ExxonMobil Canada Ltd. Eastern Newfoundland Offshore Geophysical, Geochemical, Environmental and Geotechnical Programs, 2015-2024

Scoping Document

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1. Purpose

This document provides scoping information for the Environmental Assessment (EA) of geophysical, geochemical, environmental, and geotechnical programs in the eastern Newfoundland offshore and all other related activities (the Project). ExxonMobil Ltd. Canada (ExxonMobil) is proposing to conduct a ship-borne geophysical program that includes two dimensional (2D), three dimensional (3D), wellsite geohazard, geochemical, geotechnical and environmental survey programs in one or more years within the 2015 to 2024 timeframe. The primary objectives of the Project are to: acquire data to image structural and stratigraphic trends; define and assess prospects for potential drilling and development; and assess overall hydrocarbon potential.

Included in this document is 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.

This document has been developed by the Canada-Newfoundland and Labrador Offshore Petroleum Board (C-NLOPB) in consultation with federal and provincial fisheries and environmental departments[1].

2. Regulatory Considerations

The Project will require authorizations pursuant to Section 138 (1) (b) of the *Canada-Newfoundland Atlantic Accord Implementation Act* and Section 134(1) (b) of the *Canada-Newfoundland and Labrador Atlantic Accord Implementation Newfoundland and Labrador Act* (Accord Acts).

The C-NLOPB formally delegates the responsibility of an acceptable environmental assessment report and any supporting documents to ExxonMobil Canada Ltd., the project proponent.

3. Scope of the Project

The project to be assessed consists of the following components:

3.1 The conduct of 2D, 3D, wellsite geohazard, geochemical, geotechnical and environmental survey program surveys between May 1 and November 30 in one or more years between 2015 and 2024 within the Project Area; and

3.2 Operation of support craft associated with the above activities, including but not limited to support and guard/picket vessels, and helicopters.

4. Factors to be Considered

The EA shall include a consideration of the following factors:

4.1 The purpose of the project;

[1]Appendix 1 contains a list of the departments and agencies consulted during the preparation of the document.

4.2 The environmental effects of the Project, including those due to malfunctions or accidents that may occur in connection with the Project and any change to the Project that may be caused by the environment. Environmental effect is defined as: any change that the project may cause in the environment, including any such change on health and socio-economic conditions, on physical and cultural heritage, on the current use of lands and resources for traditional purposes by aboriginal persons, or on any structure, site or thing that is of historical, archaeological, paleontological or architectural significance; and any change to the project that may be caused by the environment, whether any such change occurs within or outside Canada;

4.3 Cumulative environmental effects of the Project that are likely to result from the project in combination with other projects or activities that have been or will be carried out;

4.4 The significance of the environmental effects described in 4.2 and 4.3;

4.5 Measures, including contingency and compensation measures as appropriate, that are technically and economically feasible and that would mitigate any significant adverse environmental effects of the project;

4.6 The significance of adverse environmental effects following the employment of mitigative measures, including the feasibility of additional or augmented mitigative measures; and

4.7 Report on consultations undertaken by ExxonMobil with interested other ocean users who may be affected by program activities and/or the general public respecting any of the matters described above.

5. Scope of the Factors to be Considered

ExxonMobil will prepare and submit to the C-NLOPB an EA for the above-described physical activity, and as described in the "*Environmental Project Description Eastern Newfoundland Offshore Geophysical, Geochemical, Environmental and Geotechnical Programs 2015-2024"* (ExxonMobil Canada Ltd. February 2015). The EA will address the factors listed above; the issues identified in Section 5.2 (following), and document any issues and concerns that may be identified by the proponent through regulatory, stakeholder, and public consultation.

Program activities are proposed for the eastern Newfoundland offshore area, which has been studied in a number of recent EAs and the recently published *Eastern Newfoundland Strategic Environmental Assessment* (SEA) (August 2014). For the purposes of this assessment, the information provided in the *Eastern Newfoundland SEA* should support the EA to avoid unnecessary duplication of information. Appropriate references should be included in the EA.

It is recommended that the "valued ecosystem component" (VEC) approach be used to focus its analysis. A definition of each VEC (including components or subsets thereof) identified for the purposes of environmental assessment, and the rationale for its selection, shall be provided.

The scope of the factors, to be considered in the EA, will include the components identified in Section 5.2 - Summary of Potential Issues, setting out the specific matters to be considered in assessing the environmental effects of the project and in developing environmental plans for the project, and the "Spatial Boundaries" identified below (Section 5.1). Considerations relating to definition of "significance" of environmental effects are provided in the following sections.

Discussion of the biological and physical environments should consider the data available from recent EAs and the recently completed *Eastern Newfoundland SEA* (August 2014) for the Project and Study Areas. Where data gaps exist, the EA should clearly identify the lack of data available.

5.1. Boundaries

The EA shall consider the potential effects of the proposed survey program within spatial and temporal boundaries that encompass the periods and areas during and within which the project may potentially interact with, and have an effect on, one or more VECs. These boundaries may vary with each VEC and the factors considered, and should reflect a consideration of:

- the proposed schedule/timing of the seismic survey program;
- the natural variation of a VEC or subset thereof;
- the timing of sensitive life cycle phases in relation to the scheduling of seismic survey activities;
- interrelationships/interactions between and within VECs;
- the time required for recovery from an effect and/or return to a pre-effect condition, including the estimated proportion, level, or amount of recovery; and
- the area within which a VEC functions and within which a project effect may be felt.

The proponent shall clearly define, and provide the rationale for the spatial and temporal boundaries that are used in its EA. The EA report shall clearly describe the spatial boundaries (*e.g*. Study Area, Project Area) and shall include figures, maps and the corner-point coordinates. Boundaries should be flexible and adaptive to enable adjustment or alteration based on field data. The Study Area will be described based on consideration of potential areas of effects as determined by the scientific literature, and project-environment interactions. A suggested categorization of spatial boundaries follows.

Spatial Boundaries

Project Area

The area in which seismic survey activities are to occur, including the area of the buffer zone normally defined for line changes.

Study Area

The area which could potentially be affected by project activities beyond the "Project Area".

Regional Area

The area extending beyond the "Study Area" boundary. The "Regional Area" boundary will also vary with the component being considered (e.g., boundaries suggested by bathymetric and/or oceanographic considerations).

The EA Report shall also include a description of the first survey(s) proposed within the Project Area (e.g. 2015 3D seismic survey), including the size of the survey area and a description of the boundaries.

5.1.1 Temporal Boundaries

The temporal scope should describe the timing of project activities. Scheduling of project activities should consider the timing of sensitive life cycle phases of the VECs in relation to physical activities.

5.2 Summary of Potential Issues

The EA shall contain descriptions and definitions of EA methodologies employed in the assessment of effects. Where information is summarized from existing reports, the sections referenced should be clearly indicated. The EA should be an assessment of environmental effects on selected VEC's related to the specific Project Area and the specific Project proposed, thereby providing a comprehensive assessment of potential environmental effects and mitigation applicable to the Project (and VECs) being proposed and assessed. Effects of relevant Project activities on those VECs most likely to be in the defined Study Area shall be assessed. Discussion of cumulative effects within the Project Area and with other relevant marine projects shall be included. Issues to be considered in the EA shall include, but not be limited to, the following:

Physical Environment

5.2.1 The recently published *Eastern Newfoundland SEA* (August 2014) provides information on the eastern Newfoundland offshore physical environment. This SEA, as well as recent EAs in the area provides descriptions of the meteorological and oceanographic characteristics, including extreme conditions. Only new information for the Study Area that has become available since the publication of the above noted documents, and that is relevant to the consideration of environmental effects, should be provided in the EA.

Biological Environment

5.2.2 The recently published *Eastern Newfoundland SEA* (August 2014) provides information on the eastern Newfoundland offshore biological environment. This SEA, as well as recent EAs in the area, provides descriptions of: marine birds; fish and fish habitat; marine mammals and sea turtles; species at risk; sensitive areas; and human activities, including marine fisheries. Only relevant new information for the Study Area that has become available since the publication of

the above noted documents should be provided in the EA, in particular species at risk, sensitive areas, and marine fisheries.

5.2.3 Marine and/or Migratory Birds

The EA shall provide only new or updated information, where applicable, to address any changes to the following:

- Noise disturbance from seismic equipment including both direct effects (physiological), or indirect effects (foraging behaviour, prey species, adult attendance at the nest);
- Physical displacement as a result of vessel presence (e.g. disruption of foraging activities);
- Attraction of, and increase in, predator species as a result of waste disposal practices (*i.e.*, sanitary and food waste);
- Nocturnal disturbance from light (e.g. increased opportunities for predators, attraction of birds to vessel lighting and subsequent collision, disruption of incubation);
- Procedures for handling birds that may become stranded on survey vessels;
- Means by which bird mortalities associated with project operations may be documented and assessed;
- Effects of hydrocarbon spills from accidental events, including fluid loss from streamers and operational discharges (e.g. deck drainage, gray water, black water);
- Means by which potentially significant adverse effects upon birds may be mitigated through design and/or operational procedures; and
- Environmental effects due to the Project, including cumulative effects.

5.2.4 Marine Fish and Shellfish

The EA shall provide only new or updated information, where applicable, to address any changes to the following:

- The means by which potentially significant adverse effects upon fish (including critical life stages) and commercial fisheries may be mitigated through design, scheduling, and/or operational procedures; and
- Environmental effects due to the Project, including cumulative effects.

5.2.5 Marine Mammals and Sea Turtles

The EA shall provide only new or updated information, where applicable, to address any changes to the following:

- Disturbance to/displacement of marine mammals and sea turtles due to noise and the possibility of ship strikes;
- Means by which potentially significant adverse effects upon marine mammals and sea turtles (including critical life stages) may be mitigated through design, scheduling, and/or operational procedures; and
- Environmental effects due to the Project, including cumulative effects.

5.2.6 Species at Risk (SAR)

The EA shall provide only new or updated information, where applicable, to address any changes to the following:

- Monitoring and mitigation, consistent with recovery strategies/action plans (endangered/threatened) and management plans (special concern);
- A summary statement stating whether project effects are expected to contravene the prohibitions of *Species at Risk Act* (*SARA*) (Sections 32(1), 33, 58(1));
- Means by which adverse effects upon SAR and their critical habitat may be mitigated through design, scheduling, and/or operational procedures; and
- Assessment of effects (adverse and significant) on Species at Risk SAR and critical habitat, including cumulative effects.

5.2.7 "Sensitive" Areas

The EA shall provide only new or updated information, where applicable, to address any changes to the following:

- Sensitive Areas in the Study Area deemed important or essential habitat to support any of the marine resources identified;
- Environmental effects due to the project, including cumulative effects, on those "Sensitive" Areas identified; and
- Means by which adverse effects upon "Sensitive" Areas may be mitigated through design, scheduling and/or operational procedures.

Marine Use

5.2.8 Noise/Acoustic Environment

The EA shall provide only new or updated information, where applicable, to address any changes to the following:

- Disturbance/displacement of VECs and SAR associated with seismic survey activities;
- Means by which potentially significant effects may be mitigated through design, scheduling and/or operational procedures; and
- Effects of seismic activities (direct and indirect) including cumulative effects, on the VECs and SAR identified within the EA. Critical life stages should be included.

5.2.9 Presence of Seismic Survey Vessel(s)

The EA shall provide only new or updated information, where applicable, to address any changes to the following:

- Description of project-related traffic, including routings, volumes, scheduling and vessel types;
- Effects upon access to fishing grounds;
- Effects upon general marine traffic/navigation, including fisheries research surveys, and mitigations to avoid research surveys;
- Means by which potentially significant effects may be mitigated through design, scheduling and/or operational procedures; and
- Environmental effects assessment, including cumulative effects.

5.2.10 Fisheries and Other Ocean Users

The EA shall provide only new or updated information, where applicable, to address any changes to the following:

- An analysis of the effects of Project operations and accidental events upon fisheries and other ocean users. The analysis should include consideration of recent scientific literature on effects of survey activity on invertebrate species, including identified data gaps;
- Qualification of any change or effect of the Project on existing commercial activities;
- Fisheries liaison/interaction policies and procedures;
- Program(s) for compensation of affected parties, including fisheries interests, for accidental damage resulting from project activities;
- Means by which adverse effects upon commercial fisheries may be mitigated through design and/or operational procedures; and
- Environmental effects due to the Project, including cumulative effects.

5.2.10 Accidental Events

- Discussion on the potential for spill events related to the use and maintenance of streamers.
- Environmental effects of any accidental events arising from streamers or accidental releases from the seismic and/or support vessels (e.g., loss of product from streamers). Cumulative effects in consideration of other oil pollution events (e.g., illegal bilge disposal) should be included.
- Mitigations to reduce or prevent such events from occurring.
- Contingency plans to be implemented in the event of an accidental release.

Environmental Management

5.2.11 The EA shall outline ExxonMobil Canada Ltd.'s environmental management system and its components, including, but not limited to:

- Pollution prevention policies and procedures;
- Fisheries liaison/interaction policies and procedures;
- Program(s) for compensation of affected parties, including fishery interests, for accidental damage resulting from project activities; and
- Emergency response plan(s).

Biological and Follow-up Monitoring

5.2.12 Discuss the need for and requirements of a follow-up program to verify the accuracy of the EA, to verify the effectiveness of any mitigation measures identified in the EA, or both. The discussion should also include any requirement for compensation monitoring (compensation is considered mitigation).

Details regarding the monitoring and observation procedures to be implemented regarding marine mammals, sea turtles and seabirds (observation protocols should be

consistent with the C-NLOPB "*Geophysical, Geological, Environmental and Geotechnical Program Guidelines"* (January 2012).

5.3 Significance of Adverse Environmental Effects

The Proponent shall clearly describe the criteria by which it proposes to define the "significance" of any residual adverse environmental effects that are predicted by the EA. This definition should be consistent with the November 1994 CEAA reference guide "*Determining Whether a Project is Likely to Cause Significant Adverse Environmental Effects*", and be relevant to consideration of each VEC (including components or subsets thereof) that is identified. SARA species shall be assessed independent of non-SARA species. The effects assessment methodology should clearly describe how data gaps are considered in the determination of significance of effects.

5.4 Cumulative Effects

The assessment of cumulative environmental effects should be consistent with the principles described in the February 1999 CEAA "*Cumulative Effects Assessment Practitioners' Guide*" and in the November 2007 CEAA operational policy statement "*Addressing Cumulative Environmental Effects under the Canadian Environmental Assessment Act*". It should include a consideration of environmental effects that are likely to result from the proposed project in combination with other projects or activities that have been or will be carried out. These include, but are not limited to: proposed oil and gas activities under EA review (listed on the C-NLOPB Public registry at www.cnlopb.ca); other geophysical activities; fishing activities, including Aboriginal fisheries; and marine transportation. The C-NLOPB website lists all current and active offshore petroleum activity within the NL offshore area.

6. Projected Timelines for the Environmental Assessment Process

The following are estimated timelines for completing the EA process. The timelines are offered based on experience with recent environmental assessments of similar project activities.

ACTIVITY	TARGET	RESPONSIBILITY
EA review upon receipt from Proponent	6 weeks	C-NLOPB & Expert Departments and Agencies
Compile comments on EA	1 week	C-NLOPB
Review of EA Addendum/Response Document (*if necessary*)	3 weeks	C-NLOPB & Expert Departments and Agencies
Determination Report (Determination of Significance of Project Effects)	3 weeks	C-NLOPB
Total	13 weeks	

APPENDIX 1

Departments and Agencies Consulted by C-NLOPB

Federal Departments

Department of National Defence

Environment Canada

Fisheries and Oceans Canada

Health Canada

Natural Resources Canada

Transport Canada

Other Departments/Agencies

Canadian Environmental Assessment Agency

Provincial Departments (Government of Newfoundland and Labrador)

Department of Environment and Conservation

Department of Fisheries and Aquaculture

Department of Natural Resources