



Impact Assessment
Agency of Canada

Agence d'évaluation
d'impact du Canada

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May 22, 2020

Sent by E-mail

Collette Horner
Regulatory Lead, Eastern Canada
BHP
St. John's, NL Canada
Email: collette.horner@BHP.com

Dear Ms. Horner,

SUBJECT: BHP Exploration Drilling Project – Information Requirements

The Impact Assessment Agency of Canada (Agency) has completed its technical review of the Environmental Impact Statement (EIS) and associated EIS Summary for the proposed BHP Exploration Drilling Project. The Agency has determined that additional information is required, as per the information requirements (IRs) attached.

The Agency recently received additional comments from Fisheries and Oceans Canada on the Drill Cutting Dispersion Modelling Report (Appendix D) and is still reviewing these comments. The Agency may issue additional IRs once these comments have been reviewed. If additional IRs are required, they would focus on the Drill Cutting Dispersion Modelling Report and related effects assessment.

With the issuance of these IRs, the federal timeline within which the Minister of Environment and Climate Change must make a decision is paused as of May 22, 2020. Once BHP has submitted responses, the federal timeline for the environmental assessment will resume.

The responses to IRs may be in a format of your choice; however, the format must be such that the responses to individual IRs can be easily identified. You may wish to discuss certain IRs with the Agency or other government experts, as necessary, to obtain clarification or additional information, prior to submission of the responses. Working directly with government experts in this manner will help to ensure that IRs are responded to satisfactorily. The Agency can assist in arranging meetings with government experts, at your request.



The IRs and your responses will be made public on the Canadian Impact Assessment Registry Internet site: <https://iaac-aeic.gc.ca/050/evaluations/proj/80174>.

Please confirm receipt of this message and contact me if you require further information.

Sincerely,
<original signed by>

Joseph Vigder
Project Manager – Atlantic Regional Office
Impact Assessment Agency of Canada

Cc: Elizabeth Young, Canada - Newfoundland Labrador Offshore Petroleum Board
Ian Murphy, Canada - Newfoundland Labrador Offshore Petroleum Board
Michael Hingston - Environment and Climate Change Canada
Kimberley Keats - Fisheries and Oceans Canada
Clare Bustin - Indigenous Services Canada
Tanya Trenholm - Indigenous Services Canada
Carla Stevens - Major Projects Management Office
Maximilien Genest - Natural Resources Canada
Lauren Knowles - Natural Resources Canada
Carol Lee Giffin - National Defence
Vanessa Rodrigues - Parks Canada
Jason Flanagan - Transport Canada
Sara Rumbolt - Health Canada

Attachment:

Attachment 1 - Information Requirements for the BHP Exploration Drilling Project.

**BHP Canada Exploration Drilling Project
Information Requirements and Required Clarifications from Environmental Impact Statement Review:
May 22, 2020**

INTRODUCTION

The Impact Assessment Agency of Canada (the Agency) has completed its technical review of the Environmental Impact Statement (EIS) and associated EIS Summary for the proposed BHP Canada Exploration Drilling Project. The Agency also received submissions from government experts, the public and Indigenous groups and has analyzed their comments. The Agency determined that additional information is required, as per the information requirements (IRs) below. In addition to IRs, a list of clarifications (CLs) that are required to ensure correct interpretation of project information and effects analysis can be found below.

ACRONYMS AND SHORT FORMS

Agency	Impact Assessment Agency of Canada
C-NLOPB	Canada-Newfoundland and Labrador Offshore Petroleum Board
DFO	Fisheries and Oceans Canada
ECCC	Environment and Climate Change Canada
EL	Exploration Licence
EIS	Environmental Impact Statement
km	Kilometre
KMKNO	Kwilmu'kw Maw-klusuaqn Negotiation Office
LAA	Local Assessment Area
MODU	Mobile Offshore Drilling Unit
MTI	Mi'gmawe'l Tplu'taqnn Incorporated
NG	Nunatsiavut Government

ATTACHMENT 1: INFORMATION REQUIREMENTS AND REQUIRED CLARIFICATIONS FOR THE BHP CANADA EXPLORATION DRILLING PROJECT

Information Requirements

IR Number	External Reviewer ID (as applicable)	Reference to EIS	Context and Rationale	Specific Question/ Information Requirement
Fish and Fish Habitat; Marine Mammals and Sea Turtles				
IR-01	C-NLOPB-1; KMKNO-1	Section 2.4; Section 2.6; Section 8.3; Appendices D and E	<p>Section 2.6 of the EIS (p. 2-23) states that “there may at times be up to two MODUs working in different parts of the project area simultaneously”.</p> <p>Section 2.4.1 of the EIS does not indicate whether batch drilling or simultaneous drilling is being contemplated over the course of the Project, and if so, whether the effects analysis in the EIS is applicable. This information is required to assess the potential environmental effects of the Project.</p> <p>It is noted that BHP’s acoustic modelling (Appendix E – Acoustic Modelling Report) was conducted for the operation of a single drilling unit, while two drilling units may be operating simultaneously for the Project. The potential for two MODUs operating simultaneously has not been adequately considered in Appendix E or in the assessment and characterization of effects of noise on fish and fish habitat, marine mammals, and sea turtles.</p> <p>Similarly, the drill cutting dispersion modelling (Appendix D) and the related effects assessment did not consider potential implications of batch drilling or simultaneous drilling should those occur.</p>	<p>Clarify if batch drilling or simultaneous drilling is being considered for the Project, and if so, provide information about its frequency and duration.</p> <p>Should batch drilling or simultaneous drilling be contemplated, assess the environmental effects of batch drilling and simultaneous drilling on all valued components. This must include an assessment of the effects of noise from operating multiple drilling units simultaneously. Update the modelling in Appendices D and E, if applicable.</p>
IR-02	C-NLOPB-2; DFO-67	Section 2.7.2; Section 8.3; Appendix D	<p>Section 2.6 of the EIS indicates that drilling may occur at various times during the year, yet the drill cutting dispersion modelling (Section 2.7.2 and Appendix D) only examines summer and fall drilling scenarios, without providing a clear indication on why these are chosen for modelling purposes. Drill cutting dispersion modelling should be done based on the worst-case scenarios and not the most likely.</p> <p>Fisheries and Oceans Canada (DFO) also noted that water column density changes throughout the year, and that it is not possible to confirm that predicted results of the drill cutting dispersion modelling are applicable to other temporal windows if these are not assessed or the differences from the target season are not evaluated.</p>	<p>Provide rationale for modelling drill cutting dispersion only in the summer and fall, including, as appropriate, why winter and spring dispersion scenarios would be similar to summer and fall scenarios. If winter and spring drill cuttings dispersion may differ from summer and fall dispersion, describe the potential differences and update the effects assessment as required. If necessary, conduct modelling for the worst-case drill cuttings dispersion scenario.</p>
IR-03		Section 10.3.2.3	<p>Section 10.1.4.1 of the EIS states that the “LAA for marine mammals and sea turtles is based on modeling results for distances to sound threshold criteria for behavioural change as well as scientific literature, and is defined as a conservative 50 km radius buffer around the project area to encompass the maximum threshold distances for all activities.”</p> <p>The sound modeling results estimated that distances to sound threshold criteria for behaviour change (Appendix E) could be up to >100 km in February for a semi-submersible drill rig. Therefore, wells drilled within 30 km or less of the border of an EL could have effects that extent beyond the LAA. The</p>	<p>Discuss why a more conservative >100 km buffer around the ELs is not chosen for the LAA for marine mammals and sea turtles. As required, revise the effects assessment taking into account the potential >100 km distance to sound threshold criteria for behaviour change.</p>

IR Number	External Reviewer ID (as applicable)	Reference to EIS	Context and Rationale	Specific Question/ Information Requirement
			rationale for the LAA as a 50 km radius buffer beyond the project area is therefore not clear. Any resultant implications for the effects assessment should be considered.	
Migratory Birds				
IR-04		Section 9.3	Bird attraction to and collisions with lit structures is a known problem; however, Environment and Climate Change Canada (ECCC) has advised that there remains uncertainty around estimates of bird strandings and mortality on offshore vessels and installations and of the effectiveness of mitigation measures. This concern has also been brought up recently through the environmental assessment being conducted for the proposed Bay du Nord Development Project, and more proactive mitigation and follow-up measures are being developed. For that project, Equinor has been required to work with the Canadian Wildlife Service to develop specific mitigation measures, including confirming means to reduce and adjust lighting and researching potential new technologies.	Discuss the need for additional follow-up measures and research into potential means to reduce or adjust lighting, or other potential new technologies that could further reduce the effects of light attraction and bird collisions and strandings.
Species at Risk				
IR-05	DFO-08	Section 6.1.8.1; Section 11.1	<p>Figure 11-1 of the EIS identifies proposed critical habitat for Northern and Spotted Wolffish.</p> <p>In February 2020, the final version of the Management Plan for Atlantic Wolffish (<i>Anarhichas lupus</i>), and the Recovery Strategy for Northern Wolffish (<i>Anarhichas denticulatus</i>) and Spotted Wolffish (<i>Anarhichas minor</i>) in Canada were published, therefore finalizing critical habitat boundaries for Northern and Spotted Wolffish.</p>	<p>Confirm that figures in the EIS depicting wolffish critical habitat (e.g., Figures 6-17; 6-18; 11-1) remain accurate given the recently finalized boundaries. Similarly, confirm that the information on the overlap of wolffish critical habitat with the project area and LAA, as well as distances from spatial boundaries (e.g., ELs, project area, LAA, PSV routes) remain accurate. Update this information and these figures, as required.</p> <p>(Also see CL-02 which requires the percent overlap of special areas with the ELs, including wolffish critical habitat.)</p>
IR-06		Section 6.1.8	The LAA and a small portion of the project area overlap with critical habitat for Northern and Spotted Wolffish; however, the EIS states that these species of wolffish are “unlikely to be within the project area” (p. 6-56 & 6-60). It is unclear on what information the proponent is basing this statement.	Provide an explanation as to why BHP is of the view that these species of wolffish would not likely be found in the project area despite the project area overlapping with their identified critical habitat. If it is determined that wolffish may frequent the project area, update the proposed mitigation and follow-up, effects predictions, and conclusion on the effects of the Project on wolffish, as appropriate.
IR-07	DFO-27	Section 8.3.3	Section 8.3.3 of the EIS briefly describes changes in habitat quality and use that could occur for wolffish, including critical habitat for Northern and Spotted Wolffish. The EIS lacks detail regarding the specific changes that could occur to wolffish critical habitat, change in habitat use by wolffish, which specific mitigation measures would reduce the impacts to wolffish and its critical habitat, and the residual effects on wolffish and its critical habitat. In addition, there is a lack of consideration regarding how the Project could affect the recovery of wolffish and the Project’s overall contribution or impairment to the measures and goals outlined in the Recovery Strategy for Northern Wolffish (<i>Anarhichas denticulatus</i>) and Spotted Wolffish (<i>Anarhichas minor</i>) and Management Plan for Atlantic Wolffish (<i>Anarhichas lupus</i>) in Canada.	Provide additional detail on the unique features of the wolffish critical habitat, specify which mitigation measures would mitigate effects on this habitat and how these measures are anticipated to be effective, and describe if and how the Project could affect these features and wolffish critical habitat in general. Discuss if and how the Project could affect the recovery of wolffish and how the Project contributes or impairs the measures and goals outlined in the Recovery Strategy for Northern Wolffish (<i>Anarhichas denticulatus</i>) and Spotted Wolffish (<i>Anarhichas minor</i>), and Management Plan for Atlantic Wolffish (<i>Anarhichas lupus</i>) in Canada. As required, update the mitigation and follow-up as well as the prediction of residual effects to wolffish and its critical habitat.

IR Number	External Reviewer ID (as applicable)	Reference to EIS	Context and Rationale	Specific Question/ Information Requirement
Accidents and Malfunctions – Spill Scenarios, Model Inputs, & Model Results				
IR-08		Section 15.4.2	The EIS Guidelines state that results of the fate and behaviour modelling “should include a projection for spills originating at the site and followed until the slick volume is reduced to a negligible amount or until a shoreline is reached.” Modelling in the EIS indicates that up to 20% of the released oil could travel outside the model domain. There is no discussion of the limitations associated with the model domain/area or the potential effects of oil travelling outside the model domain.	Provide a discussion of the fate and behaviour of oil that is noted to leave the model domain, and provide an assessment of related potential environmental effects, including the potential for an oil spill to contact shorelines outside the model domain to the east. Include the potential locations of shoreline oiling.
Accidents and Malfunctions – Prevention and Response				
IR-09	ECCC-3	Section 15.6.2.1	<p>ECCC stated that the proponent’s synthesis of the effects of dispersants on marine and migratory birds provides conflating information and does not provide sufficient evidence to support the conclusion that “dispersant mitigates the potential adverse effects of oil on birds compared to untreated oil”. While applying dispersants may be beneficial for migratory birds in some situations, they may prove to be more harmful in others.</p> <p>It is difficult to compare the results of the Whitmer et al. 2018 study (conducted in a laboratory) to what may occur in the offshore areas of NL. Specifically, in Whitmer et al. 2018, post-exposure birds were kept out of the water and in ambient temperatures of 15.5°C-18.3°C, whereas any birds exposed to dispersants in the project area would be confined to water in much colder temperatures.</p>	In light of the views expressed by ECCC, consider the effects of dispersants in colder water temperatures and revise the effects assessment, as necessary. Update the proposed mitigation and follow-up and conclusion on the effects of dispersants on marine and migratory birds, as appropriate.
IR-10	MTI-28	Section 15.5	The EIS Guidelines require the proponent to identify the probability of potential accidents and malfunctions related to the Project and the contingency and emergency response procedures that would be put in place. MTI has requested additional detail on how spills would be detected, and has raised related concerns regarding the time it would take to deploy spill contingency measures such as booms, berms, and other barriers that may be used to contain a spill or protect sensitive habitats.	Provide additional detail regarding how spills would be detected, including the time it could take between detection and deployment of spill contingency methods. If there is a possibility of a spill going undetected, provide a description of these scenarios and comment on the potential implications regarding the resultant effects.
IR-11		Section 15.5	The EIS Guidelines require the proponent to discuss the use, availability (including nearest location), timing (testing and mobilizing) and feasibility of a capping stack to stop a blowout and resultant spills. Page 15-85 of the EIS states “the most likely timing for mobilization and installation [of a capping stack]...is calculated to be 13 days (summer) to 17 days (winter).” Later on the same page, it states that “BHP estimates that the earliest a well could be capped would be 17 days after an incident”. Based on these two statements, it is unclear if mobilization and installation of a capping stack would likely take between 13 and 17 days, or if it would take 17 days or more.	Please confirm the estimated earliest and longest time it would take to cap a well following a blowout incident.
Effects of the Environment on the Project				
IR-12	NG-01	Section 15.4; Section 16	The Nunatsiavut Government raised concern regarding spill risk and probabilities as a result of severe weather events, and noted that it appears as though the number of disconnections required for other nearby projects has increased with the increase in severe weather events. The Nunatsiavut Government raised concern that more frequent disconnections may increase the probability of an accident or malfunction. The Nunatsiavut Government also noted that climate change could further exacerbate this risk, which should be more thoroughly considered in the assessment.	Discuss whether disconnecting and reconnecting the MODU, as may be required in severe weather, could result in an accident or malfunction. Discuss whether increases in the frequency of severe weather events could influence the risk of an accident or malfunction.

Required Clarifications

CL Number	External Reviewer ID (as applicable)	Reference to EIS	Context and Rationale	Specific Question/ Information Requirement
Special Areas				
CL-01		Table 11.1	Table 11.1 of the EIS lists special areas in the LAA. The LAA for special areas is defined as the project area and adjacent areas within a 50 km buffer zone where Project-related environmental effects are reasonably expected to occur based on available information. The LAA also includes transit routes to and from the project area with a 10 km zone of influence. However, the Agency notes that the sound modelling results estimated that distances to sound threshold criteria for behavioural change (Appendix E) could be up to >100 km in February for a semi-submersible drill rig.	Revise Table 11.1 to include all special areas within the maximum potential distance to sound threshold criteria (i.e. >10 km) from the ELs.
CL-02		Section 11.3.1.3	Section 11.3.1.3 of the EIS provides the percent overlap between special areas and the project area. However, information is not provided on the percent overlap between special areas and ELs.	Provide the percent overlap of special areas with the ELs.
Accidents and Malfunctions – Spill Scenarios, Model Inputs, and Model Results				
CL-03	C-NLOPB-4	Table 15.3	Table 15.3 of the EIS (p. 15-12) provides details on the hypothetical subsurface release locations, parameters, and stochastic scenario information. It expresses release rate and volume in bpd and bbl respectively. It is preferred that volumes are expressed as litres or cubic metres rather than bbl.	Revise Table 15.3 as requested.
CL-04		Section 15.3; Appendix F	Table 15.7 of the EIS (Table 4-3 of Appendix F) indicates that shoreline contamination probabilities are identical for the 'oil exposure exceeding 1 g/m ² for all shorelines' (i.e., the socio-economic threshold) and the 'oil exposure exceeding 100 g/m ² for all shorelines' (i.e., the ecological threshold) (except for the vessel route location). Given the difference between the socio-economic and ecological thresholds for shoreline oiling, it is not clear how shoreline oiling probabilities are identical for both oil exposure exceeding 1 g/m ² and exceeding 100 g/m ² .	Confirm that the values in Table 15.7 of the EIS (Table 4-3 of Appendix F) are accurate or provide updated values.