

75 Treaty Trail Truro, NS B6L 1W3

Tel (902) 843 3880 Fax (902) 843 3882 Toll Free 1 888 803 3880 Email info@mikmaqrights.com www.mikmaqrights.com

October 24, 2019

Cheryl Benjamin
Project Manager – Atlantic Region
Impact Assessment Agency of Canada
1801 Hollis Street, Suite 200
Halifax, NS B3J 3N4
Cheryl.Benjamin@ceaa-acee.gc.ca

Re: Review of the Draft Environmental Assessment Report and Potential Conditions for the CNOOC International Flemish Pass Exploration Drilling Project

Ms. Benjamin,

KMKNO has reviewed the Draft Environmental Assessment Report and Potential Conditions for the CNOOC International Flemish Passage Exploration Drilling Project. I wish to provide you with our comments, concerns and recommendations. KMKNO has contracted AECOM to conduct a review of the draft EA report and potential conditions and we have submitted the report to the Impact Assessment Agency of Canada (IAA).

The Mi'kmaq are the holders of constitutionally protected Aboriginal and treaty rights, which include the Aboriginal right to fish for food and the treaty right to fish for a moderate livelihood. Any impacts to fish and fish habitat are impacts to Mi'kmaq rights. Therefore, it is our expectation the Mi'kmaq will be compensated for any infringement on fishing rights.

We wish to reiterate our concern that this exploration project, as well as the other concurrent offshore oil and gas developments in Newfoundland, may impact both Atlantic salmon and American eel. The timing and design of the project activities will be important to reduce potential impact to migrating fish as well as those overwintering. We have already provided CIAA with a copy of the UINR report on Atlantic salmon that indicates drilling activities between the months of January to August pose a greater impact Atlantic salmon in the area.

We are also concerned about the potential for accidental spills in the deep water and the potential effects this would have on the Mi'kmaq of Nova Scotia. This concern is magnified when considering the number of exploration drilling projects being proposed in the offshore Newfoundland.

We look forward to further consultation on this matter.

Yours in Recognition of Mi'kmaq Rights and Title,

<Original signed by>

Twila Gaudet, BA, LL.B. Director of Consultation



Kwilmu'kw Maw-klusuaqn Negotiation Office (KMKNO)

Review of the Canadian Environmental Assessment Agency EA Report and Potential Conditions for the CNOOC International Flemish Pass Exploration Drilling Project

Prepared by:

AECOM 1701 Hollis Street SH400 (PO Box 576 CRO) Halifax, NS, Canada B3J 3M8 www.aecom.com

902 428 2021 tel 902 428 2031 fax

October, 2019 Project Number: 60565441



AECOM 1701 Hollis Street SH400 (PO Box 576 CRO) Halifax, NS, Canada B3J 3M8 www.aecom.com

902 428 2021 tel 902 428 2031 fax

October 25, 2019

Mr. Derek Peters Mi'kmaq Energy Advisor Kwilmu'kw Maw-klusuaqn Negotiation Office 75 Treaty Trail, Millbrook, Nova Scotia B6L 1W3

Via Email: dpeters@mikmaqrights.com

Dear Mr. Peters:

Project No: 60565441

Regarding: Review of the Canadian Environmental Assessment Agency EA Report and

Potential Conditions for the CNOOC International Flemish Pass Exploration

Drilling Project - Final Report

AECOM Canada Ltd. (AECOM) is pleased to provide Kwilmu'kw Maw-klusuaqn Negotiation Office (KMKNO) with this final report on AECOM's review of the Environmental Assessment Report and potential EA Conditions prepared by the Canadian Environmental Assessment Agency for the CNOOC International Flemish Pass Exploration Drilling Project.

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
Nora.doran@aecom.com

Nd:lm Encl. cc

Statement of Qualifications and Limitations

The attached Report (the "Report") has been prepared by AECOM Canada Ltd. ("AECOM") for the benefit of the Kwilmu'kw Mawklusuaqn Negotiation Office (KMKNO) ("Client") in accordance with the agreement between AECOM and Client, including the scope of work detailed therein (the "Agreement"). The information, data, recommendations and conclusions contained in the Report (collectively, the "Information"):

- is subject to the scope, schedule, and other constraints and limitations in the Agreement and the qualifications contained in the Report (the "Limitations");
- represents AECOM's professional judgement in light of the Limitations and industry standards for the preparation of similar reports;
- may be based on information provided to AECOM which has not been independently verified;
- has not been updated since the date of issuance of the Report and its accuracy is limited to the time period and circumstances in which it was collected, processed, made or issued;
- must be read as a whole and sections thereof should not be read out of such context;
- was prepared for the specific purposes described in the Report and the Agreement; and
- in the case of subsurface, environmental or geotechnical conditions, may be based on limited testing and on the assumption that such conditions are uniform and not variable either geographically or over time.

AECOM shall be entitled to rely upon the accuracy and completeness of information that was provided to it and has no obligation to update such information. AECOM accepts no responsibility for any events or circumstances that may have occurred since the date on which the Report was prepared and, in the case of subsurface, environmental or geotechnical conditions, is not responsible for any variability in such conditions, geographically or over time.

AECOM agrees that the Report represents its professional judgement as described above and that the Information has been prepared for the specific purpose and use described in the Report and the Agreement, but AECOM makes no other representations, or any guarantees or warranties whatsoever, whether express or implied, with respect to the Report, the Information or any part thereof.

Without in any way limiting the generality of the foregoing, any estimates or opinions regarding probable construction costs or construction schedule provided by AECOM represent AECOM's professional judgement in light of its experience and the knowledge and information available to it at the time of preparation. Since AECOM has no control over market or economic conditions, prices for construction labour, equipment or materials or bidding procedures, AECOM, its directors, officers and employees are not able to, nor do they, make any representations, warranties or guarantees whatsoever, whether express or implied, with respect to such estimates or opinions, or their variance from actual construction costs or schedules, and accept no responsibility for any loss or damage arising therefrom or in any way related thereto. Persons relying on such estimates or opinions do so at their own risk.

Except (1) as agreed to in writing by AECOM and Client; (2) as required by-law; or (3) to the extent used by governmental reviewing agencies for the purpose of obtaining permits or approvals, the Report and the Information may be used and relied upon only by Client.

AECOM accepts no responsibility, and denies any liability whatsoever, to parties other than Client who may obtain access to the Report or the Information for any injury, loss or damage suffered by such parties arising from their use of, reliance upon, or decisions or actions based on the Report or any of the Information ("improper use of the Report"), except to the extent those parties have obtained the prior written consent of AECOM to use and rely upon the Report and the Information. Any injury, loss or damages arising from improper use of the Report shall be borne by the party making such use.

This Statement of Qualifications and Limitations is attached to and forms part of the Report and any use of the Report is subject to the terms hereof.

AECOM: 2015-04-13

© 2009-2015 AECOM Canada Ltd. All Rights Reserved.

Authors

Report Prepared By:

<Original signed by>

Tara Oak, BSc

Environmental and Regulatory Planning Paita Environmental Consulting Inc.

<Original signed by>

Karina Andrus, M.Sc.

Technical Lead, Impact Assessment

AECOM

<Original signed by>

Julie D'Amours, M.Sc.

Biologist AECOM

Report Reviewed By:

<Original signed by>

Pamela Neubert, M.S., PhD

Associate Vice President, Director Marine Science

AECOM

Table of Contents

1.1 1.2	AECOM's Mandate Project Description		
1.3	Environmental Assessment Process		
Met	hod		1
Rev	iew Results		5
3.1	Consultation Activities		
	3.1.1 Indigenous Consultation led by the Agency		
	3.1.2 The Proponents' Indigenous Engagement Activi		
	3.1.3 The Agency's Public Engagement Activities		
	3.1.4 Proponents' Public Engagement Activities		
3.2	Predicted Effects on Valued Components		
	3.2.1 Fish and Fish Habitat		
	3.2.2 Marine Mammals and Turtles		
	3.2.3 Migratory Birds		
	3.2.4 Special Areas		
	3.2.5 Species at Risk		
	3.2.6 Commercial Fisheries		C
	3.2.7 Current Use of Lands and Resources for Traditi and Socio-Economic Condition of Indigenous Po		J
3.3	Effects of Accidents and Malfunctions		
	3.3.1 Capping Stack and Deployment Vessel Availab	ility1	1
	3.3.2 Indigenous Involvement in Spill Response Plani	•	
	3.3.3 Compensation Guidelines		
	3.3.4 Perceived Contamination	12	2
	3.3.5 Environmental Incident Reporting		
	3.3.6 Capping Stack Water Depth Limitations	1;	3
	3.3.7 Psychosocial Effects	1;	3
	3.3.8 Measuring Levels of Contamination	1	3
	3.3.9 Significance Determination	14	4
3.4	Effects of the Environment on the Project	14	4
	3.4.1 Operating Procedures and Thresholds	14	4
3.5	Cumulative Environmental Effects		
3.6	Impacts on Potential or Established Aboriginal or Treaty	y Rights15	5
Con	clusions and Recommendations	16	3
Rev	iew Limitations	18	3
	erences		

1. Introduction

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 assessment (EA) of exploration / delineation / appraisal drilling programs and associated activities, proposed to be conducted in the eastern portion of the Canada-Newfoundland and Labrador (NL) Offshore Area.

AECOM's mandate consists of supporting the ANSMC in the review of the Environmental Impact Statement (EIS) and the draft EA Report in order 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 any outstanding information gaps.

A previous report summarized AECOM's review of the EIS and EIS Summary for the CNOOC International Flemish Pass Exploration Drilling Project (formerly Nexen Energy ULC Flemish Pass Exploration Drilling Project) (CEAR 80117), proposed by CNOOC Petroleum North America ULC (CNOOC). This report summarizes AECOM's review of the Canadian Environmental Assessment Agency (the Agency) draft EA Report and potential EA Conditions for the Project.

Nexen Energy ULC changed its name to CNOOC International as of January 15, 2019.

1.2 Project Description

To determine the potential presence of hydrocarbons, CNOOC plans to conduct a program of petroleum exploration drilling and associated activities in the eastern portion of the Canada-Newfoundland and Labrador Offshore Area over the period 2018 to 2028 (the Project). The Project area includes two Exploration Licences (ELs) in the Flemish Pass region (EL-1144 and EL-1150), as well as a 20-km buffer area surrounding those licences to accommodate the location and extent of ancillary activities that may be carried out in support of such drilling activities. CNOOC is the current Operator and sole interest holder of the ELs, which have not been subject to exploration drilling activity to date. The Project includes exploration drilling within these ELs; possible appraisal (delineation) drilling in the event of a hydrocarbon discovery; vertical seismic profiling (VSP); well testing; eventual well abandonment or suspension activities; and associated supply and service activities.

The scope of the Project may involve the drilling of up to 10 wells over its planned temporal duration. Specific wellsite types and locations will be selected as Project planning and design activities move forward. Wells may be drilled using either harsh environment semi-submersible or drill ship mobile offshore drilling units (MODUs), and it is possible that at times there could be two MODUs involved in Project-related drilling activities in different areas simultaneously. VSP surveys may also be conducted following completion of drilling to obtain accurate time-to-depth ties to correlate seismic data to well depth. If there is an indication of commercial hydrocarbons found during the exploration drilling program, a well flow test may be conducted to sample and identify formation fluids and to measure produced flow rates. Once completed, well abandonment or suspension activities will be undertaken. Wells will be monitored and inspected in accordance with applicable regulatory requirements.

Supply vessels and helicopters will be used to transport personnel, equipment and materials to and from the active MODU(s). Project-related supply and support activities will take place at one or more existing, established onshore facilities operated by a third-party contractor that provides services to multiple offshore operators. No Project-specific construction or expansion of such facilities or other on-shore infrastructure is required or planned. Detailed planning and procurement processes for the Project are in progress and will continue throughout the life of the Project. Pending the receipt of applicable regulatory and corporate approvals, the identification of suitable drilling targets, and other technical, logistical and commercial considerations, exploration drilling could commence as early as 2019. It is expected that each well will require approximately 45 to 160 days for drilling and evaluation (including sidetracking and potential well testing) and associated well abandonment or suspension.

The Project would require authorization under the Canada-Newfoundland and Labrador Atlantic.

Accord Implementation Act and may require authorization under the Fisheries Act. A permit under the Species at Risk Act may be required for effects on species that are listed as endangered or threatened on Schedule 1 of that act.

1.3 Environmental Assessment Process

The Agency conducted a federal EA of each of the Projects based on the requirements of the *Canadian Environmental Assessment Act*, 2012 (CEAA 2012), as it was determined that these constituted "designated projects" under Section 10 of the Regulations Designating Physical Activities. The Canada-Newfoundland and Labrador Offshore Petroleum Board (C-NLOPB) also requires that Project-specific EAs be conducted pursuant to the *Canada-Newfoundland and Labrador Act and the Canada-Newfoundland Atlantic Accord Implementation Act* ("the Accord Acts").

The EA review of the Project under CEAA 2012 commenced in April 2017, upon submission by Nexen of a Project Description and associated Summary Documents to the Agency. Following government and public review, the Agency determined that a federal EA was required for the Project (June 9, 2017). Notices of EA Determination and EA Commencement, as well as Draft EIS Guidelines, were posted on June 12, 2017, and the EIS Guidelines (CEA Agency 2017) were finalized and issued to Nexen on July 25, 2017.

Nexen submitted the EIS and EIS Summary to the Agency on February 21, 2018. Following a conformity review, the Agency issued a letter to Nexen on April 4, 2018 indicating that the documents conform to the EIS Guidelines. The EIS and EIS Summary were posted for public comment from April 4, 2018 to May 4, 2018. Nexen Energy ULC changed its name to CNOOC International as of January 15, 2019.

Following completion of the Proponent's EIS documents and subsequent information request (IR) responses and clarifications, the Agency prepared a summary of the main findings of the federal EA process. During preparation of the EA Report, the Agency considered input from Indigenous consultation, public and stakeholder comments, regulatory input, the Proponent's EIS, and other information received during the EA process. The EA Report was prepared in consultation with the C-NLOPB, Fisheries and Oceans Canada (DFO), Environment and Climate Change Canada (ECCC), Health Canada, Natural Resources Canada, Transport Canada, the Parks Canada Agency, the Department of National Defence, and Indigenous and Northern Affairs Canada, and will inform a Decision Statement to be made by the federal Minister of Environment.

The draft EA Report, along with potential EA Conditions that may be included in the Decision Statement, has been issued for public comment from September 25 to October 25, 2019. If the Minister decides that the Project is unlikely to cause significant adverse environmental effects as defined under subsections 5(1) and 5(2), or if the Minister decides that the Project is likely to cause significant adverse environmental effects and the Governor in

Final EA Report and Potential Conditions Review - CNOOC International Flemish Pass Exploration Drilling Project

Council decides such effects are justified in the circumstances, the Project would be allowed to proceed (pending applicable additional regulatory authorizations), and any conditions established by the Minister under CEAA 2012 would become legally binding.

2. Method

AECOM's team of senior environmental and social specialists performed the review of the draft EA Report and potential EA Conditions. 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 experience in offshore oil and projects in Atlantic Canada. Various additional documents were referenced (see References section) to contextualize the information, data and conclusions. The Terms of Reference for a Mi'kmaq—Nova Scotia—Canada Consultation Process and the Mi'kmaq Ecological Knowledge Study Protocol (MEKSP) were referenced to consider the extent to which they were adhered to during the EA process.

Given that AECOM had previously reviewed the Proponents' EIS and responses to Information Requests, AECOM's review focused on the Agency's analysis and conclusions, including how views expressed were incorporated in the draft EA Report and potential EA Conditions. Areas considered to have 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.

3. Review Results

The results of AECOM's review are provided herein, with sections following the structure of the Agency's draft EA Report. The potential EA Conditions were reviewed, with comments incorporated in the applicable report section. **Section 3.1** addresses consultation activities and **Section 3.2** considers the Agency's assessment, conclusions and conditions related to predicted effects on valued components. **Section 3.3** relates to the effects of accidents and malfunctions; **Section 3.4** the effects of the environment on the Project; and **Section 3.5** cumulative environmental effects. **Section 3.6** discusses impacts on potential or established Aboriginal or treaty rights.

3.1 Consultation Activities

3.1.1 Indigenous Consultation led by the Agency

Depth of Consultation Determination

The draft EA Report states:

"The Agency served as Crown Consultation Coordinator for a whole-of-government approach to consultation. The Agency consulted communities and groups that hold communal commercial fishing licences in NAFO areas that overlap the project area, local study area and regional study area, or portions of them, or hold licences for species that migrate through the project area such as swordfish. In addition, the Agency consulted communities that fish for and have an interest in certain Atlantic Salmon populations, a species which could potentially be affected by the Project."

The communities included Labrador Inuit, Labrador Innu, Nova Scotia Mi'kmaq First Nations, New Brunswick Wolastoqiyik (Maliseet First Nations), New Brunswick Mi'gmaq First Nations, New Brunswick Peskotomuhkati Nation at Skutik (Passamaquoddy), Prince Edward Island Mi'kmaq First Nations, Quebec Mi'gmaq, Quebec Innu. Subsequent engagement, based on good governance reasons, was also conducted with Qalipu First Nation and Miawpukek First Nation (MFN).

The Agency determined that the depth of consultation required was on the low end of the consultation spectrum based the potential adverse effects of the Project on the Section 35 Rights of the above noted Indigenous Groups. Apart from Qalipu First Nation and Miawpukek First Nation (MFN), who were contacted later with engagement opportunities, the Agency provided the depth of consultation analysis and draft consultation plans to Indigenous groups and requested their feedback on the plans.

The draft EA Report indicates that comments were received on the depth of consultation and the plan provided but does provide details on the communication received and how the Agency considered the feedback into their final depth of consultation analysis and consultation plan.

• The Agency should provide details on feedback received and how that feedback was considered in the development of the consultation plan and final determination of the depth of consultation.

Consultation Opportunities

Based on the depth of consultation determination, the Agency provided opportunities for input into the EIS during 3 comment periods, as well as offering 4 Information Sessions (October 2017) to provide information on the Agency and 4 proposed offshore projects. Three additional information sessions were offered in April 2018 to continue building relationships between Indigenous groups, the Agency and Proponents of offshore projects. Proponents were specifically invited to the 3 April 2018 information sessions so that they could share information about their projects.

While the Agency's determination that the depth of consultation for the Project was deemed to be on the low end of the spectrum, there should still be an opportunity for Indigenous communities to be consulted directly by the Crown. The Agency also provided participant funding to support Indigenous community participation in the EA process. The draft EA Report indicates the following:

"The Agency maintained contact with Indigenous groups throughout the EA with general meetings with Indigenous Consultation Coordinators and periodic emails to verify that participants were aware of the EA process as it advanced, respond to questions and discuss comments."

Areas of Concern Raised by Indigenous Groups

The main areas of concern raised by Indigenous groups included:

- salmon and potential interactions with the Project;
- effects on fish and fish habitat;
- effects on fishing for communal commercial and food, social or ceremonial purposes, including related socioeconomic and health effects;
- effects of accidents and malfunctions, including the use of dispersants in oil spill response;
- · effects on migratory birds;
- compensation in the event of damages from normal operation or due to accidents and malfunctions; and
- cumulative effects.

Appendix C of the EA Report documents the feedback received from Indigenous groups along with the Proponent's response and the Agency's response, as well as the information directly in Sections 6 and 7 of the valued components sections of the EA Report.

Follow Up Consultation Opportunities

The draft EA Report does not indicate areas of continued consultation by the Agency with Indigenous groups nor does it highlight specific compliance and enforcement processes within the Approval Conditions to ensure the Proponent undertakes meaningful consultation and seeks opportunities to incorporate or modify plans based on input received from Indigenous groups.

The Agency should indicate how condition 2.3 and 2.4 will be approved, monitored and enforced.

3.1.2 The Proponents' Indigenous Engagement Activities

The draft EA Report states that "The Proponent engaged with 41 Indigenous groups located in Newfoundland and Labrador, Nova Scotia, New Brunswick, Prince Edward Island and Quebec. Early engagement began in March 2017 with the Nunatsiavut Government, the Labrador Innu Nation, the NunatuKavut Community Council, Qalipu Mi'kmaq Nation Band and MFN. Based on direction from the Agency, in July 2017, the Proponent began engaging an additional 36 Indigenous groups in the Maritime Provinces and Quebec. Engagement methods included phone calls, emails and reports. The Proponent stated that they would continue to communicate with Indigenous groups as required and requested."

It is not clear whether the Proponent attended the information sessions organized by the Agency as a means to build relationships with Indigenous groups and provide information on the Project.

Future Consultation Activities

The Proponent has committed to several ongoing and future consultation opportunities and the EA Conditions provide the support to some of these commitments. In particular, the draft EA Report indicated that, "the Proponent also committed to engage with Indigenous groups throughout the life of the Project and to explore opportunities to provide education in oil spill response, which could include training, workshops or exercises to more fully integrate these groups into the Project". This commitment is not included in the Approval Conditions and would be a component of a Socio-Economic Effects Monitoring Plan (SEEMP).

AECOM recommends the Agency consider adding the following to the Approval Conditions:

- Condition 2.5 Invite interested Indigenous groups to participate in the development of follow-up programs.
- Condition 2.6 Include consultation with Indigenous groups with "relevant authorities".
- Condition 2.8 Reporting should include how Indigenous groups were consulted and how their input was considered.
- Condition 2.10 add consult with interested Indigenous groups to participate in the development of the plans set out in the Approval Conditions. Further, notify Indigenous groups of the final plans prior to the commencement of the drilling program.
- Condition 6. 7 add communication and notification procedures for Indigenous groups.

3.1.3 The Agency's Public Engagement Activities

Public engagement conducted by the Agency for the Project was limited to the public comment periods associated with the Project Description, draft EIS Guidelines and the EIS Summary and the draft EA Report. It was noted in the draft EA Report that the only public participation came from comments received from the Fish, Food and Allied Workers' Union and the Newfoundland and Labrador Oil & Gas Industries Association.

The draft EA Report indicated that the Fish, Food and Allied Workers' Union, "provided information on the nature and importance of the fishing industry and traditional knowledge, and raised concerns related to potential effects of the Project on commercial fisheries, including related socioeconomic effects, oil spills, marine conservation and cumulative effects".

The Newfoundland and Labrador Oil & Gas Industries Association commented on the spatial extent and location of the Project, provided support for the Project highlighting the economic importance of the Project as well as consideration for the Eastern Newfoundland Strategic Environmental Assessment Report and the availability of data.

It does not appear that any Public Open Houses were undertaken to provide information on the Project and the draft EA Report does not indicate how the public was notified of the public comment periods or whether the PD, draft EIS Guidelines, EIS Summary or draft EA Report were made available in hard copy for public to view.

 The Agency should indicate how the Public was notified of the Project comment periods and whether documents were made available in hard copy for those without internet access.

3.1.4 Proponents' Public Engagement Activities

The draft EA Report indicates that the Proponent engaged 77 groups that have historically been engaged in or have an interest in offshore oil and gas in Newfoundland and Labrador. The draft EA Report states that, "this included representatives from the oil and gas industry, fishing industry, Indigenous communities, environmental non-government organizations and other oil and gas operators participating in exploration or production activities in offshore Newfoundland and Labrador". The Proponent conducted engagement from May 2016-January 2018 using a variety of methods such as face to face meetings, telephone conversations and written correspondence.

As indicated in the EIS review conducted in April 2018, the list of stakeholders that were engaged by the Proponent is not provided and details on issues raised or feedback received and how the Proponent considered that feedback has not been provided. Further, it is noted that the list of representatives does not include local community members from St. John's such as those businesses or service providers located near support vessel access points and the airport used for air transit support. While the Project operations are over 400km from shore, the personnel and supplies will access through St. John's and therefore key stakeholders should be engaged.

The Agency should consider a socio-economic effects management plan (SEEMP) to support the Project's use
of local services, businesses and resources to minimize the influx of workers and to create a positive socioeconomic impact from the Project on the local communities and potentially impacted Indigenous communities,
as well as working to offset the potential effects to the commercial fishing industry.

3.2 Predicted Effects on Valued Components

3.2.1 Fish and Fish Habitat

AECOM did not identify specific concerns in the proposed mitigation measures, follow-up programs and EA conditions that relate to fish and fish habitat.

Drilling and associated cuttings discharges affect fish habitat via seabed disturbance, sediment deposition, resuspension of sediment, and change of substrate composition. KMKNO expressed concerns about the seabed investigation as presented by the Proponent and recommended that seabed investigations be conducted at mooring locations and not only in areas where coral gardens or sponge grounds are known or likely to be present. The investigation should also consider algal beds and sensitive seafloor communities, including hardbottom habitat.

KMKNO is satisfied with draft EA Condition 3.6 specifying that investigation will be conducted for corals and sponges or "any environmentally sensitive features (including species at risk)". Also, Condition 3.6 indicates that transects around anchor and transponder sites should extend at least 50 m from each structure, thereby covering mooring locations.

3.2.2 Marine Mammals and Turtles

AECOM did not identify specific concerns in the proposed mitigation measures and follow-up programs for marine mammals and turtles. However, AECOM, on behalf of KMKNO, believes that clarification should be made to one of the EA conditions that relate to marine mammals and sea turtles when conducting vertical seismic profiling (VSP).

Having previously recommended extending the safety zone during VSP activities from 500 m to 1 km, KMKNO finds DFO's rationale and recommendation for maintaining a 500-m safety zone acceptable, since it would be difficult to maintain a larger zone with precision.

Regarding the marine vessel traffic, KMKNO continues to have concerns about vessel speed limits. EA Condition 3.10 states that vessels must use established shipping lanes and reduce speeds to a maximum of 7 knots in presence of marine mammals or turtles within 400 m of a supply vessel (if feasible for safety reasons).

KMKNO finds the Agency's Condition 3.10 to be acceptable.

Condition 3.9 related to VSP requires, "the use of passive acoustic monitoring and visual monitoring throughout VSP, as well as the shut down of the seismic sound source if any marine mammal or sea turtle is observed within the safety zone". The use of both monitoring methods is essential, especially in periods of low visibility where visual observation may not be effective.

Since acoustic monitoring cannot detect sea turtles and can only monitor whales that make vocalizations, the
Agency should specify in the condition that measures according to visibility conditions should be included in the
marine mammal monitoring. Actions to be taken in the presence of fog or darkness should be discussed with
DFO and the C-NLOPB.

3.2.3 Migratory Birds

AECOM did not identify specific concerns in the proposed mitigation measures, follow-up programs and EA conditions that relate to migratory birds.

 KMKNO appreciates the addition of the following condition to avoid harming, killing or disturbing migratory birds: "flaring as early as practicable during daylight hours to limit flaring that occurs during nighttime" (Condition 4.2.3).

3.2.4 Special Areas

AECOM did not identify specific concerns in the proposed mitigation measures, follow-up programs and EA conditions that relate to special areas.

3.2.5 Species at Risk

AECOM did not identify specific concerns in the proposed mitigation measures, follow-up programs and EA conditions that relate to species at risk.

3.2.6 Commercial Fisheries

The Approval Conditions 5.1 indicates that a Fisheries Communication Plan (FCP) is to be developed in consultation with the Board, Indigenous groups and commercial fishers. The Approval Conditions list the items that should be contained in the plan but does not indicate a dispute resolution mechanism or a compensation program for lost or damaged fishing gear.

The draft EA Report indicates that the Fishing Gear Damage or Loss Compensation Program identified and committed to by the Proponent is expected to, "to consider claims in a manner that meets the requirements of the Canada-Newfoundland and Labrador Atlantic Accord Implementation Act and the spirit of the Compensation Guidelines Respecting Damages Related to Offshore Petroleum Activity and to act in good faith to resolve claims from fishers". While it is acknowledged that the draft EA Report indicates that, "if the Proponent and a fisher were unable to resolve such a claim, the fisher could seek relief through a compensation claim to the C-NLOPB [if applicable] or through the court", it would be preferable to have a program in place. The Agency should consider the following:

- Add a dispute resolution mechanism to Condition 5.1.
- Add an Approval Condition that requires the Proponent to develop a Fishing Gear Damage or Loss Compensation Program that considers rights-based fisheries.
- Add notification to Indigenous groups and commercial fishers of the report submitted to the Board on incidents
 of lost or damaged fishing gear (Condition 5.4).

3.2.7 Current Use of Lands and Resources for Traditional Purposes and Health and Socio-Economic Condition of Indigenous Peoples

The draft EA Report indicates that the Agency acknowledges that the potential effects to the Current Use of Lands and Resources for Traditional Purposes and Health and Socio-Economic Condition of Indigenous Peoples "from a worst-case accident or malfunction (i.e., an unmitigated subsea blowout event) would be more severe". KMKNO is satisfied with the Approval Conditions indicating the inclusion of Indigenous groups and key stakeholders in the development of the Spill Response Plan and Fisheries Communication Plan as well as the commitment from the Proponent to "engage with Indigenous groups throughout the life of the Project and to explore opportunities to provide education in spill response which could include training, workshops or exercises to more fully integrate these groups into the Project."

While the Proponent stated that any 'perceived' contamination (i.e., where traditional foods are not actually contaminated) would be addressed by a post-spill sampling and supporting information program to demonstrate that the "various harvested food are not contaminated." The Agency has acknowledged that actual socio-economic effects may result from 'perceived' contamination, even where post-spill tissue sampling has been conducted and there is evidence demonstrating that traditional foods have not been contaminated. The draft EA Report states that the, "Agency is of the view that, in the event of a subsea release, actual and perceived environmental changes could potentially result in effects on socioeconomic conditions of Indigenous peoples, including effects to traditional foods. The spill response plan should include a post-spill sampling and monitoring program as well as the consultation process and the inclusion of traditional knowledge to ensure that potential health effects caused by contamination of lands and resources from an accident or malfunction are mitigated and communicated effectively to Indigenous groups.

• The Agency should specify requirements for post-spill sampling and monitoring program, the consultation process and the inclusion of Indigenous knowledge to the EA Condition 6.7.

3.3 Effects of Accidents and Malfunctions

3.3.1 Capping Stack and Deployment Vessel Availability

In response to IR-69 and IR-71, the Proponent stated that it, "would have advanced knowledge of the status of the primary and secondary capping stacks." KMKNO recommended, in response to IR-69 and IR-71, that the Proponent, "should be required to provide up-to-date information to the C-NLOPB prior to drilling and at specific regular intervals (e.g., weekly) during Project execution, both related to capping stack status and to the availability of vessels/rigs capable of deploying the capping stack."

KMKNO reiterated this recommendation in its review of the Proponent's responses to IR-69-02 and IR-71-02, stating the following:

"At a minimum, we request that the Agency state in the EA Conditions (or the C-NLOPB in the OA) that the Proponent is required to provide up-to-date information to the C-NLOPB prior to drilling and at specific regular intervals (e.g., weekly) during Project execution, both related to capping stack status and to the availability of vessels/rigs capable of deploying the capping stack."

KMKNO acknowledges that the Agency has considered and incorporated aspects of this request in Condition 6.6, which states the following:

"The Proponent shall develop and implement procedures to provide up-to-date information to the Board on capping stack status and availability of vessels capable of deploying the capping stack, prior to and during the drilling of each well."

 The frequency of updates should be specified by the Agency in the Final EA Conditions and/or by the C-NLOPB in the OA.

3.3.2 Indigenous Involvement in Spill Response Planning

Regarding spill response planning, it is not apparent how the views of Indigenous groups will be ascertained; draft EA Condition 6.7 states the following:

"After considering the views of Indigenous groups, the Proponent shall prepare and submit a Spill Response Plan to the Board for acceptance prior to drilling."

In Section 7.1.3 of the draft EA Report, the Agency states that, "Views provided by Indigenous groups would be considered in the development of the Spill Response Plan and groups would be provided the approved version." However, for the Exxon/Equinor EA, the Agency also stated that the Proponents were to "consult with Indigenous groups during the development of the Spill Response Plan."

- The Agency should provide the Proponent with additional information regarding requirements for Indigenous groups' involvement in the Spill Response Plans (e.g., method/form of consultation, timeframe, degree of involvement).
- While it may be generally understood that Spill Response Plans must be developed prior to initiating drilling (and not only in the event of an incident), this should be explicitly stated in the draft EA Report. This should also be specified for the Spill Impact Mitigation Assessment (SIMA).

3.3.3 Compensation Guidelines

Draft EA Condition 6.15 states:

"In the event of an accident or malfunction, the Proponent shall comply with the requirements of the Accord Acts and the Canada-Newfoundland and Labrador Offshore Financial Requirement Regulations and the requirements described in the Compensation Guidelines Respecting Damages Relating to Offshore Petroleum Activity."

 Condition 6.15 should state that compensation also applies to the loss of commercial or food, social and ceremonial fisheries.

3.3.4 Perceived Contamination

Section 7.1.3 of the draft EA Report states:

"The Agency agrees with comments from Indigenous groups that, even if effects on these species are relatively minor, perceived contamination may discourage individuals from engaging in certain traditional practices or consuming certain species which may have interacted with a spill. For both Indigenous and non-Indigenous fishers, any damages, including the loss of commercial or food, social and ceremonial fisheries, would require compensation in accordance with the Compensation Guidelines Respecting Damages Relating to Offshore Petroleum Activity."

Yet the Agency also states that it: "considers that mitigation measures identified for fish and fish habitat, accidents and malfunctions, commercial fishing (e.g., development of the Fisheries Communication Plan and compensation for any damages, including loss of food, social and ceremonial fisheries), would also mitigate potential effects on the current use and health and socioeconomic conditions of Indigenous peoples."

Although the Agency has stated that it agrees that perceived contamination may affect health and socioeconomic conditions of Indigenous groups, it did not require the Proponent to assess this potential adverse effect.

 KMKNO requests that the Agency include the requirement to assess potential effects of perceived contamination in future EIS Guidelines.

3.3.5 Environmental Incident Reporting

No maximum timeframe is specified within which the Proponent must notify relevant authorities of an environmental incident. Draft EA Condition 6.10 states the following:

"In the event of a spill or unplanned release of oil or any other substance that may cause adverse environmental effects, the Proponent shall notify the Board and any other relevant authorities as soon as possible, and implement its Spill Response Plan, including procedures for notification of Indigenous groups and commercial fishers."

In addition to requiring that notification of environmental incidents should be provided, "as soon as possible,"
the condition should stipulate a maximum timeframe in which environmental incidents must be reported to the
Board and any other relevant authorities.

3.3.6 Capping Stack Water Depth Limitations

In its review of the Proponent's response to IR-72-02, KMKNO requested that the Agency EA Conditions, "specify that it is assumed the Proponent will not drill in waters <700m (or <500m, whichever is appropriate), and that should drilling be proposed in shallower water, the Proponent will be required to reassess potential effects of a well blowout in shallower water."

KMKNO appreciates that the Agency has considered and incorporated this request; Condition 6.14 states:

"If drilling is anticipated in water depths in excess of 2,500 m or less than 500 m, the Proponent shall undertake further analysis to confirm the capping stack technology selected can be deployed and operated safely at the proposed depth and submit this analysis to the Board for approval."

3.3.7 Psychosocial Effects

As noted above, AECOM recommends further opportunities for the inclusion of Indigenous groups and key stakeholders in the development of the follow up programs and Spill Response Planning as well as an additional Approval Condition for the development of a SEEMP. The inclusion of Indigenous and local communities in the Project can support reduced psychosocial effects if an accident or malfunction were to occur. If economic opportunities are realized by the Indigenous groups and local communities and the Proponent undertakes meaningful communication, psychosocial stresses caused by an accident or malfunction due to a potential exposure to oil and the associated loss of income, health concerns from contaminated food and air and safety can potentially be minimized.

The Agency should address this specific concern, indicate how the Proponents have assessed this potential
effect, and provide the Agency's conclusion on this matter.

3.3.8 Measuring Levels of Contamination

The draft EA Conditions for Exxon/Equinor (section 6.8.2) noted that, as applicable, monitoring following a spill may include, "measuring levels of contamination in recreational and commercial fish species." KMKNO had commented that the Agency should also reference traditionally-harvested fish species in this condition.

• KMKNO appreciates that the Agency incorporated this request in draft EA Condition 6.10.2, which states that levels of contamination would be measured (as applicable) in "recreational, commercial and traditionally harvested fish species with results integrated into a human health risk assessment, to be submitted".

Post-spill monitoring requirements are not detailed in the EA Report or draft EA Conditions. Section 7.1.3 states general measures that would be included in a follow-up program in the event of a spill but does not specify any scientific or technical requirements associated with these measures. Section 7.1.1 of the draft EA Report states:

"The proponent would implement a follow-up monitoring plan to monitor the effects of a spill and the effectiveness of the response measures. Although the plan would largely depend on the specifics of the actual spill and cannot be described in detail at this time, monitoring could be conducted on fish and fish habitat (e.g., toxicity tests, dispersant effectiveness, oxygen levels), migratory birds (e.g., carcass surveys), marine mammals and sea turtles (e.g., mortality estimations), commercial fisheries (e.g., testing seafood, monitoring fisheries closure areas) and the atmospheric environment (e.g., air quality monitoring)."

The Agency states that details of a post-spill monitoring program will be included in the Spill Response Plan, which is required as part of the C-NLOPB's authorization process; however, it is not clear that applicable regulators will provide input and approval of the proposed Spill Response Plan.

In consultation with ECCC, DFO and other applicable regulators, the Agency should consider establishing and specifying minimum scientific and technical requirements for a post-spill monitoring program in the EA Conditions.

3.3.9 Significance Determination

Where the Proponents determined that potential effects resulting from a worst-case accident may be significant for migratory birds or special areas protected for migratory birds, it is notable that the Agency concludes that such an accident may also be significant for fish and marine mammals (primarily through potential presence of species at risk), and Indigenous peoples (i.e., ability to harvest species into the future).

The Agency states:

"By extension and particularly considering potential effects on populations of Atlantic Salmon and their recovery, as well as the context provided by Indigenous groups, the Agency concludes that the potential effects on the current use of lands and resources for traditional purposes and the health and socioeconomic conditions of Indigenous peoples could be significant."

The Agency concludes the following:

"However, the Agency recognizes that the probability of occurrence for a major event is very low and thus, these effects are unlikely to occur. Taking into account the implementation of key mitigation measures, the Agency concludes that the Project is not likely to cause significant adverse environmental effects as a result of accidents and malfunctions."

• KMKNO notes that the Agency's conclusion that, "the Project is not likely to cause significant adverse environmental effects as a result of accidents and malfunctions" is not based on mitigation measures being sufficient; rather, it is based on the very low likelihood of occurrence. The Agency should clearly state in the EA Report that, in the event of a major subsea blowout, the identified mitigation measures may not be sufficient to result in non-significant adverse environmental effects to migratory birds, special areas protected for migratory birds, fish and marine mammals, and Indigenous peoples.

3.4 Effects of the Environment on the Project

3.4.1 Operating Procedures and Thresholds

KMKNO recommended the following during review of the CNOOC (Nexen) EIS:

"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."

This request was reiterated during KMKNO's review of the draft EA Conditions for the Exxon and Equinor offshore exploration projects as the following:

"It is recommended that the Agency specify in the EA Conditions that the Proponents will develop and implement detailed procedures related to planned and emergency disconnect in harsh environments, with conservative (precautionary) operational thresholds, and that procedures are to include clear and unambiguous roles and responsibilities and detailed decision-trees. Furthermore, the Proponents should be required to provide in-depth training to the responsible parties. In establishing operating thresholds, consideration should also be given to ROV launch parameters to ensure adequate monitoring in the event of an incident."

 KMKNO appreciates that the Agency has considered and incorporated aspects of this request; Condition 6.1.1 states the following:

"The Proponent shall take all reasonable measures to prevent accidents and malfunctions that may result in adverse environmental effects and mitigate any adverse environmental effects from accidents and malfunctions that do occur. In doing so, the Proponent shall:

6.1.1 develop and implement operating procedures including thresholds for cessation of a work or activity, with respect to meteorological and oceanographic conditions experienced at the Project location, and which reflect the facility's design limits and limits at which any work or activity may be conducted safely and without causing adverse environmental effects. These conditions include poor weather, high sea state, and presence of sea ice or icebergs."

3.5 Cumulative Environmental Effects

AECOM did not identify specific concerns in the proposed mitigation measures, follow-up programs and EA conditions that relate to cumulative environmental effects.

3.6 Impacts on Potential or Established Aboriginal or Treaty Rights

The draft EA Report indicates that, "since there are no Aboriginal or treaty rights in the Project area, the pathways for potential impacts to rights of Indigenous groups are through impacts from Project activities to migratory species that are harvested or fished within Indigenous groups' traditional territories. The potential impacts were examined through the lens of routine operations and accidents or malfunctions. Migratory species of particular concern to Indigenous groups include Atlantic Salmon, seals, whales, migratory birds and American Eel."

While it is acknowledged that the Proponent has, "committed to contribute to research on the presence and distribution of Atlantic Salmon in Eastern Canadian offshore regions", given the importance of Atlantic Salmon and the potential impacts to Aboriginal rights of Indigenous groups, the establishment of this research should be undertaken prior to the commencement of drilling to collect baseline information for the Project area.

• The Agency should consider strengthening Approval Condition 3.13 to have the Proponent initiate the research program prior to commencing drilling operations.

Please refer to sections specific to the migratory species of concern for comments related to proposed mitigation measures, follow-up programs and EA conditions that relate to that species.

4. Conclusions and Recommendations

KMKNO requests that the Agency address the following issues and concerns in the final EA Report and Conditions:

i. Commercial Fisheries

Issue: The draft EA Report indicates that the Fishing Gear Damage or Loss Compensation Program identified and committed to by the Proponent is expected to, "consider claims in a manner that meets the requirements of the Canada-Newfoundland and Labrador Atlantic Accord Implementation Act and the spirit of the Compensation Guidelines Respecting Damages Related to Offshore Petroleum Activity and to act in good faith to resolve claims from fishers". It is preferable to have a program in place prior to the commencement of drilling.

Recommendation: Agency should consider adding an Approval Condition that requires the Proponent to develop a Fishing Gear Damage or Loss Compensation Program that includes rights-based fisheries.

ii. Future Consultation Opportunities

Issue: Proponent has committed to several ongoing and future consultation opportunities and the EA Conditions provide the support to some of these commitments. Further, there are several areas where notification to or engagement with Indigenous and key stakeholders would provide greater certainty that the Proponent will follow through with commitments and work to build trust that areas of concern have appropriate follow up programs and monitoring for potential effects. Further, inclusion of Indigenous groups and stakeholders in the development of follow up programs or plans should be considered a priority.

Recommendation: Agency should add the following to Condition 2.5: 'Consultation with Indigenous groups in the development of follow-up programs."

iii. Supply Vessel and Air Transit Local Opportunities

Issue: The draft EA Report focuses on the offshore Project area and does not indicate if local stakeholders in the area of the supply vessel or airport air transit areas were engaged.

Recommendation: The Agency should consider a socio-economic effects management plan (SEEMP) to support the Project's use of local services, businesses and resources to minimize the influx of workers and to create a positive socio-economic impact from the Project on the local communities and potentially impacted indigenous communities, as well as working to offset the potential effects to the commercial fishing industry.

iv. Human Health Effects

Issue: The draft EA Report notes that the "Proponent stated that any perceived contamination would be addressed by a post-spill sampling and supporting information program to demonstrate that the various harvested food are not contaminated".

Recommendation: The Agency should add post-spill sampling and monitoring program, the consultation process and the inclusion of indigenous knowledge to the EA Condition 6.7.

v. Psychosocial Effects

Issue: The inclusion of Indigenous and local communities in the Project can support reduced psychosocial effects if there were an accident or malfunction to occur.

Recommendation: AECOM recommends further opportunities for the inclusion of Indigenous groups and key stakeholders in the development of the follow up programs and Spill Response Planning as well as an additional Approval Condition for the development of a SEEMP.

vi. Impacts on Potential or Established Aboriginal or Treaty Rights

Issue: The inclusion of Indigenous and local communities in the Project can support reduced psychosocial effects if there were an accident or malfunction to occur.

Recommendation: The Agency should consider strengthening Approval Condition 3.13 to have the Proponent initiate the research program prior to commencing drilling operations.

5. Review Limitations

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 judgement 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, and in conjunction with the previous reviews conducted for the Projects (EIS review and IR reviews).

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.

Page | 18

6. References

Assembly of Nova Scotia Mi'kmaq Chiefs. N.d. Mi'kmaq Ecological Knowledge Study Protocol. 2nd Edition. 27 pp.

- CEA (Canadian Environmental Assessment) Agency. 2016(a). Guidelines for the Preparation of an Environmental Impact Statement pursuant to the *Canadian Environmental Assessment Act*, 2012: Statoil Canada Ltd. Flemish Pass Exploration Drilling Program. 46 pp.
- CEA (Canadian Environmental Assessment) Agency. 2016(b). Guidelines for the Preparation of an Environmental Impact Statement pursuant to the *Canadian Environmental Assessment Act*, 2012: Eastern Newfoundland Offshore Exploration Drilling Project, ExxonMobil Canada Ltd. 45 pp.
- Canadian Environmental Assessment Agency. 2015. Technical Guidance for Assessing the Current Use of Lands and Resources for Traditional Purposes under the *Canadian Environment Assessment Act*, 2012. 21 pp.
- NSOAA 2009: Nova Scotia Office of Aboriginal Affairs, Proponents' Guide: The Role of Proponents in Crown Consultation with the Mi'kmaq of Nova Scotia. 2012. Retrieved from: http://novascotia.ca/abor/office/what-we-do/consultation/. Last modified: 2015-06-01. 12 pp.

About AFCOM

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 and @AECOM.

Contact

Nora Doran Senior Project Manager T (902) 428-2028 E nora.doran@aecom.com