

Kwilmu'kw Maw-klusuaqn Negotiation Office (KMKNO)

# **Review of the Environmental Impact Statement of the West Flemish Pass Exploration Drilling Project**

**Prepared by:**

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March, 2020

Project Number: 60628250



March 24, 2020

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Via Email: <email address removed>

Dear Mr. Peters:

**Project No: 60628250**

**Regarding: Review of the Environmental Impact Statement of the West Flemish Pass Exploration Drilling Project**

AECOM Canada Ltd (AECOM) is pleased to provide Kwilmu'kw Maw-klusuaqn Negotiation Office (KMKNO) with this final report on AECOM Canada Ltd.'s (AECOM) review of the Environmental Impact Statement for the West Flemish Pass Exploration Drilling Project, completed by Chevron Canada Limited.

Thank you for the opportunity to assist KMKNO with this work.

Sincerely,

**AECOM Canada Ltd.**

<Original signed by>

Nora Doran, P.Geo.  
Senior Project Manager, Canada East  
<email address removed>

Nd:vm  
Encl.  
cc:

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# 1. Introduction

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## 1.1 AECOM's Mandate

Kwilmu'kw Maw-klusuaqn Negotiation Office (KMKNO), on behalf of the Assembly of Nova Scotia Mi'kmaq Chiefs (ANSMC), retained AECOM Canada Ltd. (AECOM) as an Independent Consultant to review the federal environmental impact statement (EIS) of exploration / delineation / appraisal drilling programs and associated activities, proposed to be conducted in the Flemish Pass, approximately 375 kilometres (km) northeast of St. John's, Newfoundland and Labrador (NL), in Canada.

AECOM's mandate consists of supporting the ANSMC in the review of the EIS report to evaluate the scientific and technical information for completeness, to identify information gaps, and environmental risks to the Mi'kmaq of Nova Scotia, and to propose actions to address outstanding information gaps.

This report considers the EIS and EIS Summary for the West Flemish Pass Exploration Drilling Project (CEAR 80147) (herein referred to as “the Project”) proposed by Chevron Canada Limited (Chevron) (the Proponent), submitted to the Canadian Environmental Assessment Agency (CEA Agency) to fulfil the requirements of the EIS Guidelines under the *Canadian Environmental Assessment Act, 2012* (CEAA 2012). A subsequent report will address the Canadian Environmental Assessment Agency (“the Agency”) EA Report, when this has been issued for public comment.

## 1.2 Project Overview

To determine the potential presence of hydrocarbons, Chevron plans to conduct a program of petroleum exploration drilling and associated activities within a Project area (**Figure 1**) that includes exploration licences (ELs) in the Flemish Pass, approximately 375 kilometres (km) northeast of St. John's, Newfoundland and Labrador, in the Northwest Atlantic Ocean. The West Flemish Pass Exploration Drilling Project (“the Project”) is proposed to drill up to eight exploration wells on EL 1138 during the term of the EL. The EL is in West Flemish Pass area of the Grand Banks region, just outside and bordering Canada’s 200 nautical mile (nm) Exclusive Economic Zone (EEZ). Water depths in the EL range from approximately 400 to 2,200 m. Drilling operations will be conducted within the EL boundaries, but exact well site locations are not yet known. Exploration drilling is required to assess the potential for important geological formations and hydrocarbon reserves within the EL. To compliment previous geophysical data collected in the region, this exploration drilling will help determine the presence, nature and quantities of potential hydrocarbon resources within the EL. Drilling is anticipated over the term of the EL (2016 to 2025), with an initial well proposed to be drilled in 2021 pending regulatory approval. Chevron's license size is 274,732 acres and while Chevron is leading the operations, the interests of this EL is 50% owned by Chevron Canada, Limited and 50% owned by Anadarko Canada E&P, Limited.

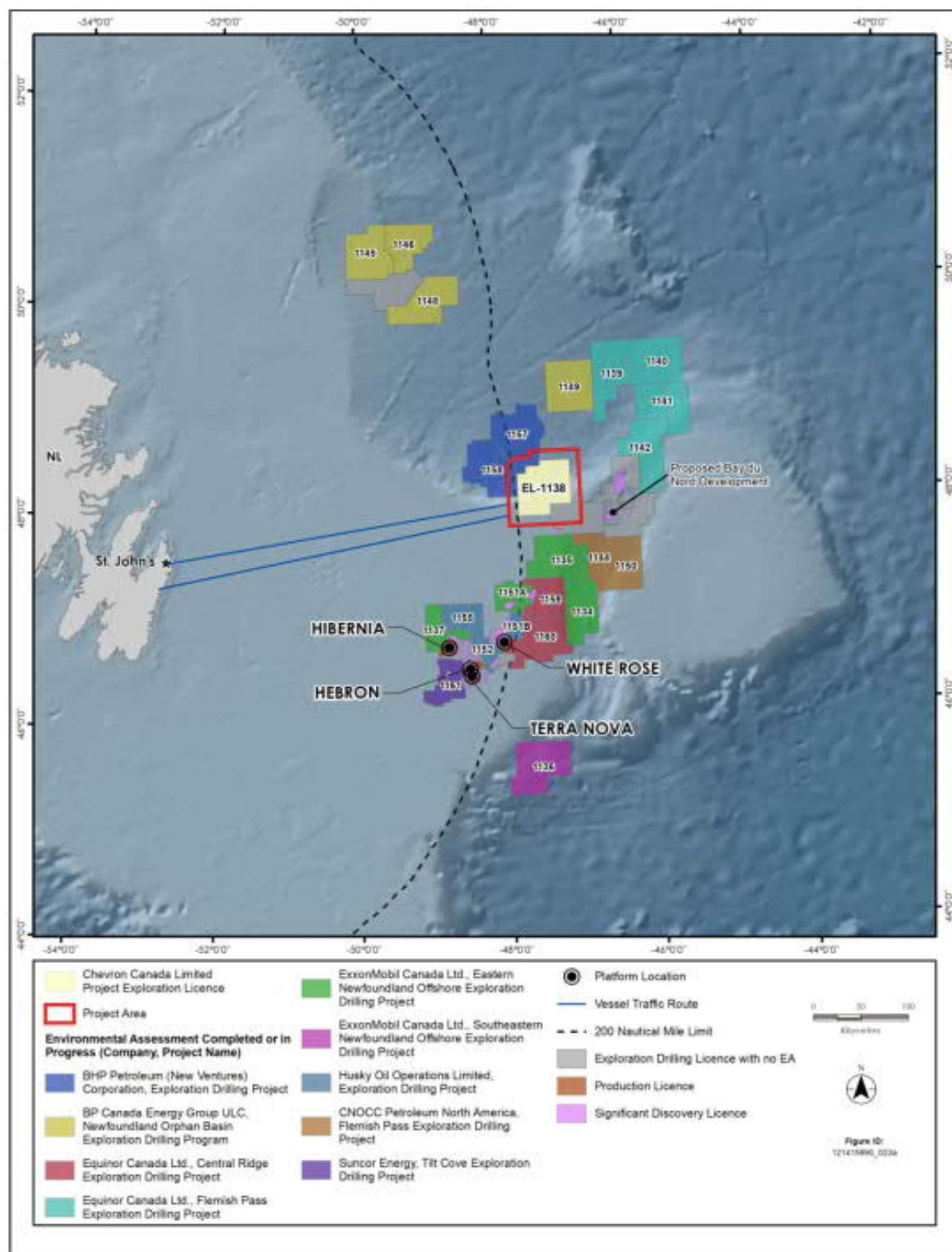


Figure 1. Project Location (Chevron EIS).

Wells will be drilled using either a semi-submersible rig or a drillship, referred to as a mobile offshore drilling unit (MODU). The choice of MODU may change over the course of the drilling program, depending on the results of initial wells. This anticipated multiple-phase approach for exploration drilling incorporates the analysis of initial well results to inform the execution strategy for subsequent wells. A fleet of supply vessels and helicopters will provide logistics support and supplies, and will be based out of existing, onshore facilities in Eastern NL. The scope of this EIS does not include any onshore activities at these shore-based facilities, which are existing facilities operated by third-party suppliers.

Activities associated with a drilling program may include:

- MODU mobilization and drilling;
- Offshore exploration wells;
- Well control and blowout prevention;
- Vertical seismic profiling (VSP);
- Well evaluation and testing;
- Well abandonment and decommissioning;
- Supply and servicing; and
- Emissions, discharges and waste management.

Chevron proposes to commence exploration drilling with an initial well in 2021, pending regulatory approval. Up to eight exploration wells could be drilled over the term of the EL (2016 to 2025) contingent on the drilling results of the initial well. Drilling activities will not be continuous and will be in part determined by MODU availability and previous wells' results. It is anticipated that each well will take approximately 180 days to drill.

Chevron's preference is to conduct drilling between May and September to avoid extreme weather conditions as much as possible, although the EIS assumes year-round drilling. VSP operations will take approximately one to three days per well and well testing, where required, would occur over a one to three-month period with flaring likely occurring over two to three days during this period. Well abandonment will likely be conducted following drilling and/or well flow testing. Wells may be designed for suspension and re-entry, but this will be determined through further prospect evaluation.

### 1.3 Environmental Assessment Process

The CEA Agency (now the Impact Assessment Agency of Canada; the Agency) determined that the drilling of a well on EL 1138 constitutes a “designated project” under Section 10 of the *Regulations Designating Physical Activities* and thus requires approval according to the requirements of the *Canadian Environmental Assessment Act, 2012* (CEAA 2012). Following submission of the Project Description document, the Agency determined that an environmental assessment was required and EIS guidelines were issued on December 20, 2018. The environmental assessment was undertaken pursuant to CEAA 2012. New federal environmental assessment legislation (Bill C-69) received Royal Assent on June 21, 2019 and came into force on August 28, 2019; however, it will not apply to the currently proposed Project; which will continue under CEAA 2012. The Canada-Newfoundland and Labrador Offshore Petroleum Board (C-NLOPB) also requires a project-specific environmental assessment (EA) be completed for offshore oil and gas activities, pursuant to the Canada-Newfoundland and Labrador Atlantic Accord Implementation Newfoundland and Labrador Act and the Canada-Newfoundland Atlantic Accord Implementation Act (the Accord Acts).

The Proponent has prepared EIS and EIS Summary documents, which are intended to satisfy both the EIS guidelines (Agency 2018) and the C-NLOPB Accord Acts EA requirements.

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## 2. Review Method

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AECOM's team of senior environmental and social specialists performed the review of the Proponent's EIS and EIS Summary. The team is well versed in best practices for offshore oil and gas projects, have extensive expertise in environmental and social impact assessment, and have work-related experience in offshore oil and gas projects in Atlantic Canada. Various additional documents were referenced (see References Cited section) to contextualize the information, data, and conclusions of the EIS.

AECOM's review focused on identifying information gaps, highlighting potential concerns and deficiencies, while providing inquiries and recommendations regarding supplementary information, proposed mitigation measures, and environmental monitoring. Areas considered as having the most potential to affect Mi'kmaq rights and interests, notably environmental effects to traditional activities and the quality of life of the Mi'kmaq people, were of highest priority for the review. Environmental impacts would result from a large subsea oil release; therefore, spill prevention and response plans were reviewed in detail, including project design, blowout probabilities, spill dispersion modelling scenarios and results, well control planning, and mitigation and contingency measures.

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## 3. Results

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The results of AECOM's review of the Chevron EIS document are provided herein, with sections following the structure of the EIS documents. Throughout the document, AECOM summarizes a given issue, then provides bullet-point recommendation(s) for consideration by the Proponent and/or regulators. **Section 3.1** identifies comments related to Project components and activities, and **Section 3.2** considers the Proponent's approach to Indigenous and stakeholder engagement. **Section 3.3** considers the description of the existing environment and **Section 3.4** through **Section 3.8** address the assessment of potential effects to fish and fish habitat, marine and migratory birds, marine mammals and sea turtles, special areas, and Indigenous people and community values. Accidental event planning and assessment are addressed in **Section 3.9**. Indigenous groups and contingency plans are addressed in Section **3.10**, while human health-related effects are addressed in **Section 3.11**.

The issues and recommendations that AECOM considers to be of primary concern are highlighted and summarized in the Conclusions and Recommendations section (**Section 4.0**). Additionally, to simplify regulator and Proponent review of the comments, all the review findings with their associated EIS section references are summarized in the appended **Table A-1 Review Findings Summary, Appendix A**. A summary of the acronyms and abbreviations used in this review summary, are presented in **Table B-1 – List of Acronyms and Abbreviations, Appendix B**.

It is recognized that at this stage of the Project, the Proponent has not identified the target drilling locations within the Proponent's lease-areas. AECOM presents review comments within the following review report sub-sections, based on the marine physical and biological information presented in the EIS for the lease areas themselves.

### 3.1 Project Description

#### 3.1.1 Alternatives Analysis – Formation Flow Testing

In the case that hydrocarbons are present in a given well, well evaluation (formation flow testing) is an important component of exploration drilling which helps to determine the viability of a prospect and commercial potential of the reservoirs, gathering information about subsurface characteristics (e.g., potential productivity, connected volumes, fluid properties, composition, flow, pressure, and temperature). This helps the developer determine if a well to be drilled will be successful for resource extraction. If well flow testing is carried out, flaring will be required for safe disposal of hydrocarbons as well as vaporization of liquid waste; however, flaring can result in adverse effects by contributing to platform lighting and potentially attracting birds. The analysis of alternative means of carrying out the Project identified two preferred options for formation flow testing: (1) 'formation testing while tripping' and (2) flaring as required with flare shield (water curtain). Formation testing while tripping does not require flaring; therefore, results in reduced light and atmospheric emissions and reduced risk of bird attraction and mortality. However, the Proponent states that formation testing while tripping does not provide the same data as with flaring and thus, its suitability will be assessed on a case-by-case basis. The Proponent does commit to considering formation testing while tripping in each case, to ensure that well testing meets C-NLOPB requirements. If flaring is required, Chevron will discuss flaring plans with the C-NLOPB including steps to reduce adverse effects on migratory birds. This may involve restricting flaring to the minimum required to characterize the wells' hydrocarbon potential and as necessary for the safety of the operation, reducing flaring during periods of migratory bird vulnerability, and the use of water curtain to deter birds from the general vicinity of the flare.

- To minimize potential environmental, safety and economic adverse effects during formation testing, ‘formation testing while tripping’ should be the preferred/default option, with formation flow testing with flaring only considered where C-NLOPB requirements cannot be met without flaring.

### 3.1.2 Batch Drilling

The Proponent proposes to drill up to eight wells; however, does not specify whether batch drilling may be considered. Batch drilling involves drilling the riser-less sections for multiple well sites consecutively, with the MODU returning to drill each well to completion. This suggests several wells would be initiated with only the top-hole portions (conductor hole section and surface hole section), drilled initially without risers and using water-based mud (WBM).

- While the proposed sequencing and schedule do not imply batch drilling, the Proponent should state whether batch drilling may be considered and, if so, include this potential activity in the EIS.

## 3.2 Consultation and Engagement

The EIS Guidelines (CEA Agency 2018) states that a key objective of CEAA 2012 is to promote communication and cooperation with Indigenous peoples, which includes First Nations, Inuit and Métis, and identify the following expectations of the Proponent:

- To engage with potentially affected groups, beginning as early as possible in the project planning process.
- To provide potentially affected groups with opportunities to learn about the Project and its potential effects and to make groups’ concerns known about the Project’s potential effects and discuss measures to mitigate those effects.
- To work with potentially affected groups to establish an engagement approach.
- To make reasonable efforts to integrate Aboriginal traditional knowledge into the assessment of environmental effects.

It is noted in the EIS that “Chevron is committed to collaborating with Indigenous peoples and their communities in Canada to build long-term trusting and mutually beneficial relationships based on values of inclusion, transparency, respect and accountability” (EIS p. 3-3); however, engagement on this Project has been limited to email invites and a multi-proponent workshop. The Proponent has stated in the EIS that they have utilized information from other Proponent’s EIS’ and this does not constitute meaningful, transparent, respectful or fulsome engagement. The Proponent has committed to “incorporating actions and mitigations to address the concerns and interests of Indigenous groups, as applicable”. KMKNO and ANSMC would like to reiterate the importance of consulting on all phases of the Project planning process, including being provided the opportunity to review documents prior to submission to regulators, during both the EA process and post-EA regulatory approval processes.

Furthermore, the Mi’kmaq of Nova Scotia expect that proponents will work with them to decide on a mutually agreed upon process for engagement. This process includes developing an engagement plan with the Mi’kmaq. It is expected that KMKNO will be involved in the development of an engagement plan for all phases of the Project; EA, post-EA permitting and decommission and reclamation. The Proponent has committed to developing an Indigenous Fisheries Communication Plan (IFCP), however, it is unclear how Indigenous groups will be engaged in its development. It is the expectation of KMKNO and ANSMC that the Proponent develops an engagement plan with them that will include how they will be engaged on all phases of the Project including on the IFCP. KMKNO would like to see an Indigenous Communications Plan (ICP) developed for the Project in addition to the IFCP. This is discussed further in Section 3.10 below.

KMKNO expects that the engagement activities undertaken by the Proponent during the exploration phase will involve meaningful engagement activities that allow for an in-depth exchange between the parties. To achieve this, AECOM has the following recommendations:

- The Proponent should ensure that engagement is directly with the KMKNO and ANSMC and is based on a mutually agreed upon engagement strategy that provides information on how Indigenous groups will be engaged up to and during the Project execution.
- The Proponent should seek to gather input and information from Indigenous groups and not just provide Project information and inform out.
- The Proponent should clearly demonstrate the input that has been received by each of the Indigenous groups during direct engagement and how they have considered and resolved issues and concerns.
- The Proponent should provide detailed information on how the Indigenous groups will participate in the development and implementation of mitigation and monitoring measures. The Proponent should also indicate how it will integrate input from Indigenous groups (such as Indigenous Knowledge) into monitoring activities.
- The Proponent should be proactive and work collaboratively with Indigenous groups to maximize participation in engagement activities and the Project.
- The Proponent should indicate how it intends to foster the engagement capacity of the concerned Indigenous groups.
- The Proponent should ensure that information about the potential for spills / large-scale accidental events will be shared with Indigenous groups, including consultation in relation to the findings of the dispersion modelling and to the scope of emergency preparedness and response planning.
- An Indigenous Communication Plan as well as the IFCP, developed in consultation with Indigenous groups, should be in place prior to initiating Project activities.

### 3.3 Existing Biological Environment

#### 3.3.1 Marine Fish and Fish Habitat

The EIS does not always include vessels routes on figures in the EIS (for example, Figure 6.14). This information is very important for understanding potential interactions between vessel traffic and environmental components.

- The Proponent should illustrate the proposed vessels routes on each figure, including figures from other sections (Marine and Migratory Birds; Marine Mammals and Sea Turtles, for example). Vessel routes relative to the Project area as well as vessel traffic should be defined, including the number of vessels that currently and will transit through the proposed Project area.

Chevron acknowledges data gaps on American eel migration routes in the Project Area. DFO surveys from 2007 to 2018 did not identify American eel in any of the survey sets. American eel is of cultural importance for the Mi'kmaq, and filling gaps in data in the Project area would help future recommendations in the Project Area.

- The Project and other proposed exploration projects in offshore Newfoundland and Labrador provide a valuable opportunity to increase knowledge and understanding of important species including American eel, and the Proponent is encouraged to actively support related research opportunities and initiatives.

## 3.4 Marine Fish and Fish Habitat

### 3.4.1 Change in Risk of Mortality or Physical Injury

In reference to liquid discharges, EIS Section 8.3.1 states: “[...] other routine liquid discharges, such as cooling and ballast water, will be managed in accordance with the Offshore Waste Treatment Guidelines (OWTG), Transport Canada’s Ballast Water Control Management Regulations and/or the International Convention for the Prevention of Pollution from Ships (MARPOL), and are not expected to cause mortality or physical injury to marine fish”. The Proponent has not supported this statement with literature references, and may therefore be underestimated, particularly since the Proponent mentions fish, but not other organisms living in the same habitats such as benthic invertebrates and plankton.

- The Proponent should cite studies to support this statement and indicate if these activities might also harm benthic fauna and plankton communities (food source).

### 3.4.2 Change in Habitat Quality and Use

The EIS Guidelines require that the Proponent describe the predicted effects on fish and fish habitat, including the calculations of any potential habitat loss (temporary or permanent) in terms of surface areas (e.g. spawning grounds, juvenile, rearing and feeding areas), and in relation to availability and significance. The Proponent did not provide information about fish habitat loss in the EIS.

- This is an information gap. The Proponent should calculate fish habitat surface area losses in the Project Area by type of habitat (spawning, rearing, feeding) and locate these on a map.

In reference to exploration drilling, EIS Section 8.3.2 states: “[...] the primary discharges resulting in changes in habitat quality relate to drilling muds and cuttings, and components of these discharges causing physical or chemical changes in the water column and/or sediment. A temporary increase in suspended particulate matter and turbidity in the water column will occur as drill muds and cuttings disperse through the water column to settle on the seafloor”. While the Proponent acknowledges changes in turbidity, it does not explore changes in other important parameters for marine wildlife such as pH, temperature, conductivity and dissolved oxygen.

- The Proponent should specify changes in water parameters, such as dissolved oxygen, temperature, conductivity, pH, as drilling fluids can have possible effects.

In reference to oil spills, EIS Section 8.3.2 states: “While individuals in these life stages could be affected, effects on larval stages does not necessarily result in effects on adult populations (Gallaway et al. 2017; Carroll et al. 2018)”.

- While there might be no immediate effects on adults, the Proponent should specify what would happen to recruitment of fish in the years following an oil spill event that would decimate fish larvae.
- The Proponent should evaluate studies on the potential drastic decrease in recruitment the year following a massive death event of fish larvae caused by an oil spill.

In reference to fish mortality caused by an oil spill, the EIS Section 8.3.2 states: “Adult fish species in surface waters will largely be unaffected due to avoidance mechanisms and demersal (bottom dwelling) species are unlikely to be exposed to harmful concentrations of dissolved total hydrocarbons unless the spilled was unmitigated. Residual effects following a nearshore diesel spill could include localized mortality and sublethal

effects to fish eggs, larvae, and juveniles". The Proponent does not refer to studies which support these statements. This is a recurrent situation throughout the EIS.

- The Proponent should provide reference material to support these conclusions.

In reference to the imagery-based seabed survey, the EIS Section 8.3.2.2 states: "An imagery-based seabed survey will be conducted at the proposed well site(s) to confirm the absence of sensitive environmental features, such as habitat-forming corals or species at risk (as well as shipwrecks, debris on the seafloor, and unexploded ordnance). The survey will be carried out prior to drilling. If environmental or anthropogenic sensitivities are identified during the survey, Chevron will move the well site to avoid affecting them if it is feasible to do so". Identifying sensitive environmental features is not possible if one did not receive proper training. The Proponent does not specify if a biologist or other trained professional will be present during the survey. This could result in an underestimation of sensitive environmental features or potential habitat while surveying.

- The Proponent should commit to having a biologist or a trained professional present during the survey.

With regards to mitigating for the presence and operation of a MODU, EIS Section 8.3.2.2 states: "The loss of fish habitat will be mitigated through compliance with the Fisheries Act." The loss of fish habitat is not clearly described. It is also not apparent which aspect(s) of the Fisheries Act this is referring to, nor which mitigative measures will be taken to comply with the Fisheries Act.

- Substantially more detail on this statement ("The loss of fish habitat will be mitigated through compliance with the Fisheries Act.") is needed to understand mitigation and compliance. If this is referencing to an authorization for harmful alteration, destruction or disruption of fish habitat pursuant to the Fisheries Act, the Proponent should state so and describe a conceptual plan for compensating for fish habitat loss.

## 3.5 Marine and Migratory Birds

### 3.5.1 Change in Risk of Mortality or Physical Injury

The EIS Section 9.3.1.2 states: "The regional Environment and Climate Change Canada-Canadian Wildlife Service (ECCC-CWS) office will be contacted for separation distances and altitudes between helicopters transiting to and from the MODU and migratory bird nesting colonies, as per ECCC-CWS guidelines (Government of Canada 2018) and routes will comply with provincial Seabird Ecological Reserve Regulations, 2015. Specific details will be provided in the environmental protection plan (EPP)". However, flights during migration or reproduction season of marine birds have the potential to disrupt these important cycles. Thus, the mitigation plan should include information on how this impact will be mitigated.

- The Proponent should specify if they will suspend flights during these critical periods for these species.

Section 9.3.2.2 of the EIS states: "Chevron will take steps to deter marine and migratory birds from the area as part of its Oil Spill Response Plan (OSRP) before in-situ burning commences". There are several deterrent techniques which may be effective and do not require a permit; however, a permit under the Migratory Bird Convention Act is required for the use of aircraft or firearms (defined as capable of emitting at projectile at more than 495 feet per second). In addition, a permit under the Fisheries Act may be required as the Marine Mammal Regulations prohibit disturbance of the marine mammals.

- The Proponent should mention if permits are required for hazing and if so, the Proponent should name which agency regulates the use of aircraft and firearms during hazing.

## 3.6 Marine Mammals and Sea Turtles

### 3.6.1 Change in Risk of Mortality or Physical Injury

Regarding possible collisions with supply vessels, EIS Section 10.3.1 states: “Although there are no known marine mammal concentration areas along the supply vessel transit route, it is possible that groups of foraging marine mammals may be encountered, especially during summer months”. While there may not be areas of concentration, if the vessels transit routes cross important habitat and transit routes, then risk of collision can be increased. This is the only vessel related risk to marine mammals mentioned within the EIS. The EIS does address underwater sound and potential risk as described below.

- The Proponent should add that the risk of collision can be increased if vessels transit routes are crossing transit routes for marine mammals, and not only during summer months.

Regarding the assessment of the underwater sound generated by the MODU, section 10.3.1.3 of the EIS states: “The broadband sound source level for the MODU is assumed to be 196.7 dB re 1 µPa @ 1 m sound pressure level (SPLrms)”. This statement is not referenced. Similarly, the following statement is not substantiated: “Given the expected SPLrms of 196.7 dB for the MODU, sound levels would not reach the peak sound pressure level (SPLpeak) auditory injury thresholds for any marine mammal groups.” There is no discussion of the relation between source levels and peak injury levels.

- The Proponent should cite studies or references to support these statements.
- The Proponent should justify the interaction between the source levels, the peak levels and their relationship to injury criteria for marine mammals and sea turtles.

Section 10.3.1.2 of the EIS states: “Supply vessels will follow established shipping lanes where they exist (i.e., in proximity to shore); where these do not exist, supply vessels will follow a straight-line approach to and from the Project Area. During transit to/from the Project Area, supply vessels will travel at vessel speeds not exceeding 22 km/hour (12 knots) except as needed in the case of an emergency”. However, transit during migration or reproduction season have the potential to disrupt these important cycles. Thus, the mitigation plan should include information on how this impact will be mitigated. The Proponent also does not take into account the Marine Mammal Regulations of the Fisheries Act, that has a number of prohibited actions including that vessel traffic should not separate a marine mammal from its group or a mother and her calf.

- The Proponent should also add information about compliance with the Marine Mammal Regulations.
- The Proponent should state that they plan to minimize traffic during these important periods.

Section 10.3.1.2 of the EIS states: “Vessel crew will keep a watch for marine mammals or sea turtles and reduce speed and/or alter course if practicable to avoid a collision”. However, the Proponent does not mention if a Marine Mammal Observer (MMO) will be on board. In the case of an impact, documentation of the event is very important for other vessel captains, regulatory organisms and future mitigation measures. Photographs, direction of travel, coordinates of impact location should be documented and shared between supply vessels and vessel captains.

- The Proponent should specify what the MMO search area will include, how low light or night monitoring will be considered, how many MMOs are to be on watch, the watch schedule, the area to be monitored, the area that is the Marine Mammal Exclusion Zone, and where the observations will be conducted from, specify what the MMO search area will include, how low light or night surveys are considered, how many MMOs are to be on watch, the watch schedule, the area to be monitored, the area that is the Marine Mammal Exclusion Zone, and where the observations will be conducted from.

- The Proponent should develop a Project-specific protocol for guidance on interactions with marine mammals, particularly in the event of a collision.

### **3.6.2 Change in Habitat Quality and Use**

In regards to the magnitude of the effect of the presence and operation of a MODU and VSP, Section 10.3.2 of the EIS states: “Given that the zone of influence of the Project at one time or location will likely be a small proportion of the feeding, breeding, or migration area of species, marine mammals and sea turtles will not be displaced from important habitats or during important activities or be affected in a manner that causes adverse effects to overall populations in the region”. This statement should be validated with respect to North Atlantic right whales. While the Project area is beyond the main habitat of North Atlantic right whales, the Endangered status of this species requires thoughtful and effective consideration, and as with all species compliance with the *Fisheries Act* and the *Species at Risk Act*.

- The Proponent should cite studies to support this statement.

The EIS states: “As a result, a blowout would have a greater potential to interact with marine mammals that inhabit these deeper waters including species like sperm whales, beaked whales, and delphinids. Fin whales also occur regularly in the Flemish Pass area. Harp and hooded seals are considered common in the Project Area and adjacent deep-water basins. Sea turtles are expected to be rare in Flemish Pass, Flemish Cap, and the areas to the east”. These statements are contradictory to the previous two marine mammal sections, which indicate there are fewer sightings of these species in the Project area. These statements are also not in alignment with Section 10.3.1.3.1, which discusses potential acoustic implications of harbour porpoise (a high frequency cetacean that is generally a coastal species).

- The Proponent should comment on the anticipated occurrence of species throughout the Project Area and RAA.

Regarding the VSP surveys, the EIS states: “Shut down procedures will be implemented if a marine mammal or sea turtle listed as endangered or threatened on Schedule 1 of the Species at Risk Act (SARA), as well as any beaked whale species, is observed within 500 m of the air gun array”. This section requires more details for mitigation for marine mammals including the species that can be expected to be encountered in the region, the area to be monitored, and the area designated as the Marine Mammal Exclusion Zone.

- The Proponent should specify if the shutdown procedure is only implemented if any marine mammal or sea turtle is observed (i.e., not only those listed as endangered or threatened under the SARA).
- The Proponent should specify the permits that are required for disturbance of non-endangered or threatened marine mammals and turtles if it is only these SARA listed species that will initiate a shutdown procedure.

### **3.6.3 Significance Definition**

In the context of the importance of Marine Mammals and Sea Turtles, the EIS Section 10.1.6 states: “This valued component (VC) is also of cultural and recreational value to Indigenous groups and the general public”. It should be noted that federal regulators, including Transport Canada, Fisheries and Oceans Canada, and Environment and Climate Change Canada as well as international conservation consortiums and non-governmental organizations (e.g. North Atlantic Right Whale Consortium, World Wildlife Fund, Porpoise Conservation Society) are also recognizing the importance of these species.

- The Proponent should include that governmental agencies and institutions consider marine mammal species such as North Atlantic right whales and harbour porpoise as well as other Marine Mammals and Sea Turtles as having cultural, recreational and ecological value.

## 3.7 Special Areas

### 3.7.1 Potential Effects from Accidental Events

In Section 11.3.2, the EIS states: “Portions of the Northeast Slope Canadian Ecologically and Biologically Significant Area (EBSA), Northeast Newfoundland Slope Closure Marine Refuge, proposed critical habitat for northern and spotted wolffishes, and Slopes of the Flemish Cap and Grand Bank United Nations Convention on Biological Diversity (UNCBD EBSA) nearest to or overlapping the Project Area may be exposed to released drilling muds from a SBM spill”. No further information is provided with respect to mitigation measures in the event of an SBM spill.

- The Proponent should provide mitigation measures for an SBM spill.

In section 8.3.2.2 regarding fish and fish habitat mitigation measures, the EIS states: “Given the water depths in the Project Area, approval from the C-NLOPB may be sought in order to leave the wellheads in place”.

- The Proponent should specify if any infrastructure may be located in a Special Area and, if so, should be required to remove this infrastructure following well completion, as these are areas of ecological concern.

## 3.8 Indigenous Communities and Activities Effects Assessment

### 3.8.1 Primary Sources of Baseline Information

Section 4.3 of the EIS Guidelines states:

The Proponent will consider the use of both primary and secondary sources of information regarding baseline information, changes to the environment and the corresponding effect on health, socio-economics, physical and cultural heritage and the current use of lands and resources for traditional purposes. Primary sources of information could include traditional land use studies, socio-economic studies, heritage surveys or other relevant studies conducted specifically for the Project and its EIS. These studies and other types of relevant information are often obtained directly from Indigenous groups. Secondary sources of information could include previously documented information on the area (not collected specifically for the purposes of the Project) or desktop or literature-based information (Appendix A).

The EIS states that the information within Section 7.4.1 to 7.4.7 was provided to Chevron by Equinor Canada. Further, the baseline information provided for KMKNO Indigenous Communities and Activities does not include primary sources of information obtained directly from Indigenous groups and lacks adequate referencing to indicate all sources of information used. In particular, the information compiled on current use of lands and resources for traditional purposes appears to come from another Proponent's EIS. As a matter of good practice and in an effort to build positive working relationships, this type of information should be directly obtained from and validated by potentially affected Indigenous groups.

The Proponent acknowledges that one of the key messages communicated by Indigenous groups is that Indigenous interests and concerns extend beyond the potential interactions with effects on commercial communal

and/or FSC fishing practices and that Project footprint should not overlap with areas important for Food, Social and Ceremonial (FSC) or commercial communal fishing activities for Indigenous communities. Further, the EIS states that there are commercial communal licences that overlap with the Project Area but can not confirm if fishing occurs. The EIS does not provide a discussion on how the Proponent intend to engage Indigenous groups to confirm the use of the commercial communal fishing licences and how the overlap with the Project Area and potential loss of use of these licences was considered and accommodated.

Further, the Proponent indicates that there will be no anticipated interaction with well abandonment relative to Indigenous fishing areas; however, the EIS indicated that there are commercial communal licences held by Indigenous groups occurring within the Project Area or RAA and notes that the commercial fishing activity is limited to groundfish within the southwest corner of the Project area (Section 12.3.1).

- The KMKNO hold several commercial communal licences that overlap with the Project Area and these licences are considered an inherent right protected under the Section 35 of the Constitution Act, 1982. KMKNO and ANSMC should be consulted on any potential impacts or infringements on the use of those licences currently or in the future.

The EIS guidelines requires the Proponent to consider the assessment of impacts to human health which will be based on the effects of changes to the environment on Aboriginal peoples' human health including the current and future availability of country foods (e.g. marine species). The EIS acknowledges that the potential effects on commercial communal fisheries may be broader than direct and indirect economic effects on communities.

- Human health should be assessed for both the current and future availability of not only migratory species of importance, Atlantic salmon and American eel, but also for species for which the KMKNO First Nations hold Commercial Communal Fishing Licenses.

The EIS Guidelines state that the EIS is to consider the mental and social well-being of Indigenous people and also consider the effects to the practice of a current use or activity through changes or alterations to access into areas used for traditional purposes and commercial fishing, including implementation of exclusion zones.

- As mental and social well-being could be affected through reduced access to commercial communal fishing areas from the establishment of the exclusion zone during routine operations or a potential loss of access to areas for traditional purposes, the Proponent should assess related potential cultural and mental impacts.
- The exclusion zone should be added as an activity in Tables 17.3 Summary of Residual Effects for Routine Operations.
- Given that Indigenous harvesting activities in the vicinity of the shoreline could be impacted by an oil spill, the Proponent should explain the rationale of not conducting specific studies on current use of lands and resources for traditional purposes if limited secondary sources of information were available.

### **3.8.2 Opportunities for Indigenous Workers and Enterprises**

Given that engagement activities were strictly limited to email invites to multi-proponent workshop and that information obtained for the EIS did not come directly from Indigenous groups, it is very unlikely that the Proponent has made inventory of the Indigenous workforce and businesses to support Indigenous participation in the Project.

- The Proponent should indicate if an Indigenous Participation Plan has been or will be developed to support participation of Indigenous people in the Project employment and business opportunities.

### 3.8.3 Follow-up with Indigenous Groups

The Proponent has committed to continuing to engage, facilitated by the development and implementation of an IFCP, with Indigenous communities to share Project details and facilitate information sharing. Further, the Proponent plans to communicate details of safety zones for broadcasting and publishing in Notices to Shipping and/or Notices to Mariners, as appropriate. Further, the Proponent will utilize common shipping routes for supply vessels and will communicate the locations of abandoned wellheads, if applicable. This will allow Indigenous groups, fishers and other ocean users to plan accordingly and mitigate potential space-use conflicts or environmental effects. Lastly, the Proponent has committed to compensate fishers for damage to fishing gear from the Project.

- The Proponent should clarify how it will engage with Indigenous groups for the development of all follow up programs, particularly the Fisheries Communications Plan, a Fishing Gear Damage or Loss Compensation Program and Emergency and OSRP.
- The Proponent should clarify how issues and concerns raised by Indigenous groups will be taken into account and resolved during Project execution.
- The Proponent should also commit to participating in the research program on the presence and distribution of Atlantic salmon in Eastern Canadian offshore regions.

## 3.9 Accidental Events

### 3.9.1 Capping Stack

Section 7.6.1 of the EIS Guidelines requires the following: “The EIS shall include a discussion on the use, availability (including nearest location), timing (testing and mobilizing) and feasibility of a capping stack to stop a blowout and resultant spills.” The Proponent’s Table of Concordance with the EIS Guidelines (Table E.1) identifies Section 15.4 as the EIS Reference for this requirement. Section 15.4 does not provide this information, nor is it located in the Oil Spill Trajectory Model report (Appendix F).

The Proponent states that the modelling is based on a 30-day well capping scenario but does not state from where the capping stack would originate, nor does it provide an estimated timeframe (breakdown) for mobilizing, deployment and testing. Other EIS documents for exploratory drilling projects offshore NL provided this level of detail. Furthermore, mobilization timeframes of marine transport of a capping stack should be compared to potential use of an air-freightable capping stack. For example, for the Newfoundland Orphan Basin Exploration Drilling Program, Chevron estimated a timeframe of only 9 to 17 days to cap a well in the case of a subsea blowout. This substantially reduced mobilization timeframe is attributable to assumed use of an air-freightable capping stack.

- As per the Guidelines, the Proponent must provide a discussion on the “use, availability (including nearest location), timing (testing and mobilizing) and feasibility of a capping stack to stop a blowout and resultant spills analyze and describe these aspects.”
- The Proponent should provide a justification that the selected approach for capping is the best available, including justifying the selection of technology and capping stack locations that provide superior responsiveness to an accident. This should include consideration of mobile capping stacks that can be flown in.
- To ensure the most expedient capping stack mobilization, the Proponent should identify suitable deployment vessels and track/update their locations on a monthly basis.

### **3.9.2 Harsh Weather Environment Training**

Personnel may not have previously conducted drilling operations in harsh weather environments similar to those in the North Atlantic. This experience can be vitally important in avoiding and responding to accidental events and malfunctions in adverse weather and extreme seastate conditions.

- The Proponent should engage experts prior to drilling program initiation to provide offshore well control training specific to operating in harsh weather environments, including specialized training for technical experts, decision-making factors and processes, and roles and responsibilities.

### **3.9.3 Operating Thresholds**

Risks to the environment associated with potential effects of the environment on the Project should be minimized. While the Proponent mentions incorporating harsh weather considerations into MODU design and selection, there is little discussion of operating in harsh weather, which can be a substantial risk factor in accidental events.

- Explicit procedures and training related to planned and emergency disconnect should be developed and implemented, with specific installation and forecast weather thresholds (precautionary operating limits); clear decision-making processes; and detailed and unambiguous roles and responsibilities.
- The Proponent should employ a conservative approach to establishing sea state parameters and associated operating thresholds (including consideration for disconnect and reconnection), with strict, precautionary operating limits identified and communicated prior to project initiation. In the EIS, the Proponent should describe the process for identifying and assuring adherence to these thresholds.
- In establishing operating thresholds, consideration should also be given to remotely operated vehicles (ROV) launch parameters to ensure adequate monitoring in the event of an incident.

## **3.10 Indigenous Groups and Contingency Plans**

A major accident or malfunction incident is of great concern for the Mi'kmaq and there is an expectation that communities will be well informed and prepared should such an event occur. The EIS mentions that the Proponent will continue to engage with Indigenous communities to share Project details and facilitate information sharing and that this will be accomplished through the development and implementation of an IFCP. The EIS does not indicate that Indigenous groups will be engaged on the development of this plan. Further, it is not clear in the EIS how the Proponent intends to involve the Indigenous groups (not only fishers) in the development of and the implementation of contingency plans.

- The Proponent should indicate how it will involve Indigenous groups in the development and implementation of the OSRP and other emergency response and contingency plans, including emergency response and preparedness planning, exercises and training.
- The Proponent should indicate if Indigenous groups will be provided with the approved versions of contingency and response plans.
  - In consultation with Indigenous groups, an Indigenous Communication Plan (i.e., not only IFCP) should be developed prior to initiating Project activities.
  - The Proponent should indicate whether they will share results of the Spill Impact Mitigation Assessment (SIMA) / Net Environmental Benefit Analysis (NEBA) with Indigenous groups.

## 3.11 Human Health-Related Effects

The EIS states that the probability of an accidental event such as a large oil or diesel spill or a blowout occurring is very low. It also states that in the unlikely event that such an accident did occur, the oil or diesel spill modelling predicts a very low probability of affecting shoreline or near-coastal waters and coming into contact with Indigenous communities and activities. Nevertheless, Indigenous peoples may change their harvesting or consumption habits following the announcement of such an accidental event.

- The Proponent should address the issue of human health-related effects of accidental events, notably problems caused by the consumption of contaminated species, or due to dietary changes if traditionally harvested species are avoided and replaced with foods of lower nutritional value.
- Although the probability of a blowout is very low, the potential psychosocial impacts of an oil spill should be assessed. The Emergency Response Plan should also include engagement with Indigenous groups as part of the mitigation of the psychosocial stresses that may arise from a spill.

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## 4. Conclusions and Recommendations

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The review findings are summarized in **Table A-1** included in **Appendix A**. Based on review of the Chevron EIS, AECOM considers the following key issues and recommendations to be of primary concern:

i. **Seabed Survey**

Chevron will conduct an imagery-based seabed survey at the proposed wellsite(s) prior to drilling to confirm the presence or absence of any aggregations of habitat-forming corals or sponges within a 500-m radius from the wellsite(s). However, the Proponent does not indicate if a trained professional or a biologist will be required to analyze the survey imagery.

- AECOM recommends that, as sensitive benthic species and habitats are known to occur in the area, the Proponent should be required to confirm the absence of sensitive benthic species (corals, sponges, sea pens) and habitat-forming species prior to drilling by conducting ROV video seabed surveys wherever project infrastructure (wellheads, anchors, dynamic positioning transponders, etc.) may impact benthic habitat, with the spatial extent of surveys to include buffer zones of the potential zones of impact. The Proponent should also clarify that a trained professional or a biologist will be present and offer expertise on whether or not there is potential for benthic species, corals and their respective habitats.

ii. **American Eel Importance to Indigenous Communities**

Throughout the document, Chevron acknowledges that the American eel is of cultural importance for the Mi'kmaq, that this species can be found in the Project area, and that it is a vulnerable species (COSEWIC). Nevertheless, the Proponent does not offer any specific mitigation measures for this highly important species.

- AECOM recommends that the Proponent should clearly indicate that mitigation measures pertaining to the American eel are available, gather information about possible mitigation measures and add an American eel mitigation measures section in the EIS.

iii. **Loss of Fish Habitat**

With regard to mitigating for the presence and operation of a MODU, EIS Section 8.3.2.2 states: “The loss of fish habitat will be mitigated through compliance with the *Fisheries Act*.” The loss of fish habitat is not clearly described, nor is it apparent to which aspect(s) of the Fisheries Act this is referring, nor what mitigative measures will be taken in order to comply with the Fisheries Act with regards to loss of fish habitat.

- AECOM recommends that the Proponent should provide substantially more detail on the statement, “The loss of fish habitat will be mitigated through compliance with the *Fisheries Act*.” The Proponent should calculate fish habitat surface area losses in the Project Area by type of habitat (spawning, rearing, feeding) and locate these on a map. If this is referencing an authorization for harmful alteration, destruction or disruption of fish habitat pursuant to the *Fisheries Act*, this should be stated and, if so, the conceptual plan for compensating for fish habitat loss described.

**iv. Traffic from and to the Project Area**

Throughout the fish and fish habitat, marine mammals and sea turtles and marine and migratory birds sections, traffic induced by supply vessel and helicopter does not seem to take into account migratory and reproduction periods in their mitigation measures. The supply vessels transiting to and from the Project Area have the potential to strike marine mammals or sea turtles, resulting in injury or mortality. Additionally, the inconsistency in mapping vessel routes is also a concern to prevent collision.

- AECOM recommends that the Proponent should gather information about migratory and reproductive periods for all sensitive species, especially marine mammals and sea turtles. It should then be added in the mitigation measures that helicopter or supply vessel traffic will be reduced to a minimum during these periods. Vessel routes should also be added in all maps presented in the EIS.

**v. Marine Mammal Observer (MMO)**

The EIS does not indicate what the MMO search area will include, how low light and night will be taken into account, how many MMOs are to be on board, or where observation will be conducted from. These sections are light on the details for mitigation for marine mammals and migratory birds.

- AECOM recommends that the Proponent should specify in the mitigation measures what course of action is taken by trained professional on board, whether for marine mammals or migratory birds. It should detail how many professionals are required, what the MMO/trained professional search area will include, how low light or night watches are taken into account, where the observations will be conducted from. It should also include details on what will be documented in case of a collision or encounter with stranded birds. Photographs of the incident, date and time of impact/discovery, state of the animal, communication channels between vessels captains to avoid further collisions, and more if applicable.

**vi. Indigenous Communities and Activities**

The Proponent acknowledges that one of the key messages communicated by Indigenous groups is that Indigenous interests and concerns extend beyond the potential interactions with effects on commercial communal and/or FSC fishing practices and that the footprint of fishing activities need not overlap with the Project for Indigenous communities to be affected, however, there is no discussion in the assessment on how this was considered and accommodated.

- AECOM recommends the Proponent should consider the effects to human health and social well-being from the potential impacts to the current and future use of commercial communal licences. Further, the Proponent should assess the interaction of well abandonment on the future use of communal commercial licences in the Project area considering groundfish are known to be harvested in the southwest corner of the Project area. The Proponent should undertake direct consultation with KMKNO and ANSMC to gather FSC, traditional use and commercial communal licence information as well as the potential impacts to KMKNO from project activities, including potential spills.

The Proponent's engagement activities were strictly limited to email invites to a multi-proponent workshop and information obtained for the EIS did not come directly from Indigenous groups, therefore; it is very unlikely that the Proponent has made inventory of the Indigenous workforce and businesses to support Indigenous participation in the Project.

- AECOM recommends that the Proponent should also develop an Indigenous Participation Plan and engage KMKNO in the employment and business capacity of the Mi'kmaq.

The Proponent has committed to continuing to engage, facilitated by the development and implementation of an IFCP, with Indigenous communities to share Project details and facilitate information sharing.

- AECOM recommends that the Proponent should clarify how it will engage with Indigenous groups for the development of all follow up programs, particularly the Fisheries Communications Plan, a Fishing Gear Damage or Loss Compensation Program and Emergency and OSRP. Further, the Proponent should commit to participating in the Atlantic salmon in Eastern Canada offshore regions research program.

#### vii. Capping Stack Mobilization

The Proponent does not address the EIS Guideline requirements regarding capping stack mobilization in the event of a blowout. Furthermore, while the Proponent states that the modelling is based on a 30-day well capping scenario, there is no information provided as to where the capping stack would originate from, nor is an estimated timeframe (breakdown) included for mobilizing, deployment and testing.

- AECOM recommends that the Proponent must provide a discussion on the “use, availability (including nearest location), timing (testing and mobilizing) and feasibility of a capping stack to stop a blowout and resultant spills analyze and describe these aspects.” Furthermore, the Proponent should provide a justification that the selected approach for capping is the best available, including justifying the selection of technology and capping stack locations that provide superior responsiveness to an accident, including consideration of air-freightable capping stacks.

#### viii. Harsh Weather Environment Training

Previous experience in adverse weather and extreme seastate conditions can be vitally important in avoiding and responding to accidental events and malfunctions in adverse weather and extreme seastate conditions. All personnel may not have previously conducted drilling in harsh weather environments such as those potentially present in the North Atlantic.

- AECOM recommends that the Proponent should engage experts to provide training specific to operating in harsh weather environments (specialized training for technical experts, decision-making factors and processes, roles and responsibilities). Explicit procedures and training related to emergency disconnect should be developed and implemented, with specific installation and forecast weather thresholds (precautionary operating limits); clear decision-making processes; and detailed and unambiguous roles and responsibilities.

#### ix. Operating Thresholds

Risks to the environment associated with potential effects of the environment on the project should be minimized. While the Proponent mentions incorporating harsh weather considerations into MODU design and selection, there is little discussion of operating in harsh weather, which can be a substantial risk factor in accidental events.

- AECOM recommends that the Proponent should employ a conservative approach to establishing sea state parameters and associated operating thresholds (including consideration for disconnect and reconnection), with strict, precautionary operating limits identified and communicated prior to project initiation.

#### x. Indigenous Groups and Contingency Plans

A major accident or malfunction incident is of great concern for the Mi'kmaq and there is an expectation that communities will be well informed and prepared should such an event occur. The EIS mentions that the Proponent will continue to engage with Indigenous communities to share Project details and facilitate information sharing and that this will be accomplished through the development and implementation of an

IFCP. The EIS does not indicate that Indigenous groups will be engaged on the development of this plan. Further, it is not clear in the EIS how the Proponent intends to involve the Indigenous groups (not only fishers) in the development of and the implementation of contingency plans.

- AECOM recommends that the Proponent consult directly with Indigenous groups on their FSC and commercial communal areas/licences as well as traditional use activities. The Proponent should engage with Indigenous groups and commercial and commercial-communal fishers to understand their expectations related to the compensation program. An outline should be provided of how the compensation program will be developed with, and advertised amongst, potentially impacted parties. The Proponent should help to ensure that potentially impacted parties are aware of the C-NLOPB guidelines and know how to raise compensation claims. The Proponent is encouraged to interact with Indigenous groups and fishing communities early in project development to keep the community updated and knowledgeable on future actions.

#### **xii. Engagement Activities Related to Accidental Events**

Indigenous groups have great concerns about potential impacts of an oil spill on harvesting activities and their way of life.

- AECOM recommends that the Proponent should ensure that information about spills / large-scale accidental events will be shared with Indigenous groups, including consultation in relation to the findings of the SIMA and to the scope of emergency preparedness and response planning. An Indigenous Communication Plan (i.e., not only IFCP), developed in consultation with Indigenous groups, should be in place prior to initiating Project activities.

#### **xiii. Human Health-Related Effects**

The EIS states that the probability of an accidental event such as a large oil or diesel spill or a blowout occurring is very low. It also states that in the unlikely event that such an accident did occur, the oil or diesel spill modelling predicts a very low probability of affecting shoreline or near-coastal waters and coming into contact with Indigenous communities and activities. Nevertheless, Indigenous peoples may change their harvesting or consumption habits following the announcement of such an accidental event.

- AECOM recommends that the Proponent should address the issue of human health-related effects of accidental events, notably problems caused by the consumption of contaminated species, or due to dietary changes if traditionally harvested species are avoided and replaced with foods of lower nutritional value. Although the probability of a blowout is very low, the potential psychosocial impacts of an oil spill should be assessed. The Emergency Response Plan should also include engagement with Indigenous groups as part of the mitigation of the psychosocial stresses that may arise from a spill.

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## 5. Review Limitations

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AECOM relied upon publicly available information as referenced in the report. This report is intended solely for the Kwilmu'kw Maw-klusuaqn Negotiation Office (KMKNO) and the Assembly of Nova Scotia Mi'kmaq Chiefs (ANSMC). The information herein reflects our best judgment in consideration of information available at the time of preparation. No portion of this report should be used as separate entity, as it is written to be read in its entirety. Any use which a third party makes of this report, or any reliance on or decisions to be made based on it, is the responsibility of such third parties. Please refer to the Statement of Qualifications at the beginning of the Report.

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# **Appendix A**

**Table A-1**  
**Review Findings Summary Table**

**Table A-1: Review Findings Summary Table**

Review Report Section	EIS Section Reference	Topic	Context/Rationale	Comment / Question / Recommendation
<b>Project Description</b>				
3.1	2.9.2.5	Alternatives Analysis – Formation Flow Testing	<p>Well evaluation (formation flow testing) is an important component of exploration drilling which helps to determine the viability of a prospect and commercial potential of the reservoirs, gathering information about subsurface characteristics (e.g., potential productivity, connected volumes, fluid properties, composition, flow, pressure, and temperature). If well flow testing is carried out, flaring will be required for safe disposal of hydrocarbons and some liquid waste; however, flaring will contribute to platform lighting and potential attraction of birds.</p> <p>The analysis of alternative means of carrying out the project identified two preferred options for formation flow testing: (1) formation testing while tripping and (2) flaring as required with flare shield (water curtain). Formation testing while tripping does not require flaring, therefore results in reduced light and atmospheric emissions and reduced risk of bird attraction and mortality. However, the Proponent states that it does not provide the same data as flaring and that, therefore, its suitability will be assessed on a case-by-case basis. The Proponent does commit to considering formation testing while tripping in each case, to ensure well testing meets C-NLOPB requirements.</p>	To minimize potential environmental, safety and economic adverse effects, formation testing while tripping should be considered to be the preferred/default option, with formation flow testing with flaring only considered where C-NLOPB requirements cannot be met without flaring.
3.1	2.0	Batch Drilling	The Proponent proposes to drill up to eight wells; however, does not specify whether batch drilling may be considered. Batch drilling involves drilling the riser-less sections for multiple well sites consecutively, with the MODU returning to drill each well to completion – several wells would be initiated, with only the top-hole portions (conductor hole section and surface hole section), drilled initially, without risers and using water-based mud (WBM).	While the proposed sequencing and schedule do not imply batch drilling, the Proponent should state whether batch drilling may be considered and, if so, include this potential activity in the EIS.
<b>Consultation and Engagement</b>				
3.2	3.2	Engagement with Indigenous groups	<p>The EIS Guidelines (CEA Agency 2018) states that a key objective of CEAA 2012 is to promote communication and cooperation with Indigenous peoples, which includes First Nations, Inuit and Métis, and identify the following expectations of the Proponent:</p> <ul style="list-style-type: none"> <li>•To engage with potentially affected groups, beginning as early as possible in the project planning process.</li> <li>•To provide potentially affected groups with opportunities to learn about the Project and its potential effects and to make groups' concerns known</li> </ul>	The Proponent should engage directly with KMKNO and develop an engagement plan for all phases of the EA, post-EA permitting and decommission and reclamation. The engagement should follow the Mi'kmaq of Nova Scotia's preferred process as described in the Proponents' Guide: The Role of Proponents in Crown Consultation with the Mi'kmaq of Nova Scotia (2012)

Review Report Section	EIS Section Reference	Topic	Context/Rationale	Comment / Question / Recommendation
			<p>about the Project's potential effects and discuss measures to mitigate those effects.</p> <ul style="list-style-type: none"> <li>• To work with potentially affected groups to establish an engagement approach.</li> <li>• To make reasonable efforts to integrate Aboriginal traditional knowledge into the assessment of environmental effects.</li> </ul> <p>The EIS states that Chevron is committed to collaborating with Indigenous peoples and their communities however, engagement to date has been invites to a workshop and informing out on the project.</p>	<p>Provide detailed information on how the Indigenous groups will participate in the development and implementation of mitigation and monitoring measures.</p> <p>Indicate how it will integrate input (like traditional knowledge) from Indigenous groups into monitoring activities.</p> <p>The Proponent should be proactive and offer support to the Indigenous groups in order to prepare and realize engagement activities within the concerned communities.</p> <p>Ensure that information about spills / large-scale accidental events will be shared with Indigenous groups (not only fishers), including consultation in relation to the findings of the dispersion modelling and to the scope of emergency preparedness and response planning.</p>
<b>Existing Physical and Biological Environment</b>				
3.3	8.2	Marine Fish and Fish Habitat	Chevron acknowledges data gaps on American eel migration routes in the Project Area. DFO surveys from 2007 to 2018 did not identify American eel in any of the survey sets. American eel is of cultural importance for the Mi'kmaq Indigenous communities, and filling gaps in data in the Project area would help future recommendations in the Project Area.	The Proponent should clearly indicate that mitigation measures pertaining to the American eel are available, gather information about possible mitigation measures and add an American eel mitigation measures section in the EIS. It should also be noted that this Project would be an opportunity for research and increase knowledge pertaining to the American eel.
3.3	8.2	Marine Fish and Fish Habitat	The EIS does not always include vessels routes on figures in the EIS (for example, Figure 6.14). This information is very important for understanding potential interactions between vessel traffic and environmental components.	The Proponent should illustrate the proposed vessels routes on each figure, including figures from other sections (Marine and Migratory Birds; Marine Mammals and Sea Turtles, for example). Vessel routes relative to the Project area as well as vessel traffic should be defined, including the number of vessels that currently and will transit through the proposed Project area.

Assessment of Residual Environmental Effects on Fish and Fish Habitat				
3.4	8.3.1	Change in Risk of Mortality or Physical Injury	In reference to liquid discharges, EIS Section 8.3.1 states:" [...] other routine liquid discharges, such as cooling and ballast water, will be managed in accordance with the OWTG, Transport Canada's Ballast Water Control Management Regulations and/or MARPOL, and are not expected to cause mortality or physical injury to marine fish". The proponent has not supported this statement with literature references This statement is not supported by literature, and may therefore be This impact is underestimated. and it reads as if the impact is underestimated, especially particularly since the Proponent mentions fish, but not other organisms living in the same habitats such as benthic invertebrates and plankton.	The Proponent should cite studies to support that statement and indicate if these activities might also harm benthic fauna and plankton communities (food source).
3.4	8.3.2	Change in Habitat Quality and Use	In reference to exploration drilling, EIS Section 8.3.2 states:" [...] the primary discharges resulting in changes in habitat quality relate to drilling muds and cuttings, and components of these discharges causing physical or chemical changes in the water column and/or sediment. A temporary increase in suspended particulate matter and turbidity in the water column will occur as drill muds and cuttings disperse through the water column to settle on the seafloor".	The Proponent should specify changes in water parameters, such as dissolved oxygen, temperature, conductivity, pH, as drilling fluids can have possible effects.
3.4	8.3.2	Change in Habitat Quality and Use	The EIS Guidelines require that the Proponent describe the predicted effects on fish and fish habitat, including the calculations of any potential habitat loss (temporary or permanent) in terms of surface areas (e.g. spawning grounds, juvenile, rearing and feeding areas), and in relation to availability and significance.	This is an information gap. The Proponent should calculate fish habitat surface area losses in the Project Area by type of habitat (spawning, rearing, feeding) and locate these on a map.
3.4	8.3.2.2	Change in Habitat Quality and Use	With regards to mitigating for the presence and operation of a MODU, EIS Section 8.3.2.2 states: "The loss of fish habitat will be mitigated through compliance with the Fisheries Act." The loss of fish habitat is not clearly described, nor is it apparent to which aspect(s) of the Fisheries Act this is referring, nor what mitigative measures will be taken in order to comply with the Fisheries Act with regards to loss of fish habitat.	Substantially more detail on this statement ("The loss of fish habitat will be mitigated through compliance with the Fisheries Act.") is needed to understand mitigation and compliance. If this is referencing to an authorization for harmful alteration, destruction or disruption of fish habitat pursuant to the Fisheries Act, the Proponent should state so and describe a conceptual plan for compensating for fish habitat loss.
3.4	8.3.2	Change in Habitat Quality and Use	In reference to oil spills, EIS Section 8.3.2 states:" While individuals in these life stages could be affected, effects on larval stages does not necessarily result in effects on adult populations (Gallaway et al. 2017; Carroll et al. 2018)".	While there might be no immediate effects on adults, the Proponent should specify what would happen to recruitment of fish in the years following an oil spill event that would decimate fish larvae.  The Proponent should evaluate studies on the potential drastic decrease in recruitment the year following a massive death event of fish larvae caused by an oil spill.
3.4	8; 9; 10; 11	Change in Habitat Quality and Use	In reference to fish mortality caused by an oil spill, the EIS Section 8.3.2 states: "Adult fish species in surface waters will largely be unaffected due to avoidance mechanisms; demersal (bottom dwelling) species are unlikely to be exposed to harmful concentrations of dissolved total hydrocarbons, unless the spilled was unmitigated and resulted in infiltration of the sea floor. Residual effects following a nearshore diesel spill could include	The Proponent should cite studies to support those statements.

			localized mortality and sublethal effects to fish eggs, larvae, and juveniles”, while never citing studies to support these statements.	
3.4	8.3.2.2	Mitigation	In reference to the imagery-based seabed survey, the EIS Section 8.3.2.2 states:” An imagery-based seabed survey will be conducted at the proposed well site(s) to confirm the absence of sensitive environmental features, such as habitat-forming corals or species at risk (as well as shipwrecks, debris on the seafloor, and unexploded ordnance). The survey will be carried out prior to drilling. If environmental or anthropogenic sensitivities are identified during the survey, Chevron will move the well site to avoid affecting them if it is feasible to do so”. The Proponent does not specify if a biologist or other trained professional will be present during the survey.	The Proponent should commit to having a biologist or a trained professional present during the survey.
<b>Marine and Migratory Birds</b>				
3.5	9.3.1.2	Mitigation	In reference to mortality for migratory birds, the EIS Section 9.3.1.2 states: “The regional ECCC-CWS office will be contacted for separation distances and altitudes between helicopters transiting to and from the MODU and migratory bird nesting colonies, as per ECCC-CWS guidelines (Government of Canada 2018) and routes will comply with provincial Seabird Ecological Reserve Regulations, 2015. Specific details will be provided in the environmental protection plan (EPP)”. It should be added that helicopter flights will be minimize and only for emergency purpose during the migratory and reproduction season.	The Proponent should specify if they will suspend flights during these critical periods for these species.
3.5	9.3.2.2	Mitigation	Section 9.3.2.2 of the EIS states: “Chevron will take steps to deter marine and migratory birds from the area as part of its Oil Spill Response Plan (OSRP) before in-situ burning commences”. There are several deterrent techniques which may be effective and do not require a permit; however, a permit under the Migratory Bird Convention Act is required for the use of aircraft or firearms (defined as capable of emitting at projectile at more than 495 feet per second). In addition, a permit under the Fisheries Act may be required as the Marine Mammal Regulations prohibit disturbance of the marine mammals.	<ul style="list-style-type: none"> <li>The Proponent should mention if permits are required for hazing and if so, the Proponent should name which regulatory agency isagency regulates the use of aircraft and firearms during hazing. emitting.</li> </ul>
<b>Marine Mammals and Sea Turtles</b>				
3.6	10.1.6	Significance Definition	In the context of the importance of Marine Mammals and Sea Turtles, the EIS Section 10.1.6 states: “This VC is also of cultural and recreational value to Indigenous groups and the general public”. It should be noted that many federal agencies are also recognizing the importance of these species.	The Proponent should add that governmental agencies and institutions, consider marine mammal species such as North Atlantic Right Whales and many others harbour porpoise as well as other, also consider Marine Mammals and Sea Turtles as of having cultural and recreational value.
3.6	10.3.1	Change in Risk of Mortality or Physical Injury	Regarding the assessment of the underwater noise generated by the MODU, the statement that “The broadband sound source level for the MODU is assumed to be 196.7 dB re 1 µPa @ 1 m sound pressure level (SPLrms)”. This statement is not referenced. Similarly, the statement “Given the expected SPLrms of 196.7 dB for the MODU, sound levels would not reach the peak sound pressure level (SPLpeak) auditory injury thresholds for any marine mammal groups.” is not substantiated. There is no discussion of the relation between source levels and peak injury levels.	<p>The Proponent should cite studies or references to support these statements.</p> <p>The Proponent should expand upon the relation between the source levels and the peak levels and the relationship to injury criteria for marine mammals and sea turtles.</p>

3.6	10.3.1	Change in Risk of Mortality or Physical Injury	<p>Regarding possible collisions with supply vessels, EIS Section 10.3.1 states: "Although there are no known marine mammal concentration areas along the supply vessel transit route, it is possible that groups of foraging marine mammals may be encountered, especially during summer months". While there may not be areas of concentration, if the vessels transit routes cross the route that marine mammals use to move between important habitats, then risk of collision can be increased.</p> <p>In the same section, the EIS states: "Sea turtles are considered rare along the transit route as well as in the Project Area". While this might be true, the Proponent does not provide a source to support that statement.</p>	The Proponent should add that the risk of collision can be increased if vessels transit routes are crossing transit routes for marine mammals. Not only during summer months.
3.6	10.3.1.2	Mitigation	<p>Section 10.3.1.2 of the EIS states: "Supply vessels will follow established shipping lanes where they exist (i.e., in proximity to shore); where these do not exist, supply vessels will follow a straight-line approach to and from the Project Area. During transit to/from the Project Area, supply vessels will travel at vessel speeds not exceeding 22 km/hour (12 knots) except as needed in the case of an emergency". However, transit during migration or reproduction season have the potential to disrupt these important cycles. Thus, the mitigation plan should include information on how this impact will be mitigated. The Proponent also does not take into account the Marine Mammal Regulations of the Fisheries Act, that has a number of prohibited actions including that vessel traffic should not separate a marine mammal from its group or a mother and her calf.</p>	<p>The Proponent should state that they plan to minimize traffic during these important periods.</p> <p>The Proponent should also add information about compliance with the Marine Mammal Regulations of the Fisheries Act.</p>
3.6	10.3.1.2	Mitigation	<p>In the same section, the EIS states: "Vessel crew will keep a watch for marine mammals or sea turtles and reduce speed and/or alter course if practicable to avoid a collision". Does vessel crew imply a dedicated MMO marina mammals observer on board? In the case of an impact, documentation of the event is very important. Photographs, direction of travel, coordinates of impact location should be documented and shared between supply vessels and their captains. A Project specific protocol should be developed for guidance with interactions with marine mammals.</p>	The Proponent should develop a Project-specific protocol for guidance on interactions with marine mammals, particularly in the event of a collision.
3.6	10.3.2	Change in Habitat Quality and Use	<p>In regards to the magnitude of the effect of the presence and operation of a MODU and VSP, the EIS Section 10.3.2 states: "Given that the zone of influence of the Project at one time or location will likely be a small proportion of the feeding, breeding, or migration area of species, marine mammals and sea turtles will not be displaced from important habitats or during important activities or be affected in a manner that causes adverse effects to overall populations in the region". This statement should be validated to be sure that it is accurate also for North Atlantic Right Whales. While the Project area is beyond the main habitat of North Atlantic Right Whales, the Endangered status of this species requires thoughtful and effective consideration, and as with all species compliance with the Fisheries Act and the Species at Risk Act.</p>	The Proponent should cite studies to support this statement.
3.6	10.3.2	Change in Habitat Quality and Use	<p>As for potential effects of a blowout in the same section, the EIS states: "As a result, a blowout would have a greater potential to interact with marine mammals that inhabit these deeper waters including species like sperm whales, beaked whales, and delphinids. Fin whales also occur regularly in the Flemish Pass area. Harp and hooded seals are considered common in the Project Area and adjacent deep-water basins. Sea turtles are expected</p>	The Proponent should clarify if targeted species sightings are rare or not throughout this section, and their expected occurrence throughout the Project Area and RAA.

			to be rare in Flemish Pass, Flemish Cap, and the areas to the east". These statements seem a little contradictory to the previous two marine mammal sections, which seem to indicate that there are few sightings in the area. In addition, these statements are not in alignment with the statements made in Section 10.3.1.3.1 which discusses potential acoustic implications of harbour porpoise (a high frequency cetacean that is generally a coastal species).	
3.6	10.3.2.2	Mitigation	Regarding the VSP surveys, the EIS states: "Shut down procedures will be implemented if a marine mammal or sea turtle listed as endangered or threatened on Schedule 1 of the SARA, as well as any beaked whale species, is observed within 500 m of the air gun array". This section requires more details for mitigation for marine mammals including the species that can be expected to be encountered in the region, the area to be monitored, and the area designated as the Marine Mammal Exclusion Zone. Also, are shut down procedures only applicable to endangered or threatened, or for all marine mammals?	<p>The Proponent should specify if the shutdown procedure is only implemented if any marine mammal or sea turtle is observed. Not only those listed as endangered or threatened.</p> <p>The Proponent should specify the permits that are required for disturbance of non-endangered or threatened marine mammals and turtles if these are the only species that will initiate a shut down procedure.</p>
<b>Special Areas</b>				
3.7	11.3.2	Potential Effects From Accidental Events	In Section 11.3.2, the EIS states: "Portions of the Northeast Slope Canadian EBSA, Northeast Newfoundland Slope Closure Marine Refuge, proposed critical habitat for northern and spotted wolffishes, and Slopes of the Flemish Cap and Grand Bank UNCBD EBSA nearest to or overlapping the Project Area may be exposed to released drilling muds from a SBM spill". No further information is provided in regard to mitigation measures in the case of an SBM spill.	The Proponent should mention that mitigation measures for this particular effect are available and explain them accordingly.
3.7	11.3.2.2	Mitigation	In section 8.3.2.2 about fish and fish habitat mitigation measures, the EIS states: "Given the water depths in the Project Area, approval from the C-NLOPB may be sought in order to leave the wellheads in place". We argue that in the particular case of infrastructures present in Special Areas, efforts should be made to remove every structure after exploitation, since these areas have a particular status.	The Proponent should specify if any infrastructure may be located in a Special Area and, if so, should be required to remove this infrastructure following well completion, as these are areas of ecological concern.

Indigenous Communities and Activities				
3.8	3.2 and 7	Baseline information	<p>The CEAA Guidelines state: The Proponent will consider the use of both primary and secondary sources of information regarding baseline information, changes to the environment and the corresponding effect on health, socio-economics, physical and cultural heritage and the current use of lands and resources for traditional purposes.</p> <p>Primary sources of information could include traditional land use studies, socio-economic studies, heritage surveys or other relevant studies conducted specifically for the project and its EIS. Often these studies and other types of relevant information are obtained directly from Indigenous groups. Secondary sources of information could include previously documented information on the area, not collected specifically for the purposes of the project, or desk-top or literature-based information.</p> <p>The information compiled on current use of lands and resources for traditional purposes appears to come from another proponent's EIS and as a matter of good practice and in an effort to build positive working relationships, this type of information should be directly obtained from and validated by Indigenous groups.</p>	The Proponent should explain the justification for not engaging directly with KMKNO to gather and validate information on potential impacts to the environment, health, traditional uses, socio-economic and health of Indigenous peoples and communities.
3.8	7.4	Baseline information for current use of the lands and resources for traditional purposes	<p>The CEAA Guidelines states: Baseline information for current use of lands and resources for traditional purposes will focus on the traditional activity (e.g. hunting, fishing) and include a characterization of all attributes of the activity that can be affected by environmental change.</p> <p>The EIS does not provide much information concerning other aboriginal activities on shoreline and / or near-coastal waters.</p>	Given that Indigenous harvesting activities in the vicinity of the shoreline could be impacted by an oil spill, the Proponent should explain the rationale of not realizing specific studies on current use of lands and resources for traditional purposes if limited secondary sources of information were available.
3.8	12.3.1 and 7.4	Baseline information for Indigenous Commercial Communal Fishing Licences	<p>The baseline states that the Mi'kmaq of Nova Scotia have commercial communal licences that overlap with the Project Area but could not confirm if fishing occurs.</p>	The Proponent should explain why their engagement plan did not include direct engagement to confirm and validate commercial communal (and FSC) fisheries from both a current and future use perspective.
3.8	7.0	Opportunities for Indigenous workers and enterprises	<p>Socio-economic baseline does not outline benefits from the project, in particular, how the Proponent plans to engage Indigenous groups in employment and business opportunities to participate in the Project.</p>	Indicate if an Indigenous Participation Plan has been or will be developed to address capacity-building issues, hiring strategies and / or contract award decisions.
3.83.8.3	12.3.2.2	Follow-up with Indigenous groups	<p>The EIS states that Chevron plans to continue to engage with Indigenous communities to share project details and facilitate information sharing through an IFCP. It is understood that Chevron will send information to the indigenous groups, but it is unclear if the indigenous groups would be engaged in the development of the various follow up, emergency response and contingency plans.</p>	The Proponent should clarify how Indigenous groups will be included in the development of follow up, emergency response and contingency plans. Further, the Proponent should clarify how they plan to ensure that issues and concerns can be raised by Indigenous groups and taken into account during Project execution.

Accidental Events					
3.9	15.4	Capping Stack	<p>Section 7.6.1 of the EIS Guidelines states: "The EIS shall include a discussion on the use, availability (including nearest location), timing (testing and mobilizing) and feasibility of a capping stack to stop a blowout and resultant spills." The Proponent's Table of Concordance with the EIS Guidelines (Table E.1) identifies Section 15.4 as the EIS Reference for this requirement. Section 15.4 does not provide this information, nor is it located in the Oil Spill Trajectory Model report (Appendix F).</p> <p>The Proponent states that the modelling is based on a 30-day well capping scenario but does not state from where the capping stack would originate, nor does it provide an estimated timeframe (breakdown) for mobilizing, deployment and testing. Other EIS documents for exploratory drilling projects offshore NL provided this level of detail. Furthermore, mobilization timeframes of marine transport of a capping stack should be compared to potential use of an air-freightable capping stack. For example, for the Newfoundland Orphan Basin Exploration Drilling Program, Chevron estimated a timeframe of only 9 to 17 days to cap a well in the case of a subsea blowout. This substantially reduced mobilization timeframe is attributable to assumed use of an air-freightable capping stack.</p>	<p>As per the Guidelines, the Proponent must provide a discussion on the "use, availability (including nearest location), timing (testing and mobilizing) and feasibility of a capping stack to stop a blowout and resultant spills analyze and describe these aspects."</p> <p>The Proponent should provide a justification that the selected approach for capping is the best available, including justifying the selection of technology and capping stack locations that provide superior responsiveness to an accident. This should include consideration of mobile capping stacks that can be flown in.</p> <p>In order to ensure the most expedient capping stack mobilization, the Proponent should identify suitable deployment vessels and track/update their locations on a monthly basis.</p>	
3.9	15.4	Harsh Weather Environment Training	All personnel may not have previously conducted drilling in harsh weather environments similar to those in the North Atlantic.	<p>The Proponent should engage experts prior to drilling program initiation to provide offshore well control training specific to operating in harsh weather environments, including specialized training for technical experts, decision-making factors and processes, and roles and responsibilities.</p>	
3.9	15.4	Operating Thresholds	Risks to the environment associated with potential effects of the environment on the Project should be minimized. While the Proponent mentions incorporating harsh weather considerations into MODU design and selection, there is little discussion of operating in harsh weather, which can be a substantial risk factor in accidental events.	<p>Explicit procedures and training related to planned and emergency disconnect should be developed and implemented, with specific installation and forecast weather thresholds (precautionary operating limits); clear decision-making processes; and detailed and unambiguous roles and responsibilities.</p> <p>The Proponent should employ a conservative approach to establishing sea state parameters and associated operating thresholds (including consideration for disconnect and reconnection), with strict, precautionary operating limits identified and communicated prior to project initiation. In the EIS, the Proponent should describe the process for identifying and assuring adherence to these thresholds.</p> <p>In establishing operating thresholds, consideration should also be given to ROV launch parameters to ensure adequate monitoring in the event of an incident.</p>	

3.10	15.5.5	Indigenous groups and Contingency Plans	<p>Potential major incidents raise great concern for Mi'kmaq, and they expect to be well informed and prepared if such event happens.</p>	<p>Indicate how Indigenous groups (not only fishers) will be involved in the development and implementation of the OSRP and other emergency response and contingency plans, including emergency response and preparedness planning, exercises and training.</p> <p>Indicate whether Indigenous groups will be provided with the approved versions of contingency and response plans.</p> <p>In consultation with Indigenous groups, an Indigenous Communication Plan (i.e., not only IIFCP) should be developed prior to initiating Project activities.</p>
3.11	15.5.5.1.1	Human Health-Related Effects	<p>The EIS states that the probability of an accidental event such as a large oil or diesel spill or a blowout occurring is very low, and that in the unlikely event that such an accident did occur, the oil spill modelling predicts a very low probability of oil moving toward coastal water or shoreline in Canada and coming into contact with any Indigenous communities and activities. Nevertheless, Indigenous peoples may change their harvesting or consumption habits following the announcement of such an accidental event.</p>	<p>Although the probability of a blowout is very low, the potential psychosocial impacts of an oil spill should be assessed, and the emergency response plan should also include the need to engage with Indigenous groups and mitigate the psychosocial stresses that may arise from a spill.</p> <p>The Proponent should address the issue of human health-related effects of accidental events, notably problems caused by the consumption of contaminated species, or due to dietary changes if traditionally-harvested species are avoided and replaced with foods of lower nutritional value.</p>

## **Appendix B**

**Table B-1**  
**List of Acronyms and Abbreviations Table**



# Table B-1: List of Acronyms and Abbreviations

Acronym	Definition
AECOM	AECOM Canada Ltd.
ANSMC	Assembly of Nova Scotia Mi'kmaq Chiefs
CEA Agency	The Canadian Environmental Assessment Agency
CEAA	The Canadian Environmental Assessment Act
C-NLOPB	The Canada-Newfoundland and Labrador Offshore Petroleum Board
CPAWS	Canadian Parks and Wilderness Society
CWS	Canadian Wildlife Service
DFO	Fisheries and Oceans Canada
EA	Environmental Assessment
EBSA	Ecologically and Biologically Significant Areas
ECCC	Environment and Climate Change Canada
EIS	Environmental Impact Statement
EL	Exploration Licence
ENGOs	Environmental Non-Governmental Organizations
EPP	Environmental Protection Plan
FSC	Food, social and ceremonial
IFCP	Indigenous Fisheries Communication Plan
KMKNO	Kwilmu'kw Maw-klusuaqn Negotiation Office
MARPOL	International Convention for the Prevention of Pollution from Ships
MEKSP	Mi'kmaq Ecological Knowledge Study Protocol
MODU	Mobile Offshore Drilling Unit
NAFO	Northwest Atlantic Fisheries Organization
NL	Newfoundland and Labrador
nm	Nautical Mile
OSRP	Oil Spill Response Plan
OWTG	Offshore Waste Treatment Guidelines
PSVs	Platform Supply Vessels
RAA	Regional Assessment Area
ROV	Remotely Operated Vehicle
SBM	Synthetic-Based Mud
SRP	Spill Response Plan
The Accord Acts	Labrador Atlantic Accord Implementation Newfoundland and Labrador Act and the Canada-Newfoundland Atlantic Accord Implementation Act
UNCBD	United Nations Convention on Biological Diversity
VC	Valued component

## About AECOM

AECOM is built to deliver a better world. We design, build, finance and operate infrastructure assets for governments, businesses and organizations in more than 150 countries. As a fully integrated firm, we connect knowledge and experience across our global network of experts to help clients solve their most complex challenges. From high-performance buildings and infrastructure, to resilient communities and environments, to stable and secure nations, our work is transformative, differentiated and vital. A Fortune 500 firm, AECOM had revenue of approximately \$17.4 billion during fiscal year 2016. See how we deliver what others can only imagine at [aecom.com](http://aecom.com) and @AECOM.

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