ANNEX 1: Advice to the Agency

Table 1: Please use the table below to provide advice for the Agency's consideration in its recommendation to the Minister of Environment and Climate Change and preparation of draft conditions

Questions	Responses/Comments
• Has the proponent described all project components and activities in sufficient detail to understand all relevant project-environment interactions? If not, identify what additional information is needed.	
• Were the study areas sufficient to predict potential effects from all relevant project-environment interactions, and to consider the effects within a local and regional context? • Is the baseline information sufficient to characterize the existing environment, predict potential effects and obtain monitoring objectives? If not, identify what additional information is needed.	
Alternatives Assessment	
• Has the proponent adequately described the criteria it used to determine the technically and economically feasible alternative means? • Has the proponent listed the potential effects to valued components (VCs) within your mandate that could be affected by the technically and economically feasible alternative means? • Has the proponent adequately described why it chose each preferred alternative means? • Are there other alternative means that could have been presented? If so, please describe.	
Environmental Effects Assessment	
• Has the proponent clearly described all relevant pathways of effects to be taken into account under section 5 of CEAA 2012? • Has the proponent identified all potential effects to VCs, including species at risk, within your mandate? • Were all potential receptors considered?	
• Were the methodologies used by the proponent appropriate to collect baseline data and predict effects, why or why not? • Has the proponent explicitly addressed the degree of scientific uncertainty related to the data and methods used within the assessment? If there are scientific uncertainties which are unaccounted for, describe them and indicate the options for increasing certainty in the predictions.	

Questions	Responses/Comments
• Are the predicted effects described in objective and reasonable terms (e.g. beneficial or adverse, temporary or permanent, reversible or irreversible)?	
• Has the proponent adequately assessed the potential cumulative environmental effects, including using appropriate temporal and spatial boundaries , examining physical activities that have been and will be carried out, and proposing mitigation and follow-up program requirements? Provide rationale.	
• Has the proponent adequately described the potential for environmental effects caused by accidents and malfunctions, including the types of accidents and malfunctions, their likelihood and severity and the associated potential environmental effects? If not, identify what additional information is needed.	
• Are you satisfied with the proponent's assessment of effects of the environment on the Project? • Has the proponent characterized the likelihood and severity appropriately? Provide rationale.	
• Has the proponent sufficiently described and characterized the project activities and components as they relate to federal decisions within your mandate? If not, identify what additional information is needed. • Are changes to the environment, as they relate to federal decisions within your mandate, sufficiently described? If not, identify what additional information is needed.	
Mitigation	
• Has the degree of uncertainty regarding the effectiveness of the proposed mitigation measures been described? If not, identify what information is needed. • Is it clear how each proposed mitigation measure links to each potential pathway of effect?	
• Would you propose different or additional mitigation measures? If so, provide a description of the mitigation measure(s), with rationale.	
• Which of the proposed mitigation measures and/or project design elements do you consider to be necessary to reduce the likelihood of significant adverse environmental effects? Provide rationale.	
Residual Adverse Environmental Effects	
• Are the identification and documentation of residual environmental effects described by the proponent adequate? If not, what are the aspects for which there is uncertainty and, where possible, indicate how these residual effects can be best described. If there is uncertainty, what are the options for increasing certainty?	

Questions	Responses/Comments
• Did the proponent provide a sufficiently precise, ideally quantitative, description of the residual environmental effects related to your mandate? Identify any areas that are insufficient.	
Determination of Significance	
• Are the conclusions on significance in the EIS supported by the analysis that is provided? • Are the proponent's proposed criteria for assessing significance appropriate? This includes how the criteria were characterized, ranked, and weighted. Provide rationale. Where the proponent has **not** used one of the Agency's recommended key criteria (magnitude, geographic extent, duration, frequency, reversibility, and social/ecological context), has a rationale been provided?	
• Were appropriate methodologies used in developing the conclusions on significance?	
• Do you agree with the proponent's analysis and conclusions on significance? Provide rationale.	
Monitoring and Follow-up	
• Does the proposed monitoring and follow-up program verify the predictions of the environmental assessment as they relate to section 5? Please explain additional monitoring or follow-up needed to address uncertainty in the effects assessment.	
• Does the proposed monitoring and follow-up program verify the effectiveness of proposed mitigations as they relate to section 5? Please explain additional monitoring or follow-up needed to address uncertainty in the proposed mitigation.	
• Is the objective of the follow-up program clear and measurable? • Does the follow-up program include sufficient detail, and technical merit, for the Agency to achieve the stated objective through a condition (e.g. sufficient baseline dataset, monitoring plans, acceptable thresholds of change, contingency procedures)?	
• Are you aware of any federal or provincial authorizations or regulations that will achieve the same follow-up program objective(s)? If so, how do these achieve the objective(s)?	
Additional comments, views, advice	
• Provide any other comments.	

ANNEX 2: Information requirements directed to the proponent

Table 2: Please use the table below to provide your department's comments and suggestions for information that should be required from the proponent to ensure the information in the EIS is scientifically and technically accurate and is sufficient to make a determination of significance on environmental effects.

ID	Project Effects Link to CEAA 2012	Reference to EIS guidelines	Reference to EIS	Context and Rationale	Specific Question/ Request for Information
DFO-01	5(1)(a)(i) Fish and Fish Habitat 5(1)(a)(ii) Aquatic Species	Part 2, Section 7.1.3 Fish and fish habitat	Pages 6-23 to 6-26, Section 6.1.6.1 Corals and Sponges	There is some disconnect between Figure 6-6 and corresponding text. Results are described separately for different data sources (Canadian RV Surveys, OBIS), but are not presented separately on Figure 6-6 (e.g., page 6-23, final sentence; page 6-25, paragraph 2; page 6-26, paragraph 2). This complicates interpretation of results.	Revise text and/or Figure 6-6 to ensure consistency and clarity.
DFO-02	5(1)(a)(i) Fish and Fish Habitat 5(1)(a)(ii) Aquatic Species	Part 2, Section 7.1.3 Fish and fish habitat	Section 6.1.7 Finfish (Demersal and Pelagic Species) Page 6-81, Table 6.12	The EIS guidelines require a description of fish and fish habitat within areas that could be affected by routine project operations or by accidents and malfunctions. However, discussion of finfish in the EIS is focused on the LAA. Finfish species should be described for the RAA. Based on information provided for the LAA, additional species could have been considered as key species and subsequently described. In Table 6.5, Thorny Skate, Atlantic Cod, Atlantic	Update 6.1 to describe finfish species for the RAA. Ensure appropriate species are included as key finfish species.

				Halibut and Black Dogfish contribute to >85% of the biomass for Canadian RV trawls, but were not described. Tables 6.6 and 6.7 also list species that could have been described (e.g., Threebeard rockling, Spinytail skate).	
DFO-03	5(1)(a)(i) Fish and Fish Habitat 5(1)(a)(ii) Aquatic Species	Part 2, Section 7.1.3 Fish and fish habitat	Page 6-30, Table 6.4 Page 6-31, Table 6.5 Page 6-32, Section 6.1.7.2 Northeast Newfoundland Slope (sentence 1) Page 6-37, Section 6.1.7.4 (Redfish (Acadian, Golden, Deepwater)	There is confusion regarding which species of redfish are being described. Tables 6.4 and 6.5 note Deepwater Redfish. The corresponding text (page 6-32) notes Acadian/Deepwater redfish. On page 6-37, it states "No differentiation is made between Acadian and deepwater redfish due to the difficulty in distinguishing the individual species in the trawl survey", but later states "deepwater redfish contribute 10% of total fish abundance and 49% of biomass in the upper slope area (197 to 700 m depth) (Tables 6.4 and 6.5)".	Ensure the species of redfish is clearly specified throughout the EIS.
DFO-04	5(1)(a)(i) Fish and Fish Habitat 5(1)(a)(ii) Aquatic Species	Part 2, Section 7.1.5 Species at Risk	e.g., Page 6-37, Section 6.1.7.4 LAA Key Species Information (paragraph 3, sentence 4) e.g., Page 6-47, Section 6.1.7.4 LAA Key Species Information	When status/designation is noted for a species at risk, the associated population name should also be provided. - Acadian Redfish (Atlantic population) – page 6-37 - Deepwater Redfish (Northern population) – page 6-37 - American Plaice (Newfoundland and	Ensure appropriate population names are associated with species at risk when describing status/ designation.

			(paragraph 3, sentence 5) e.g., Page 6-53, Section 6.1.8 Species at Risk (paragraph 1, sentence 1) Pages 6-53 to 6-54, Table 6.9 Pages 8-32 to 8-37, Table 8.4	Labrador population) – page 6-47 - White Shark (Atlantic population) – page 6-53 Population names should not be provided for the following species (Tables 6.9 & 8.4): - Lumpfish (note that Common is not required) - Roundnose Grenadier - Thorny Skate	
DFO-05	5(1)(a)(i) Fish and Fish Habitat 5(1)(a)(ii) Aquatic Species	Part 2, Section 7.1.3 Fish and fish habitat	Section 6.1.7.4 LAA Key Species Information - Page 6-45, paragraph 2, sentence 3 - Page 6-45, paragraph 4, sentence 2 - Page 6-47, paragraph 4, final sentence Pages 6-55 to 6-61, Table 6.10 Pages 8-28 to 8-39, Table 8.4	There are inconsistencies in the spatial overlap of species distributions and the Project. For Roughhead and Roundnose Grenadiers, page 6-45 notes that they will likely be present in the southwest corner of the Project Area. Based on Figures 6-11 and 6-12, they will also occur in the southern portion of the Project Area. On page 6-45, it is noted that Witch Flounder is only likely to be present in the southwest corner of the LAA and within potential PSV routes; however, Figure 6-13 shows catches of Witch Flounder in the Project Area and the southern portion of the LAA.	Ensure accuracy of descriptions of spatial overlap in species distributions and the Project.

				On page 6-47, it is noted that American Plaice are unlikely to be found within the Project Area, yet Figure 6-15 shows catches in the Project Area. Tables 6.10 and 8.4 do not consistently describe spatial distributions for species at risk. For the following species, Table 8.4 indicates that they could overlap the Project Area, but Table 6.10 does not note overlap with the Project Area: Acadian Redfish, Albacore Tuna, Atlantic Bluefin Tuna, Atlantic Cod, Basking Shark and Spotted Wolffish.	
DFO-06	5(1)(a)(i) Fish and Fish Habitat 5(1)(a)(ii) Aquatic Species	Part 2, 7.1.5 Species at Risk	Section 6.1.8 Species at Risk Section 8.3.3 Species at Risk: Overview of Potential Effects and Key Mitigation	The EIS Guidelines require a description of federal species at risk within areas that could be affected by routine project operations or accidents and malfunctions. There is confusion regarding the spatial scale used to characterize and describe species at risk. On page 6-52, it states "There are 30 species with conservation designations occurring in the western North Atlantic with potential to overlap with the RAA". On page 8-26 it states, "There are 30 species of fish listed as SAR or otherwise of conservation concern with the potential to occur within the	Update 6.1.8 to describe species at risk within the RAA.

				Project Area". 30 species are described in Table 6.10, yet the text reads "Species that may occur in the Project Area are further described in Table 6.10" (page 6-53). Table 6.9 contains 31 species, but the title indicates that it is for the LAA. Table 8.4 also contains 31 species, but the title indicates it is for the Project Area. For consistency with the EIS Guidelines, species at risk should be described for the RAA. Text should also be revised to clearly provide the spatial scale.	
DFO-07	5(1)(a)(i) Fish and Fish Habitat 5(1)(a)(ii) Aquatic Species	Part 2, 7.1.5 Species at Risk	Page 6-53, Table 6.9 Page 6-68, Section 6.1.9.2 Atlantic Salmon (paragraph 3, sentence 3) Page 8-30, Table 8.4	Given some uncertainty in the distribution of the Inner Bay of Fundy population of Atlantic Salmon (see page 6-79, paragraph 4, sentence 4), this population should be included as a species at risk. Include Inner Bay of Fundy population of Atlantic Salmon in Tables 6.9 and 8.4. Reflect the possibility that the Inner Bay of Fundy population could overlap with the Project Area in the text (e.g., page 6-68).	Update EIS to include the Inner Bay of Fundy population of Atlantic Salmon as a species at risk with potential to occur in the Project Area.
DFO-08	5(1)(a)(i) Fish and Fish Habitat 5(1)(a)(ii) Aquatic Species	Part 2, 7.1.5 Species at Risk	e.g., Page 6-62, Figure 6-17	The final recovery strategy for Northern and Spotted Wolffish was published in 2020 (https://species-	Ensure finalized critical habitat for Northern and Spotted

			e.g., Page 6-63, Figure 6-18 e.g., Section 8.3.3 Species at Risk: Overview of Potential Effects and Key Mitigation	registry.canada.ca/index-en.html#/consultations/1285). Consequently, critical habitat for these species is no longer considered proposed.	Wolffish is accurately reflected in the EIS.
DFO-09	5(1)(a)(i) Fish and Fish Habitat 5(1)(a)(ii) Aquatic Species	Part 2, 7.1.5 Species at Risk	Section 6.1.9.2 Atlantic Salmon	Some information pertaining to Atlantic Salmon is erroneous, confusing or not appropriately referenced. Ensure correct population names are used for Atlantic Salmon: - Gaspé-Southern Gulf of St. Lawrence - Nova Scotia Southern Upland COSEWIC assessment for the Southwest Newfoundland population should be Not at Risk (Table 6.11). The EIS states, “RV surveys have caught salmon within the Project Area in the spring (Reddin and Shearer 1987; Figure 6-25)”; however there are no catches shown in the Project Area in Figure 6-25. Update text and/or figure accordingly. For the Labrador, Nunavik DUs, migrations routes should be	Update 6.1.9.2.

				described to better depict overlap with the Project Area (page 6-76). A reference should be provided for the statements that individuals from the southern Newfoundland population (page 6-77, paragraph 2, sentence 1) and Gulf of St. Lawrence origin (page 6-78, paragraph 3, sentence 1) congregate off the east Grand Bank. References are also lacking from paragraph 2 on page 6-79. Some uncertainty should be associated with overwintering distribution in the Flemish Pass (page 6-78, paragraph 3, sentence 2; page 6-79, paragraph 3, sentence 2). The statement, "returning adults to the Gulf of St. Lawrence" (page 6-79, paragraph 3, sentence 4) does not seem relevant to Outer Bay of Fundy, Nova Scotia Southern Upland, and Eastern Cape Breton DUs, and should be revised.	
DFO-10	5(1)(a)(i) Fish and Fish Habitat 5(1)(a)(ii) Aquatic Species	7.1.5 Species at Risk 7.1.6 Marine mammals	6.3.2 Overview of Species Occurrence, Table 6.20 6.3.3.1. Humpback Whale	Humpback Whale is no longer listed as Special Concern (Schedule 3 of SARA). Ringed Seal COSEWIC designation is incorrect	Update text and table.

DFO-11	5(1)(a)(i) Fish and Fish Habitat 5(1)(a)(ii) Aquatic Species	7.1.5 Species at Risk 7.1.6 Marine mammals	6.3.3.1 Humpback Whale 6.3.3.2 Minke Whale 6.3.3.3 Sei Whale 6.3.4.1 Sperm Whale 6.3.4.3 Striped Dolphin 6.3.4.4 Atlantic Spotted Dolphin 6.3.4.5 Short-beaked Common Dolphin 6.3.4.6 White-beaked Dolphin 6.3.4.7 Atlantic White-sided Dolphin 6.3.4.8 Common Bottlenose Dolphin 6.3.4.9 Risso's Dolphin 6.3.4.10 Killer Whale 6.3.4.11 Long-finned Pilot Whale 6.3.4.12 Harbour Porpoise 6.3.7.2 Fin Whale 6.3.7.3 North Atlantic Right Whale 6.3.7.5 Sowerby's Beaked Whale	The EIS does not describe important areas (or critical habitat for SARA listed species) in the vicinity of the drill site or supply routes (mating, breeding, feeding, and nursing of young) that could be impacted by the project (e.g. acoustics, spills, etc.)	Please provide important area information. Where information does not exist, please state the data gaps.

			6.3.7.7 Loggerhead Sea Turtle		
DFO-12	5(1)(a)(i) Fish and Fish Habitat 5(1)(a)(ii) Aquatic Species	Part 2, Section 7.1.9.1 Special areas	Page 6-141, Section 6.4.1.1 Federal Bioregional Network (paragraph 2)	The reference to five integrated management areas (IMAs) is incorrect. This refers to past work completed by DFO on five Large Ocean Management Areas (LOMAs). These were pilot projects that preceded the identification of Bioregions. The information collected in each of these areas is still valid today and is now being used in a bioregional context.	Update 6.4.1.1.
DFO-13	5(1)(a)(i) Fish and Fish Habitat 5(1)(a)(ii) Aquatic Species	Part 2, Section 7.1.9.2 Human environment	Page 7-5, Section 7.2.1.3 Information Sources and Data Limitations (paragraph 1, sentence 1)	Regarding commercial fishing data for "most" domestic fisheries in the Convention Area, it is not clear why the qualifier "most" is used.	Specify what is meant by "most".
DFO-14	5(1)(a)(i) Fish and Fish Habitat 5(1)(a)(ii) Aquatic Species	Part 2, Section 7.1.9.2 Human environment	Page 7-7, Figure 7-2 Page 7-8, Figure 7-3	For Figures 7-2 and 7-3, the source sited is DFO 2009a but the figure titles speak to the RAA and LAA, which were defined only recently. Does the DFO 2009a allow data to be defined for the polygons (RAA, LAA)?	Describe relationship of DFO 2009a data to RAA and LAA polygons.
DFO-15	5(1)(a)(i) Fish and Fish Habitat 5(1)(a)(ii) Aquatic Species	Part 2, Section 7.1.9.2 Human environment	Page 7-9, Figure 7-4 Page 7-10, Figure 7-5	Data in Figures 7-4 and 7-5 should be split into 2 graphs. The scale of the RAA catch overpowers the LAA data.	Provide separate figures for the LAA and RAA.
DFO-16	5(1)(a)(i) Fish and Fish Habitat 5(1)(a)(ii) Aquatic Species	Part 2, Section 7.1.9.2 Human environment	Page 7-13, Table 7.5	The Quantity and Value (LAA) for Turbot and Crab appear to	Recheck data and update throughout the document.

				be lower than actual (independent of redactions).	
DFO-17	5(1)(a)(i) Fish and Fish Habitat 5(1)(a)(ii) Aquatic Species	Part 2, Section 7.3.1 Fish and fish habitat Part 2, Section 7.3.6 Species at risk	Page 8-2, 8.1.1 Regulatory and Policy Setting - Paragraph 2, sentence 2 - Paragraph 3, sentence 3 Page 8-3, Section 8.1.3 Potential Effects, Pathways and Measurable Parameters (paragraph 5, sentence 1) Page 8-8, Section 8.1.6 Significance Definition (final bullet) Page 14-13, Section 14.2.1 Past and Ongoing Effects (Existing Environment) (paragraph 1)	There are some discrepancies with existing legislation. Serious harm to fish (page 8-2, 8-3) is no longer a prohibition under the *Fisheries Act*. Prohibitions are now against death of fish and harmful alteration, disruption or destruction of fish habitat (page 8-8). When defining terms from the *Fisheries Act* (page 14-13), it is recommended that exact wording from the Act be utilized. Sections 32, 33, and 58 of the *Species at Risk Act* (page 8-2) do not apply to species of special concern listed on Schedule 1.	Update information pertaining to the *Fisheries Act* and *Species at Risk Act*.
DFO-18	5(1)(a)(i) Fish and Fish Habitat 5(1)(a)(ii) Aquatic Species	Part 1, Section 4.3 Study strategy and methodology Part 2, Section 7.3.1 Fish and fish habitat	Page 8-3, Section 8.1.3 Potential Effects, Pathways and Measurable Parameters	In Table 8.1, Measurable Parameter(s) and Units of Measurement should include an assessment of physical injury and health for the potential environment effect of “Change in risk of mortality or physical injury”.	Update Table 8.1 to provide parameters for injury and health. Update effects assessment, as required.

DFO-19	5(1)(a)(i) Fish and Fish Habitat 5(1)(a)(ii) Aquatic Species	Part 2, Section 7.3.1 Fish and fish habitat	Section 8.2 Project Interactions with Marine Fish and Fish Habitat	It is not clear how surveys other than VSP (e.g., geophysical, geological, geotechnical, environmental) are incorporated in the effects assessment. If other surveys will be conducted, they should be described and subsequently assessed. Regarding the justification for no effects, although it is noted that amount of produced water is typically very small and will be treated in accordance with the Offshore Waste Treatment Guidelines, a brief justification for effects should be provided. For well abandonment, "activities are not anticipated to produce underwater sound or discharges that would pose a risk of physical injury or mortality". Some justification should be provided for the above statement.	Incorporate other surveys into the effects assessment. Provide additional justification for no effects for produced water and well abandonment.
DFO-20	5(1)(a)(i) Fish and Fish Habitat 5(1)(a)(ii) Aquatic Species	Part 2, Section 7.3.1 Fish and fish habitat	Page 8-9, Section 8.2 Project Interactions with Marine Fish and Fish Habitat (paragraph 2, final sentence)	The effects assessment for supply and servicing operations is confusing, as some aspects of supply and servicing appear to be evaluated under the presence and operation of a MODU (page 8-9).	Define which activities are associated with supply and servicing operations.
DFO-21	5(1)(a)(i) Fish and Fish Habitat 5(1)(a)(ii) Aquatic Species	Part 2, Section 7.4 Mitigation measures	Page 8-11, Section 8.3.1.2 Mitigation (bullet 1)	Regarding the visual seabed survey, the Proponent should commit to providing results pertaining to corals and sponges and other sensitive	Update text.

				environmental features to DFO prior to drilling. The wording for this mitigation is not consistent throughout the EIS (e.g., see page 8-25). DFO expects to be consulted on the seabed survey design and be provided results (as noted above).	
DFO-22	5(1)(a)(i) Fish and Fish Habitat 5(1)(a)(ii) Aquatic Species	Part 2, Section 7.3.1 Fish and fish habitat	Pages 8-12 to 8-14, Section 8.3.1.3 Characterization of Residual Project-related Environmental Effects (Presence and Operation of a MODU)	Discussion for Presence and Operation of a MODU should be enhanced. In paragraph 1, an overview of sound modelling performed is not provided, nor referenced. References are not provided for the noted behavioural threshold, nor for the statement "Based on available scientific literature, it is unlikely that exposure to MODU should would result in either physical injury or mortality". Presented results are very broad or appear to be focused on fish that use their swim bladders in hearing. Specific examples of effects of underwater sound on mortality/injury of invertebrates and fish that don't use a swim bladder in hearing would be useful.	Provide brief overview of sound modelling. Provide references for requested statements. Incorporate additional studies that examine effects of underwater sound on mortality/ injury of invertebrates and fish that don't use swim bladders in hearing.
DFO-23	5(1)(a)(i) Fish and Fish Habitat 5(1)(a)(ii) Aquatic Species	Part 2, Section 7.3.1 Fish and fish habitat	Pages 8-12 to 8-14, Section 8.3.1.3 Characterization	The EIS notes that low-mobility fishes and sessile invertebrates in the immediate area of the	Describe effects of VSP on low-mobility

			of Residual Project-related Environmental Effects (Vertical Seismic Profiling)	VSP source would be exposed to underwater sound. However, there is no discussion as to how VSP could cause injury or mortality.	fishes and sessile invertebrates.
DFO-24	5(1)(a)(i) Fish and Fish Habitat 5(1)(a)(ii) Aquatic Species	Part 2, Section 7.3.1 Fish and fish habitat	Pages 8-23 to 8-24, Section 8.3.2.3 Characterization of Residual Project-related Environmental Effects (Vertical Seismic Profiling)	A reference should be provided for the statement, "given that fishes have habituated to similar received levels, far reaching behavioural effects on fishes are not anticipated" (page 8-23). The EIS states, "there are insufficient data to address the potential behavioural effects of exposure to seismic airgun sound on invertebrates". If there is literature available examining invertebrate behavioural responses to seismic sound, such results should be discussed. Residual environmental effects for VSP are predicted to be restricted to the Project Area or LAA and short-term in duration. Given that a maximum distance of 30.6 km from the VSP source to the received SPL threshold is noted on page 8-23, residual effects could be observed in the RAA. Given that behavioural effects may not cease with the end of a VSP survey, medium term would be more appropriate for duration.	Provide reference for noted statement. If possible, incorporate results from studies that examine behavioural responses of invertebrates to seismic sound. Justify residual effects assessment for geographic extent and duration, or update assessment.

DFO-25	5(1)(a)(i) Fish and Fish Habitat 5(1)(a)(ii) Aquatic Species	Part 2, Section 7.3.1 Fish and fish habitat	Pages 8-24 to 8-25, Section 8.3.2.3 Characterization of Residual Project-related Environmental Effects (Discharges)	Discussion of potential liquid discharges is limited (page 8-25, paragraph 3). Discussion should include how these discharges could affect water quality and the anticipated spatial extents of the various discharges. Effects of discharges should also be discussed with respect to habitat use. Are discharges anticipated to cause behavioural changes in fish and invertebrates?	Elaborate on potential effects of liquid discharges. Describe changes in habitat use associated with discharges.
DFO-26	5(1)(a)(i) Fish and Fish Habitat 5(1)(a)(ii) Aquatic Species	Part 2, Section 7.3.1 Fish and fish habitat	Pages 8-25 to 8-26, Section 8.3.2.3 Characterization of Residual Project-related Environmental Effects (Well Decommissioning and Abandonment or Suspension)	The EIS states "activities are predicted to result in temporary, localized disturbance that may result in avoidance of the area and change in habitat availability for the duration of the activity"; but neither the disturbance nor resulting effects on fish and fish habitat are described. Given that well heads may be left in place and result in "permanent effects", it is not clear why it is considered short term to long term in duration and reversible.	Provide overview of activities associated with well abandonment and decommissioning, and potential effects on fish and fish habitat. Justify residual effects assessment for duration and reversibility, or update effects assessment.
DFO-27	5(1)(a)(i) Fish and Fish Habitat 5(1)(a)(ii) Aquatic Species	Part 2, Section 7.3.6 Species at risk	Page 8-27, Section 8.3.3 Species at Risk: Overview of Potential Effects and Key Mitigation (paragraph 1)	It is noted that a change in habitat quality and use could occur for wolffish. Are there any implications for critical habitat?	Describe if or how the Project could affect wolffish critical habitat.

DFO-28	5(1)(a)(i) Fish and Fish Habitat 5(1)(a)(ii) Aquatic Species	Part 2, Section 7.3.1 Fish and fish habitat	Section 8.3.4 Summary of Project Residual Environmental Effects Section 8.4 Determination of Significance	There are some issues in the final characterization of effects. There are discrepancies between paragraph 2 (page 8-40) and Table 8.5. For example, sentence 2 states "Drill cuttings discharge is anticipated to be of moderate magnitude", yet a low magnitude is selected for discharges in Table 8.5. Ensure text and Table are consistent. The statement "The low magnitude and localized or short-term nature of predicted effects will result in interactions with marine fish and fish habitat that are spatially and temporally limited" (page 8-41) should be revised given that some effects are anticipated to be medium or long term in duration. The statement "planned Project activities will not result in a detectable decline in overall abundance or changes to the spatial and temporal distributions of fish populations in the Project Area, LAA, or RAA" should be revised. If Project activities cause changes in fish behavior, then spatial and temporal distributions of fish populations will likely change, at least in the Project Area.	Update 8.3.4 and 8.4.

DFO-29	5(1)(a)(i) Fish and Fish Habitat 5(1)(a)(ii) Aquatic Species	Part 2, Section 7.6.3 Cumulative effects assessment	Page 14-13, Section 14.2.1 Past and Ongoing Effects (Existing Environment) (paragraph 4)	Given that oil and gas activities have been/are a contributor to the soundscape, such activities should also be discussed in this paragraph.	Briefly discuss interactions between oil and gas activities and fish and fish habitat.
DFO-30	5(1)(a)(i) Fish and Fish Habitat 5(1)(a)(ii) Aquatic Species	Part 2, Section 7.6.3 Cumulative effects assessment	Pages 14-19 to 14-21, Section 14.2.4.1 Cumulative Change in Risk of Mortality or Physical Injury	There is no discussion of effects of lighting or discharges (other than drill muds and cuttings) on cumulative change in risk of mortality or physical injury. Regarding cumulative effects from sound, the zone of influence for sound for the Project should be described. For the statement "these effects would be expected to be in the range of natural variability (not affecting population viability) and the sound sources themselves are far enough apart that, even if there was some temporal overlap of activities, there will be no spatial overlap (based on predicted propagation of underwater sound levels)", an explanation should be provided as to how effects are expected to be in the range of natural variability and why there will be no spatial overlap.	Evaluate cumulative effects for lighting and other discharges, or explain why they were not considered. Describe the zone of influence of sound for the Project, how it is expected to overlap with other sound sources and why effects should remain within the natural range of variability.
DFO-31	5(1)(a)(i) Fish and Fish Habitat 5(1)(a)(ii) Aquatic Species	Part 2, Section 7.6.3 Cumulative effects assessment	Pages 14-21 to 14-22, Section 14.2.4.2 Cumulative Change in Habitat Quality and Use	Given that well abandonment is noted as potentially changing habitat quality and use (sentence 1, page 14-21), well abandonment should be discussed.	Include well abandonment and seismic programs in the cumulative effects assessment.

				An important consideration of the soundscape (bullet 1, page 14-21) is seismic activity. Potential for cumulative effects with seismic programs should be discussed. It is not clear what is meant by important habitat areas (final sentence, page 14-22). Is the use of less important habitat expected to be affected differently?	Clarification should be provided for the final statement.
DFO-32	5(1)(a)(i) Fish and Fish Habitat 5(1)(a)(ii) Aquatic Species	Part 2, Section 7.6.3 Cumulative effects assessment	Page 14-23, Section 14.2.5 Species at Risk (paragraph 1, sentence 3)	Indicating that negligible residual effects are expected for SAR/SOCC is inconsistent with the effects assessment for fish and fish habitat (e.g., Table 8.5).	Statement should be revised.
DFO-33	5(1)(a)(i) Fish and Fish Habitat 5(1)(a)(ii) Aquatic Species	7.3.8.3 Special Areas	Section 15.5.4 Special Areas	The EIS does not address the following requirement in the EIS Guidelines: - Effects on special areas, including, but not limited to: use of dispersants.	This information request can be adequately addressed through the provision of supplementary information.
DFO-34	5(1)(a)(i) Fish and Fish Habitat 5(1)(a)(ii) Aquatic Species	Part 2, Section 7.6.1 Effects of potential accidents or malfunctions	Pages 15-93 to 15-94, Section 15.6.1.1 Project Pathways for Effects (Change in Fish Habitat Availability, Quality, and Use)	Discussion for change in fish habitat availability, quality and use is focused on plants and corals and sponges. Discussion should be expanded to include: - changes to the water column and sediment - Resultant impacts on fish and other invertebrates, including changes in prey availability and behavioural effects	Update discussion for change in fish habitat availability, quality and use.

DFO-35	5(1)(a)(i) Fish and Fish Habitat 5(1)(a)(ii) Aquatic Species	Part 2, Section 7.6.1 Effects of potential accidents or malfunctions	Pages 15-100 to 15-101, Section 15.6.1.3 Characterization of Residual Project-Related Environmental Effects (SBM Spill from the MODU and the Marine Riser)	It is not clear why Nexen's model is appropriate to inform potential effects of SBM spills for this Project. Similarly, it is not described how the SBM spill on the Scotian Shelf can be used to evaluate effects from this Project. The final paragraph notes reversible degradation in water. Effects to the water column should be described.	Explain relevance of Nexen's model and the SBM spill on the Scotian Shelf to the Project. Briefly describe effects to the water column resulting from an SBM spill.
DFO-36	5(1)(a)(i) Fish and Fish Habitat 5(1)(a)(ii) Aquatic Species	Part 2, Section 7.6.1 Effects of potential accidents or malfunctions	Page 15-101, Table 15.32	In Table 15.32, duration for well blowout incident is long-term, but in the text, it is moderate to long-term (page 15-99, paragraph 3, final sentence).	Ensure consistency between the text and Table 15.32.

ANNEX 3: Advice to the proponent

Table 3: Additional advice to the proponent, such as guidance or standard advice related to your departmental mandate

ID	Reference to EIS	Context and Rationale	Advice to the Proponent
DFO-37	Page 6-12, Section 6.1.4.3 Zooplankton (paragraph 2, sentence 1)	Microzooplankton is identified as 20-200 µm and >2 mm.	Revision recommended.
DFO-38	Page 6-15, Section 6.1.4.5 Marine Plants and Macroalgae (paragraph 2, sentence 1)	Recommend the following revisions: "Eelgrass (*Zostera marina*) is a coastal, marine, flowering ~~marine~~ plant that is an Ecologically Significant Species in Atlantic Canada ~~under DFO's Ecosystem Approach and Canada's *Oceans Act*~~ (~~DFO 2006,~~ DFO 2018a)".	Revision recommended.
DFO-39	Page 6-30, Table 6.4 Page 6-32, Section 6.1.7.2 Northeast Newfoundland Slope (sentence 1)	Table 6.4 shows 11 dominant species in the Upper Slope, but the corresponding text (page 6-32) only notes eight.	Revision recommended.
DFO-40	Page 6-33, Table 6.6	The statement "Minimum number of individuals in the video frame is the greatest number visible within any one frame, to avoid potential repeated counting of individuals" is counterintuitive. Would not using the maximum number of individuals increase the likelihood of repeated counting?	Clarification recommended.
DFO-41	Page 6-35, Section 6.1.7.3 Orphan Basin Abyssal Plain (paragraph 3, sentences 2-3)	The survey depth range is inconsistent with the results presented for the shallow-middle slope depths.	Revision recommended.
DFO-42	e.g., Page 6-37, Section 6.1.7.4 LAA Key Species Information (paragraph 2, sentence 3)	Throughout the text, depth ranges are inconsistent with Tables 6.4 and 6.5. For example, the Tables indicate that the Upper Slope is 197 m to 700 m, but page 6-37 notes 225 to 700 m.	Revision/clarification recommended.

	Page 6-45, Section 6.1.7.4 LAA Key Species Information (paragraph 2, sentences 1-2)		
DFO-43	Page 6-37, Section 6.1.7.4 LAA Key Species Information (paragraph 2, sentence 3)	The percentages of total catch by abundance and biomass are inconsistent with Tables 6.4 and 6.5.	Revision recommended.
DFO-44	Page 6-50, Section 6.1.7.5 Migratory and Transient Species (paragraph 2, final sentence)	This statement is contradictory, suggesting that swordfish both do and don't utilize the LAA.	Revision recommended.
DFO-45	Page 6-58, Table 6.10	Little Skate should be included in Table 6.10 for consistency with Tables 6.9 and 8.4.	Revision recommended
DFO-46	Pages 6-59 to 6-60, Table 6.10	Depth ranges should be consistent throughout the EIS. Depth range for Roundnose Grenadier is 200 m to 2600 m in Table 6.10, but on page 6.45, it states "roundnose grenadier occupying similar depths (180 m to 2,200 m)". Depth range for Thorny Skate is 18 to 1200 m in Table 6.10, but 18 to 1400 m in Table 8.4.	Revisions recommended.
DFO-47	Page 6-61, Section 6.1.8.1 Wolffish (Atlantic, Spotted, Northern) (paragraph 2)	To better characterize the distribution of Atlantic Wolffish, a figure depicting RV trawl data would be useful. With the exception of Northern Wolffish, descriptions of distributions of wolfish northwest of the Project Area would be useful.	Revisions recommended.
DFO-48	Page 6-143, Section 6.4.1.2 Marine Protected Areas	DFO is in the process of establishing a National Network of Conservation Areas (formally known as an MPA Network) within Bioregions. MPAs will be part of this network.	Point of information.

DFO-49	Page 6-143, Section 6.4.1.2 Marine Protected Areas (paragraph 2)	There are currently three established MPAs in NL. Eastport (Round and Duck Islands) is considered one MPA. Thus, there are only two within the RAA.	Revisions recommended.
DFO-50	Page 6-143, Section 6.4.1.4 Marine Refuges and Lobster Area Closures	In 2010, Canada committed to the marine conservation targets established under the United Nations Convention on Biological Diversity (UN CBD). This agreement, commonly referred to as Aichi Target 11, committed Canada to conserving 10 percent of coastal and marine areas through effectively managed networks of protected areas and other effective area-based conservation measures by 2020. https://www.dfo-mpo.gc.ca/oceans/conservation/plan/index-eng.html	Point of information.
DFO-51	Pages 6-145 to 6-146, Section 6.4.1.7 Ecologically or Biologically Significant Areas	In addition to EBSAs being a tool for identifying areas that have particularly high ecological or biological significance, they are identified to facilitate provision of a greater than usual degree of risk aversion in management of activities within these areas.	Revision recommended.
DFO-52	Page 7-8, Table 7.2	Use of $ would be useful to identify values in columns 2-4. Source data not labeled in the table – please update. Table data displays 1990 – 2015 (title indicates 1990-2010 in error). It appears that the data from this table was sourced from the DFO website (Economic Analysis and Statistics). http://www.dfo-mpo.gc.ca/stats/commercial/land-debarq/sea-maritimes/s1990pv-eng.htm	Revisions recommended.
DFO-53	Section 7.3.1.1 Fisheries Science, Table 7.12	CCG Teleost is listed twice in the table and has the same vessel in different locations conducting different surveys during the same time frame.	Please edit table.

DFO-54	Page 8-3, Section 8.1.3 Potential Effects, Pathways and Measurable Parameters	Given that the introduction of invasive species is noted as a pathway later in the EIS (e.g., 8.3.1.1), it should be reflected in the pathways of potential effects.	Revision recommended.
DFO-55	E.g., Page 8-3, Section 8.1.3 Potential Effects, Pathways and Measurable Parameters	Environmental effects should be consistently named throughout the EIS. For example, on page 8-3 (bullet 1 of paragraph 4), the effect is titled "Change in risk of mortality or physical injury", but in Table 8.3 (page 8-9) it is "Change in Risk of Mortality, Injury or Health".	Revisions recommended.
DFO-56	Page 8-7, Table 8.2	For long term in the Duration column, "beyond Project duration of activity" is unclear.	Clarification recommended.
DFO-57	Page 8-26, Section 8.3.2.3 Characterization of Residual Project-related Environmental Effects (Supply and Servicing Operations)	It would be useful to relate the source levels associated with PSV operation to the behavioural threshold.	Revision recommended.
DFO-58	Section 10.3.1.2 Mitigation, Vertical Seismic Profiling	The Statement of Canadian Practice with respect to the Mitigation of Seismic Sound in the Marine Environment (SOCP) indicates that other cetacean detection technology is required under certain conditions.	Have different detection technologies, such as Passive Acoustic Monitoring (PAM), been considered for VSP operations during low visibility or storm events?
DFO-59	Section 12.3.1.2 Mitigation	With regards to the statement, " BHP will continue to engage commercial fisheries groups and relevant enterprises to share Project details and fisheries information, and to determine the need for a fisheries liaison officer (FLO) during mobilization and demobilization of the MODU, with reference to the One Ocean Risk Management Matrix Guidelines (One Ocean n.d.)".	Please ensure that the C-NOLPB is involved with the process that determines the need for a FLO.
DFO-60	Page 14-20, Section 14.2.4.1 Cumulative Change in Risk of Mortality or Physical Injury (final paragraph)	Specifying that change in risk of mortality or physical injury is very low is inconsistent with the effects assessment in Section 8.0, which showed a low magnitude.	Revisions recommended.

DFO-61	Page 14-23, Section 14.2.5 Species at Risk (sentence 2)	Recommend the following edits: "Identified critical habitat for ~~Atlantic~~ **Northern** and spotted wolffish…"	Revision recommended.