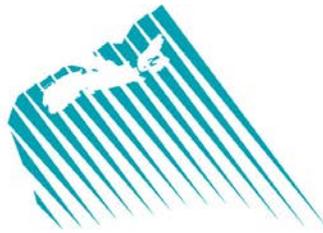


CNSOPB



**CANADA-NOVA SCOTIA
OFFSHORE PETROLEUM BOARD**

**Scoping Document for the Environmental Assessment of
Multiklient Invest's Proposed Seismic Program
in the Canada-Nova Scotia Offshore Area**

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Scoping Document for the Environmental Assessment Multiklient Invest's Proposed Seismic Program in the Canada – Nova Scotia Offshore Area

1.0 Purpose

This document provides a description of the scope of the project that will be assessed, the factors to be considered in the assessment, and the scope of those factors related to the Environmental Assessment (EA) for a proposed 2D and/or 3D seismic program to be conducted by Multiklient Invest in the Canada-Nova Scotia offshore area.

This final version of the Scoping Document has been prepared by the Canada-Nova Scotia Offshore Petroleum Board (CNSOPB), in consultation with Fisheries and Oceans Canada (DFO) and Environment and Climate Change Canada (ECCC).

2.0 Regulatory Considerations

The project will require one or more authorizations pursuant to Section 142 (1)(b) of the *Canada-Nova Scotia Offshore Petroleum Resources Accord Implementation Act*. The CNSOPB has determined that an EA for this project is required, to determine whether the project may result in significant adverse environmental effects, before issuing any authorization. The CNSOPB will delegate the preparation of the EA, and any associated addenda, to the Proponent and will make the determination of whether the project may result in significant adverse environmental effects based on the EA and any associated addenda.

3.0 Scope of the Project

Multiklient Invest, herein referred to as “the Proponent”, is proposing to conduct 2D and/or 3D (single and/or multi-vessel wide azimuth) seismic surveys. These surveys will take place in the marine waters of the jurisdiction of the CNSOPB. A map identifying the project location is provided in Figure 1.1 of the Project Description. The Project Description is available on the CNSOPB [website](#). The Proponent may begin the program in Q2 of 2019 and conduct additional programs between 2020 and 2028. The EA will cover the survey years 2019 to 2028. Addenda will be necessary to insure the EA remains valid throughout temporal scope of the project. All seismic surveys will be conducted between May and November of each survey year.

4.0 Factors to be considered

The EA shall include a consideration of the following factors:

- the environmental effects of the project, including the environmental effects of malfunctions or accidental events that may occur in connection with the project, and any cumulative environmental effects that are likely to result from the project in combination with other projects or activities that have been or will be carried out;

- the significance of the environmental effects;
- any comments from the public and Indigenous Groups that are received; and
- measures that are technically and economically feasible and that would mitigate any significant adverse environmental effects of the project.

A project file has been posted on the CNSOPB Environmental Assessment Public Registry which will include the Project Description, this Scoping Document (draft and final), the EA (draft and final), correspondence with Government Departments, comments from the public on the project and any follow-up information related to the EA. This Scoping Document will be posted on the CNSOPB EA Public Registry for a 30-day comment period. The draft EA will be posted on the CNSOPB EA Public Registry for a 30-day public comment period as well.

5.0 Scope of the factors to be considered

Based on various previous EAs involving similar surveying and data collection methods, the CNSOPB has focused the scope of the factors to be considered to those that have the potential to have significant adverse environmental effects. This scope includes consideration of the regulations, guidelines, and standard and enhanced mitigation to be followed during project activities, should the project proceed.

Section 6 of this document outlines the Valued Components (VCs) that shall be assessed in the EA, and includes discussion of the rationale for the inclusion of each of these components.

Appendix A describes those factors that are considered unlikely to have the potential to cause significant adverse environmental effects. Rationale for the exclusion of these factors, and specific mitigation that must be implemented to allow for their exclusion in the EA, are included in Appendix A. These excluded factors are considered outside the scope of the EA and do not require assessment in the EA beyond that indicated. If mitigation other than that indicated in Appendix A is to be used, further assessment may be required.

6.0 Valued Components (VCs)

The Proponent should refer to existing [Strategic Environment Assessments \(SEAs\)](#) prepared by the CNSOPB for description of the Nova Scotia offshore biological environment. A list of the species anticipated, and when they are likely to occur, is required in the EA. Reference to the appropriate SEA(s) is acceptable to satisfy this requirement. Descriptions of, or appropriate reference to the same, categorizations of wildlife shall be included in the EA:

- marine birds;
- marine mammals;
- sea turtles;
- known aggregations of habitat forming marine benthos; and
- fish populations.

The assessment of potential environmental effects shall focus on the VCs identified below.

6.1 Species of Special Status

The EA shall include assessment of potential effects on all species of special status known to occur in the study area. Species of special status include the following species and their critical habitat which may be present in the EA study area and determined to be potentially affected during the seismic survey:

- species designated as at-risk under the *Species at Risk Act (SARA)*;
- species assessed as endangered, threatened, or of special concern by the Committee on the Status of Endangered Wildlife of Canada (COSEWIC); and
- migratory birds protected by the *Migratory Birds Convention Act, 1994*.

The EA shall evaluate all environmental effects, including cumulative effects, of the project on species listed on Schedule 1 of the *SARA* and their critical habitat, and any migratory birds. The EA shall include a summary of the spatial and temporal distribution of marine mammal, fish, sea turtle, and bird species-at-risk, and any migratory birds that may occur in the study area and an assessment of the potential for disturbance to/displacement of these species due to noise, vessel presence, and the possibility of ship strikes.

The EA shall include a description of expected average and worse case sound exposure levels within the study area, and an assessment of the resultant potential effects on marine mammal, fish, sea turtle, and bird species-at-risk and migratory birds.

The Proponent shall also assess the means by which potential adverse effects on species-at-risk and their critical habitat, and migratory birds, will be mitigated through design and/or operational procedures, including those listed in the *Statement of Canadian Practice with Respect to the Mitigation of Seismic Sound in the Marine Environment*. A commitment to adhere to the mitigation measure outlined in the *Statement of Canadian Practice with Respect to the Mitigation of Seismic Sound in the Marine Environment* is required in the EA.

Additional mitigation measures identified shall be consistent with *SARA* recovery strategies and/or action plans that are in place for species-at-risk in the project area.

The Proponent shall indicate whether the project will be in compliance with the *SARA* prohibitions (*SARA* Sections 32, 33 and 58) and shall identify whether any *SARA* Section 73 permits will be requested. Any additional mitigation that is required should new species-at-risk be added the *SARA* Schedule 1 during the course of the assessment shall be included in any relevant Addendum to the EA.

The *Statement of Canadian Practice with Respect to the Mitigation of Seismic Sound in the Marine Environment* lists a 30-minute required observation period for whales prior to seismic activity ramp-up. The CNSOPB has been informed by DFO that this 30-minute required observation period is not sufficient to detect deep diving species, such as beaked whales. Beaked whales can, and typically, dive for more than 30 minutes. The CNSOPB therefore requires a 60-minute observation period when beaked whales have been detected (visually or acoustically) in order to provide the adequate time necessary to detect beaked whales that may be present in the seismic survey area. Shortland, Haldimand and Logan Canyon, are within the project areas and are known habitat for the Northern bottlenose whale, an endangered species of beaked whale.

6.2 Special Areas

Assessment of potential effects on areas designated of special interest due to their ecological and/or conservation sensitivities that could potentially be affected by seismic exploration activities are to be included in the EA. These areas include:

- The Western/Emerald Bank Conservation Zone (restricted fisheries area). This area is within the study area and potential effects on the area shall be assessed;
- Sable Island National Park Reserve, a designated migratory bird sanctuary and critical habitat for at-risk species. The Park is considered within the project area such that an assessment of the potential effects on this areas is required;
- The Gully Marine Protected Area (MPA). While outside the project area, the Gully MPA is adjacent to the area such that the potential effects from sound propagation into the area shall be assessed. The Gully MPA is designated as critical habitat for the Northern Bottlenose Whale and contains other sensitive species and habitats.
- George's Bank. While outside the project area, is adjacent to the area such that the potential effects from sound propagation into the area shall be assessed. George's Bank is a known spawning area and a lucrative fishing ground.
- Shortland and Haldimand Canyons. These areas are designated as critical habitat for the Northern Bottlenose Whale.
- The Fundian Channel – Browns Bank potential Area of Interest (AOI). It is possible that is area will become and AOI, and eventually an MPA at some point within the time span covered by the EA.
- The Roseway Basin is designated as critical habitat for the North Atlantic Right Whale. While outside the project area, the Roseway Basin is close enough to the area that the potential effects from sound propagation into the area shall be assessed.

The Proponent should review the CNSOPB SEAs for additional guidance on special areas within the project area.

Assessment of potential impacts on special areas shall include:

- an assessment of the potential for significant adverse environmental effects caused by noise;
- an assessment of the potential for vessel traffic and the potential for ship strikes; and
- an assessment of the potential for spills from malfunctions and/or accidental events.

The Proponent shall discuss the means by which design and/or operational procedures will be implemented to mitigate significant adverse effects on these special areas.

6.3 Marine Birds

It is recognized that the attraction of any avian species to lights on vessels or discharge of food waste may cause collision, landing, and may disrupt migration. An assessment of the potential adverse environmental effects on bird species-at-risk or migratory birds that may transit the area, as well as critical habitat and/or migratory bird sanctuaries, is required as outlined in Sections 6.1 and 6.2.

The EA shall note any data gaps identified in existing SEAs relative to marine birds that are not assessed in the species of special status section of the EA (see Section 6.1), and shall describe the relevance of such gaps for the conduct of the project.

The EA shall consider the potential impacts of vessel lights on marine birds and identifies any necessary mitigation measures, such as the implementation of the Williams and Chardine handling protocol brochure entitled *The Leach's Storm Petrel: General Information and Handling Instructions* should storm-petrels land on the vessels. A permit is required from the Canadian Wildlife Service of Environment and Climate Change Canada to implement this protocol. For guidance on handling of other other species of seabirds and for other groups of birds that may strand on the vessels, the proponent should refer to the ECCC document entitled *Procedures for handling and documenting stranded birds encountered on infrastructure offshore Atlantic Canada* (2017). A permit is required from the Canadian Wildlife Service of Environment and Climate Change Canada to implement these protocols.

Following the program, copies of data collected on stranded birds and bird survey information is to be provided to ECCC.

6.4 Marine Mammals

The EA shall include an assessment of potential adverse effects on marine mammal species-at-risk, as outlined in Section 6.1, and special areas within the vicinity of the project area, as outlined in Section 6.2. This includes an assessment of the potential effects due to sound and the possibility of ship strikes.

Seismic operators are required to adhere to marine mammal observer protocols stated in the most recent version of the *Statement of Canadian Practice on the Mitigation of Seismic Sound in the Marine Environment* for the project. This includes protocols for night and poor weather detection. Enhanced mitigation is required for beaked whales as stated in Section 6.1.

As stated in Section 6.1, the Proponent should note that additional mitigation may be required should new species-at-risk be added the SARA Schedule 1 during the course of the assessment, or should mitigation measures be required which are not listed in the *Statement of Canadian Practice on the Mitigation of Seismic Sound in the Marine Environment*.

The EA shall also note any data gaps identified in existing SEAs relative to marine mammals that are not assessed in the species of special status section of the EA, and shall describe the relevance of such gaps for the conduct of the project.

6.5 Sea Turtles

The EA is required to provide an assessment of potential adverse effects on sea turtle species-at-risk, as outlined in Section 6.1, and special areas within the vicinity of the project area, as outlined in Section 6.2.

The project EA shall note any data gaps identified in the three SEAs relative to sea turtles that are not assessed in the species of special status section of the EA (see Section 6.1), and shall describe the relevance of such gaps for the conduct of the project.

There is strong potential that critical habitat for the leatherback turtle will be designated within the project area during the life of the assessment. The Proponent shall follow the development of management actions for leatherback turtle critical habitat areas offshore Nova Scotia and discuss the appropriate level assessment of these areas with the CNSOPB and DFO, Maritimes Branch during EA development and development of any associated addenda to the EA.

6.6 Other Ocean Users

Existing gas production programs are within the project area. BP Exploration Canada Ltd. and Equinor both have exploration licenses in the area and may apply to conduct exploration programs within the project area (seismic and/or drilling programs).

Commercial fisheries for groundfish, pelagics and invertebrates (shellfish), as well as the potential for interaction with marine shipping and scientific research vessels, may occur in the project area. This includes commercial, recreational and/or Indigenous fisheries in the area (see Section 7.1 for Indigenous Engagement).

The potential project interactions with DND training exercises may exist in the area as well.

Therefore, an assessment of the potential effects of the project on other ocean users in the project area, including any new activities that develop during the life of the program, shall be included in the EA. The Proponent shall determine the potential for interactions with other oil and gas exploration activities, fisheries, and DND training exercises, as well as marine shipping and subsea cables, and shall contact DFO to determine if any fisheries research survey vessels are expected to be in the project area at the time of the project.

6.7 Malfunctions and Accidental Events

Accidental spills have the potential to affect the health and/or survival of plankton, fish eggs and larvae, juvenile and adult fish, marine mammals, marine birds, marine turtles and marine invertebrates in the project area. There have been hydrocarbon releases from seismic streamers on the Scotian Shelf and there is the possibility of light oil spills, such as fuel oil, from seismic vessels. Therefore, an assessment of the potential for, and potential effects of, accidental spills shall be included in the EA. This includes the targeted survey areas, as well as the special areas.

The Proponent shall provide information on the sources and volumes of petroleum products expected to be on board all vessels to be used for the project. The Proponent shall also be required to state the measures to be used to minimize the potential for accidental release of these materials into the environment. This includes a Spill Response Plan(s) specific to the project.

6.8 Cumulative Effects

The Proponent is required to assess the potential cumulative effects of their activity and other significant sources of sound in the marine environment, such as other seismic programs and military exercises, as well as the cumulative effects of increased vessel presence as a result of the project on the above listed VCs.

The assessment shall include the means by which design and/or operational procedures, including follow-up measures, will be implemented to mitigate significant adverse environmental effects as a result of cumulative effects.

7.0 Indigenous and Public Engagement

7.1 Indigenous Engagement

To support CNSOPB consultation efforts, the Proponent is expected to engage with Indigenous Groups as early as possible in the EA process and establish an engagement process with Indigenous Groups that:

- Provides opportunities to learn about the project and its potential effects
- Provides opportunities and adequate time for Indigenous Groups to make their concerns known
- Provides opportunities for Indigenous Groups to put forward and discuss mitigation measures to address their concerns

The Proponent will make reasonable efforts to integrate Indigenous Knowledge into the assessment of environmental impacts.

Within the EA, the Proponent will outline all engagement activities (as well as any future engagement planned). This includes:

- Description of efforts
- Each group's identified potential or established Indigenous or Treaty rights and the potential adverse impacts of each of the project components on potential or established Indigenous or Treaty rights.
- Issues raised by Indigenous Groups and how they were responded to and addressed
- Where and how Indigenous Knowledge was incorporated into the EA

The Proponent will make and report on efforts to meet with the following potentially affected Indigenous Groups:

Nova Scotia

- Acadia First Nation
- Annapolis Valley First Nation
- Bear River First Nation
- Eskasoni First Nation
- Glooscap First Nation
- Membertou Band Council
- Millbrook First Nation
- Paq'tnkek First Nation
- Pictou Landing First Nation
- Potlotek First Nation
- Sipekne'katik First Nation
- Wagmatcook First Nation

- Waycobah First Nation

New Brunswick

- Woodstock First Nation
- Buctouche First Nation
- Eel River Bar First Nation
- Elsipogtog First Nation
- Esgenoopetitj (Burnt Church) First Nation
- Fort Folly First Nation
- Indian Island First Nation
- Kingsclear First Nation
- Pabineau First Nation
- Oromocto First Nation
- Saint Mary's First Nation
- Tobique First Nation
- Madawaska Maliseet First Nation

Prince Edward Island

- Abegweit First Nation
- Lennox Island First Nation

There are additional Indigenous Groups that are expected to be less affected by the project. The Proponent will make information accessible to these Indigenous Groups. These Indigenous Groups are:

- Eel Ground First Nation
- Metepenagiag Mi'kmaq Nation
- The Peskotomuhkati Nation at Skutik (Passamaquoddy)
- Miawpukek First Nation
- Innu Nation (Ueushuk Fisheries) of Labrador
- Nunatsiavut Government (NG) of Labrador
- Native Council of Nova Scotia (Mime'J Seafoods Limited)
- Native Council of Prince Edward Island
- New Brunswick Indigenous Peoples Council

NOTE: The groups referenced above may change as more is understood about the environmental effects of the project. CNSOPB reserves the right to alter the list of Indigenous Groups.

Information provided by the Proponent related to Indigenous Consultation will be considered by the CNSOPB with respect to the discharge of the Crown's consultation and accommodation obligations.

7.2 Public Engagement

The Proponent is expected to provide the public with an opportunity to participate in the EA process as early as possible. This includes ongoing communication and information sharing with the public to ensure a clear understanding of the project.

Within the EA, the Proponent will outline what engagement has taken place (as well as any future engagement planned). This includes a description of engagement efforts, what engagement methods were used, location of engagement sessions, persons or groups that were engaged, the concerns voiced and how the information was considered in the EA process.

8.0 Effects of the Environment on the Project

Physical environmental conditions acting on the project that could have consequences for the environment and need to be considered within the EA (factors which could affect the project design or operation) include meteorology and oceanography.

Should the activity be ultimately authorized, the Proponent is required to monitor physical environmental conditions and develop a plan to avoid potential adverse effects on the environment as a result of environmental influences on the project. An Emergency Response Plan is required to be submitted to the CNSOPB prior to the commencement of operations.

9.0 Follow-Up Program

Details regarding follow-up monitoring and observation procedures shall be included in the EA. This includes a description of monitoring and observation procedures for marine mammals, sea turtles and seabirds.

The following reporting requirements will be applicable to any seismic program may be authorized by the CNSOPB:

- observer reports detailing marine mammal, sea turtle and bird observations shall be submitted to the CNSOPB;
- a summary of marine mammal and sea turtle observations and interactions, including indication of shut-downs, is to be submitted to the CNSOPB on a weekly basis;
- shut-downs to wildlife interactions are to be reported within 24 hours of occurrence.

All species-at-risk are to be identified as such in these reports.

Copies of data collected on stranded birds and bird survey information shall be provided to ECCC at the end of the program as well.

Weekly and end-of-program observer reports will be posted on the CNSOPB public registry as follow-up information related to the EA.

10.0 Spatial and Temporal Boundaries

As stated above, the EA shall cover the survey years 2019 to 2028. All seismic surveys will be conducted between May and November of each survey year.

The Proponent will clearly define, and provide rationale for, the temporal boundaries that are used in its EA. Boundaries should be flexible and adaptive to enable adjustment or alteration based on field data.

A gap analysis, in the form of Addenda to the EA, shall be required prior to activities applications received from the Proponent subsequent to any 2019 program application covered by this EA. Addenda are meant to capture changes in the biological environment, updates to species at risk and/or their critical habitat, new special area requiring assessment, new regulatory requirements and/or new guidelines issued by relevant regulatory bodies, and any changes to fisheries that may be affected by the project.

11.0 Significance of Environmental Effects

The Proponent will clearly describe the criteria by which it proposes to define the term “significance” of any adverse effects (i.e. such as following the implementation of mitigation measures) that are predicted within the EA. Useful guidance is available in the November 1994 CEA Agency reference guide *Determining Whether a Project is Likely to Cause Significant Adverse Environmental Effects*.

12.0 Assessment Summary Section

The assessment will include a detailed summary of all mitigation, commitments and follow-up measures discussed in the EA. Adherence to mitigation measures, commitment and/or follow-up measures will be considered by the CNSOPB as conditions of authorization.

Appendix A: Components and Activities Outside of the Scope of the Assessment of the Potential for Adverse Environmental Effects

As stated in Section 6.0, a detailed description of which species may be anticipated, and when they are likely to occur, is required for the EA. The assessment of potential environmental effects for the purposes of identification of mitigation measures is to be focused on the VCs listed in Section 6, as mitigation measures beyond standard mitigation are unlikely for species considered to be not at-risk and for conventional areas within the study area (some beaked whales being the exception). The following components are therefore considered to be outside the scope of the portion of the EA focused on the potential for adverse environmental effects.

(i) Air quality

The only emission sources from the proposed project are the seismic vessel(s) and any support vessels. It is expected that project emissions will not cause an exceedance of applicable air quality standards or guidelines. There are limited emissions sources, and few receptors in the project area with the exception of Sable Island. Assessment of potential effects on air quality can be excluded from the EA provided that the Proponent adheres to MARPOL Annex VI, Regulations for the Prevention of Air Pollution from Ships.

(ii) Marine Fish that are not commercially fished or species-at-risk

A description of fish populations reasonably expected to occur within the project area during project operations is required as per Section 6.0. An assessment of potential effects on the Western/Emerald Bank Conservation Zone (restricted fisheries area, the Haddock Box) and of sound propagation into George's Bank is required as stated in Section 6.2.

Most of the resident deep water fish species are identified as non-commercial. An assessment of potential effects on fish species-at-risk is required as stated in Section 6.1.

An assessment of potential effects on fisheries resources and commercial fishing activities is required as stated in Section 6.6.

Requirements for Indigenous Engagement are included in Section 7.1 and must include consideration for impacts to fisheries.

Assessment of the potential effects on the populations of other species of fish can therefore be excluded from the EA, provided that the Proponent adheres to the mitigation measures outlined in the *Statement of Canadian Practice with Respect to the Mitigation of Seismic Sound in the Marine Environment*.

(iii) Marine Benthos that are not commercially fished, or species-at-risk, or forming aggregations creating habitat

A description of marine benthos reasonably expected to occur within the project area during project operations is required.

The Proponent is required to adequately assess the effects of the project on commercially fished marine invertebrate species, as stated in Section 6.6.

An assessment of potential effects on any special areas within the vicinity of the project area that may contain marine benthos requiring protection, such as aggregations of habitat forming corals or sponges, is required as stated in Section 6.2.

No known marine benthos species-at-risk occur in the study area. Therefore, no further assessment of potential effects on marine benthos is required.