

**Response to Reviewer Comments on the
Environmental Assessment of
Multiklient Invest Newfoundland and Labrador
Offshore Seismic Program, 2017–2026
Addendum**

Prepared by



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Multiklient Invest AS

&

TGS-NOPEC Geophysical Company ASA

**March 2018
LGL Report No. FA0106A/B**

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Multiklient Invest Newfoundland and Labrador
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Addendum**

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LGL Report No. FA0106A/B**

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INTRODUCTION

This document provides responses to the consolidated comments generated for an Addendum to the *Environmental Assessment (EA) of Multiklient Invest Newfoundland and Labrador Offshore Seismic Program, 2017–2026*. The EA is currently being revised and split into two EAs, with the Study Area from the original EA split at 52°N such that one EA will include the portion of the Study Area offshore Newfoundland, and one for offshore Labrador. Comments and responses provided in the Addendum will be incorporated into the split EAs. Where possible, responses to the comments below were also incorporated into the split EAs.

GENERAL COMMENTS

Canada-Newfoundland and Labrador Offshore Petroleum Board (C-NLOPB)

It should be noted that the C-NLOPB has recently reviewed the temporal and spatial scopes of *Accord Act* Environmental Assessments (EAs) and made the decision to shorten the temporal scope of geophysical/geological EAs to six years to become more aligned with Period I of an exploration licence. Also, the southern boundary of the spatial scope of those EAs in the Labrador Shelf offshore area can only extend as far south as 52 degrees north and for EAs not offshore Labrador, as far north as 52 degrees. Therefore, the C-NLOPB's determination on the significance of adverse environmental effects of the proposed Multiklient Invest AS Newfoundland and Labrador Offshore Seismic Program, 2017–2026 will reflect this temporal and spatial decision.

Response: So noted. The original EA is being split into two EAs, whereby the Newfoundland EA will include the portion of the original Study Area south of 52°N, and the Labrador EA will include the portion of the Study Area north of 52°N. The EA temporal scope has also been shortened from ten years to six for the split EAs (i.e., 2018–2023).

Nunatsiavut Government

Our specific comments on the cumulative effects assessment remain unanswered, specifically with regard to the scenario used for the assessment. They are reiterated here:

“This environmental assessment does not clearly state the proponent’s scenario with which they are assessing their own cumulative effects of a 10-year program. The proponent states that the maximum possible combinations within each year are 2D and 2D or 2D and 3D and 4D; therefore the maximum combination should be used each year for 10 years to assess cumulative effects. The proponent is applying for a 10-year project; the environmental assessment should be able to properly assess cumulative effects over that time span by assessing the certain and probable projects over that time period – otherwise each project should reduce the scope to an assessable timeframe; likely resulting in each seismic project being treated as an annual or bi-annual project with separate environmental assessments.”

Response: At the request of the C-NLOPB, MKI has shortened the time span of the EA from 10 years to 6 years.

Monitoring Plans

MKI's response does not detail how the data collected will be used, why it is being collected, and how it will be incorporated into an iterative monitoring program for a 10-year project. It states that "opportunities for the adoption of best practices over the 10-year project...exist." However, without a clear monitoring objective and program it would be difficult to incorporate basic observation data into improved monitoring practices. Hence, there is a need to create a detailed, rigorous monitoring program for the project.

Response: MKI has and will follow the C-NLOPB *Geophysical, Geological, Environmental and Geotechnical Program Guidelines* (C-NLOPB 2017), which include DFO's *Statement of Canadian Practice with Respect to the Mitigation of Seismic Sound in the Marine Environment*. The *Statement of Practice* includes the purpose of monitoring and implementing mitigation measures for marine fauna during seismic programs. Additionally, MKI collects seabird distribution and abundance data and follows protocols for handling and release of stranded birds as required by ECCC-CWS. The time span for the Project has decreased from 10 years to 6 years.

Fish, Food and Allied Workers

It is unclear how the proponent's responses regarding acknowledgement to the assessment of cumulative effects regarding seismic activity (page 6) and the anticipated increased reliance on groundfish catches in the near future (page 8) will be included within the addendum of the Environmental Assessment. We ask that this be clarified.

Response: MKI acknowledges that further research into the effect of seismic surveying on the behaviour/catchability of groundfish is warranted. We understand that the Environmental Studies Research Fund (ESRF) is about to undertake a multi-year study to help address this. As in the past, MKI will provide support for the study if our vessels are operating offshore NL during the ESRF study period. In previous years, this has involved the use of a PGS seismic vessel/airgun array to provide exposure of tagged snow crab to airgun sound.

As well, it is unclear how the comment regarding DFO not indicating an official spatial and/or temporal buffer mitigation for seismic operations (page 10) be represented in the Environmental Assessment. Will the previous comment (7 day/30 km) be removed from the document?

Response: The mitigation measure of a "7-day/30-km temporal/spatial avoidance protocol" will remain within the Summary of Mitigation Measures by Potential Effect tables within the split EAs in relation to the potential effect of "interference with DFO/FFAW research program", with the associated addition of the following table footnote: "DFO does not indicate an official spatial and/or temporal buffer mitigation method for seismic operations in the vicinity of survey stations. MKI will work cooperatively with FFAW|Unifor and DFO in an effort to avoid survey stations prior to their sampling to the best extent possible".

The response regarding Compensation Guidelines is vague (page 10). Does the proponent engage a response organization during seismic activity? Does the proponent have a proactive plan in place to ensure

fair and compensation to affected parties for attributable damages in the event of any loss or damage arising from a spill or debris or the incurrence of expenses by taking remedial action in relation to a spill?

Response: MKI engages the services of a Single Point of Contact (SPOC) and the SPOC administers the compensation plan. Both the C-NLOPB and FFAW have been provided with the relevant documentation.

Groundfish Enterprise Allocation Council (GEAC)-Canadian Association of Prawn Producers (CAPP)

We appreciate the improved planning and activity reports that are described by the Addendum, but our concerns continue to exist, and some word-smithing of the report are not sufficient to address our concerns on the relationship between seismic exploration activity and catch rates experienced by our harvesters.

Response: We acknowledge the existing data gap on the effects of seismic surveying on the catchability of commercial fish/invertebrate species. We understand that research funding bodies (ESRF and Petroleum Research Newfoundland and Labrador [PRNL]) have and will fund studies to address this data gap. As noted above, MKI will continue to support this important research.

SPECIFIC COMMENTS

Fisheries and Oceans Canada (DFO)

Section 4.3.1, Information Sources, page 64 – It would be useful to reference the new Table 4.2 at the end of the first sentence of the second paragraph in Section 4.3.1.

Response: The new Table 4.2 is now referenced within subsection 4.3.1, Information Sources, of the split EAs.

Section 4.5.1, Marine Mammals, Table 4.17, pages 133–135 – As it is possible that the Davis Strait-Baffin Bay-Labrador Sea population of Northern bottlenose whales occur in the Project Area, this population should be described in Section 4.5.1.3. In the last sentence of the response, "Table 17" should be "Table 4.17".

Response: The Davis Strait-Baffin Bay-Labrador Sea population of northern bottlenose whales are now described in subsection 4.5.1.3, Toothed Whales (Odontocetes), of the split EAs. So noted, "Table 17" should read "Table 4.17" in the Addendum.

Section 4.6.2.3, Marine Mammals and Sea Turtles, Northern Bottlenose Whales, page 156 – Text should be added to include updated research provided in comment on Section 4.5.1, Marine Mammals, Table 4.17, pages 133–135.

Response: Text has been added to the split EAs to include the aforementioned updated research regarding northern bottlenose whales provided in the Addendum comment on Section 4.5.1, Marine Mammals, Table 4.17.

Section 4.7.1 Sensitive Areas within the Study Area, Figure 4.40, page 160 – Note that candidate NMCA sites may have been revised; Parks Canada would be the appropriate contact to confirm locations. The proponent should also be aware that a CSAS was recently completed and a document will soon be released with an updated map/list of EBSAs (specifically for the southern and eastern portion of Newfoundland).

Modifications to EBSA boundaries and descriptions may be required.

Response: Parks Canada was contacted, and updated shapefiles were provided for candidate NMCA sites off Labrador. These revised candidate NMCA sites will be included in the figure demonstrating Sensitive Areas in the Labrador EA. DFO was contacted and requested to provide the most up-to-date shapefiles for EBSAs in the Newfoundland and Labrador Bioregion. Updated EBSAs will be included in figures for Sensitive Areas in the Newfoundland and Labrador EAs or their associated EA Updates as applicable, once they are released.

Data gaps associated with Sensitive Area VEC, page 162 – Kenchington et al. 2016 should be incorporated into other appropriate sections of the EA, such as Section 4.2.1.2, Benthic Invertebrates (Deep-water Corals and Sponges, pages 51–54).

Response: Kenchington et al. (2016) has been incorporated into subsection 4.2.1.2, Deep-water Corals and Sponges, of the split EAs.

Section 5.4, Effects Assessment Procedures, page 169 – A very short summary has been provided. For consistency with previous EA Reports, it is suggested that additional details be provided (e.g., see Environmental Assessment of WesternGeco's Eastern Newfoundland Offshore Seismic Program, 2015–2024 <http://www.cnlopb.ca/assessments/westgecoeast3.php>). For example, magnitude ratings should be described with proportions and types of effects.

Response: Additional details, including a description of magnitude ratings, has been added to Section 5.4, Effects Assessment Procedures, of the split EAs.

Section 5.5, Mitigation Measures, page 172 – A very short summary has been provided. For consistency with previous EA Reports, it is suggested that additional details be provided (e.g., see Environmental Assessment of WesternGeco's Eastern Newfoundland Offshore Seismic Program, 2015–2024 <http://www.cnlopb.ca/assessments/westgecoeast3.php>). Additionally, associated VECs should be provided for all mitigation categories.

Response: Additional details, noting applicable VEC, are provided in Section 5.5, Mitigation Measures (see Table 5.1), of the split EAs.

Canada-Newfoundland and Labrador Offshore Petroleum Board (C-NLOPB)

Section 2.2.7, Seismic Streamers, page 10 – The environmental effects assessment is based on “a maximum of 24 streamers”?

Response: Correct. The maximum number of 24 streamers has been included in subsection 2.2.7, Seismic Streamers, of the split EAs.

LITERATURE CITED

C-NLOPB. 2017. Geophysical, Geological, Environmental and Geotechnical Program Guidelines, September 2017. 44 p. + appendices.