |
| 5.4         | ✓ Surveillance and Modelling   |
| 5.5         | ✓ Response Techniques <ul style="list-style-type: none"><li>– At-Sea Containment and Recover</li><li>– Dispersant: Surface Application</li><li>– Dispersant: Subsea Application</li><li>– Controlled In-Situ Burning (ISB)</li></ul> |
| 5.6         | ✓ Shoreline Response   |
| 5.7         | ✓ Waste Management   |
| 5.8         | ✓ Oiled Wildlife   |
| 5.9         | ✓ Response Outside Exclusive Economic Zone   |

# Capability Assessment



Key Elements that were assessed:

| Section 6.0 | Restoration                            |
|-------------|--|
| 6.1         | ✓ Shoreline Environmental Impacts      |
| 6.2         | ✓ Marine Environmental Impacts         |
| 6.3         | ✓ Economic Assessment and Compensation |

# Capability Assessment



## Appendices:

| Appendix |                                      |
|----------|--------------------------------------|
| 1        | Current Offshore Activities          |
| 2        | Equipment Inventory and RO Overviews |

# Preparedness

## Tiered Preparedness and Response

| Tier 1 Capability<br>Local   | Tier 2 Capability<br>Regional   | Tier 3 Capability<br>National or International  |
|--|---|---|
| In-situ equipment and resources offshore on the installation/support vessels (booms, sorbents, skimmers, tracking devices, sampling kits and PPE)<br><br>Mutual Emergency Assistance Agreement | Equipment and resources onshore that can be mobilized to support the offshore response<br><br>Offshore Preparedness Program<br><br>ECRC Service Agreement and equipment | ECRC Service Agreement and equipment<br><br>ECRC Mutual Aid Agreements with three Canadian ROs (ALERT, PTMS, WCRMC)<br><br>Agreements with OSRL.<br><br>Access to Global Response Network through RO agreements |

Notes: Suncor Energy is currently not producing/drilling and have one support vessel in the Terra Nova Field; BHP and CNOOC is in the planning phase of their project. Appendix 2 includes inventory lists and overviews of ECRC, OSRL, GRN

# Preparedness

## Contingency Planning



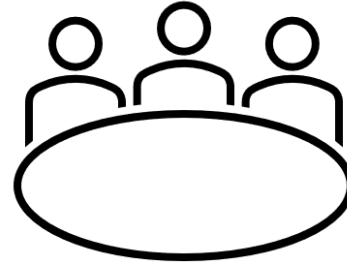
- required as a part of the OA process
- based on risk assessments
- information on the crude oils, oil/products in storage cells and a summary of current oil inventory that has been tested, oil fate and effects, sensitivity identification, resource availability, environmental conditions and stakeholder engagement
- all producing operators provided a list of contingency plans e.g. OSRP, Waste Management Plans, Wildlife Response Plans, Decontamination Plans, etc.
- BHP is currently developing contingency plans including OSRP and associated TRPs



# Preparedness

## Stakeholder Engagement

- EIS Requirements
- One Ocean Protocol
- Fishers Communication Plan, including IGs
- Linkage with academia, government researchers, consultants for various research and development programs ie. Environmental Studies Research Funds (ESRF)
- Engagement with IG regarding offshore oil and gas projects, preparedness, exercises, actual events, etc.
- Development of various plans/procedures involve engagement
- Annual Synergy Exercise
- Operator Exercises



# Response

## Response Techniques

### Containment and Recovery

- OSRPs
- BHP is currently preparing their OSRP and associated TRPs
- Operators maintain equipment for at-sea containment and recovery on board support vessels and installations for immediate deployment (Appendix 2 of report)
- Additional equipment is located on shore in St. John's, NL



# Response

## Response Techniques

### Dispersant: Surface Application

- Requires regulatory approval and incident specific SIMA
- Addressed in the OSRP and in the SIMA for Equinor and CNOOC
- BHP is currently preparing their SIMA, Oil Spill Response Plan and TRPs
- Training on dispersant use, efficacy testing, and application from a vessel is currently under development and delivery is being planned for 2021

Note: In April 2020, CAPP submitted a NEBA of Dispersant Use for Responding to Oil Spills from Oil and Gas Facilities on the Newfoundland Grand Banks to the C-NLOPB on behalf of the producing operators. The Operators' are working to address C-NLOPB comments on the document.

# Conclusions

- Since the release of the 2009 Assessment Report, all response capability recommendations outlined in the report have been implemented, resulting in enhancements to spill response capability



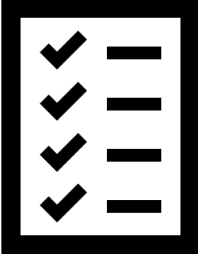
**Marine Hydrocarbon Spill Response  
Capability Assessment  
Jeanne d'Arc Production Operations**

November, 2009

# Conclusions

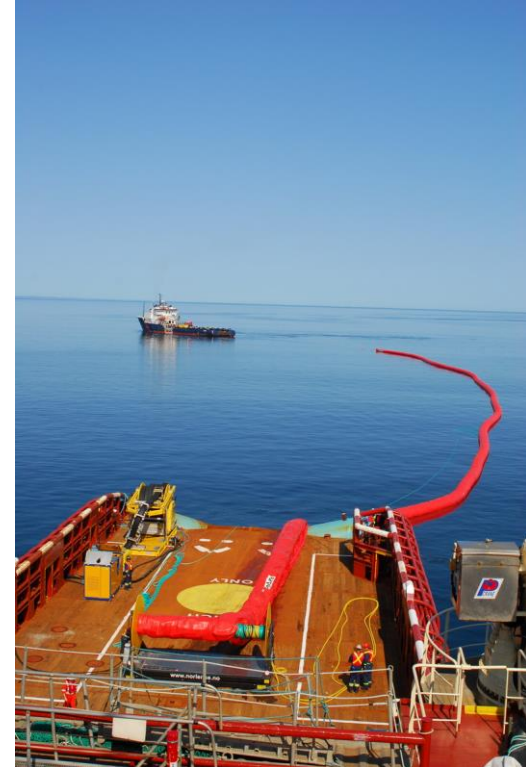
- For the report *Draft - Spill Response Capability Assessment 2020, Newfoundland and Labrador Offshore Area*, response capability was assessed using key elements from the international guidance document *Oil spill preparedness and response: An Introduction, Guidance document for the oil and gas industry*, IPIECA-IOGP, 2019.
- Through this assessment, TRIOX has concluded that an appropriate level of response capability exists for each of the key elements assessed in the Newfoundland and Labrador offshore region based on the level of activity.

# Conclusions

- For each of the key elements in the categories of preparedness, response and restoration, the Operators were able to demonstrate capability in the form of documentation, processes, inventory lists, and service agreements or arrangements 
- environmental assessments, risk management processes, protocols, plans, inventory lists, service and membership agreements (requirements for an Operating License and an Operations Authorization)
- training and exercise programs and shared learnings from incident response
- environmental monitoring and compensation requirements

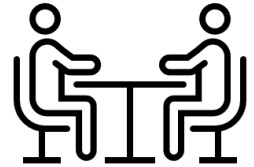
# Lessons Learned and Planned Improvements

- Synergy Exercises On-water (2008-2018):
  - Communications: use of interpreters, pre-exercise briefings
  - Conduct of the exercise: sending of materials in advance, briefing of vessel masters, involvement of helicopters
  - Procedures: how the vessels operate in relation to each other, how equipment is deployed in specific exercise situations, maximize efficiency in handling equipment onboard vessels (e.g. lifting and positioning) and on water (e.g. towing, gap between booms and vessel)



# Lessons Learned and Planned Improvements

- Synergy Exercise - Workshop (2019):
  - Incident Management: Align core elements with regulatory agencies, clarify regulatory role with respect to IMS
  - Information sharing and situational awareness: establish Critical Information Requirements, sync briefing cycles, invite the C-NLOPB to attend the Initial Action Plan (IAP) Briefing, improve the timeliness and sharing of information and messaging with public and respective stakeholders
  - Dispersant approval: streamline the process for the requesting, approval and use





# Lessons Learned and Planned Improvements

- Subsea Surveillance and Monitoring
  - provide better observation and monitoring capabilities to ensure integrity of subsea infrastructure and to improve response times: established a task group to review potential technologies in this area, sharing information and look at international best practices
- Wildlife Response Plans
  - CWS draft guidelines for spill preparedness and response plans for wildlife response preparedness, monitoring/mitigation preparedness: align plans to ensure consistency with guidelines as soon as possible to meet government agencies' expectations

# Lessons Learned and Planned Improvements

- Containment and Recovery Operations
  - compatibility issues with containment and recovery equipment have been identified and may cause issues during a Mutual Aid response: Operators continue to review the containment and recovery equipment needs and to look for efficiencies and ways to improve procedures
- Dispersant approval
  - streamline the process for the requesting, approval and use of dispersant: the Operators continue to work towards this with the regulators



**Questions**