



NUNATSIAVUT
kavamanga Government

Nunaligninikmik amma Nunamiutaniik
Ujaganik Imaniklu

Lands and Natural Resources

April 14, 2016

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RE: Nunatsiavut Government's Response to 'Seitel Canada Ltd. (Seitel) East Coast Offshore Seismic Program, 2016-2025 Environmental Assessment Report'.

Dear Mr. Hicks,

Please find below our comments with respect to Seitel's EA Report, submitted for review to the Nunatsiavut Government by the C-NLOPB on March 2, 2016.

As has been previously stated, the Nunatsiavut Government fundamentally disagrees with the length of the environmental assessment. The 10 year EA presents many problems which require clarification from the proponent:

- Within the 10-year authorization what are the opportunities for adaptive mitigation based on new information and technology? What reporting requirements exist in order to ensure adaptive and effective mitigation over the 10-year time period with regards to fisheries impacts, marine mammal impacts, and impacts to Inuit subsistence activities? What power does the C-NLOPB or its stakeholders have to encourage the use of new techniques that are developed during the length of the program? For example, the Pacific and Western Arctic jurisdictions of Canada have used Section 13 of the Statement of Canadian Practice with respect to the Mitigation of Seismic Sound in the Marine Environment (Statement of Practice) to establish

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mitigations based on received levels of sound within the marine environment. This action was instituted because the minimum 500m was modelled and found to be insufficient to prevent harm to marine mammals in certain project areas.

- The cumulative effects impact assessment does not incorporate climate change and the subsequent impacts to the marine environment and associated VECs. As this is a 10-year environmental assessment, the impacts of climate change should be included in the assessment. In 2010, the Canadian Environmental Assessment Agency published a guidance document called *Incorporating Climate Change Considerations in Environmental Assessment: General Guidance for Practitioners* (<https://www.ceaa-acee.gc.ca/default.asp?lang=En&n=A41F45C5-1&offset=1&toc=show>). This guidance document clearly outlines the importance of incorporating possible climate change impacts into the cumulative effects assessment. As a designated responsible authority under the Canada Environmental Assessment Act, the C-NLOPB is responsible to ensure proponents are following best practices not only in their operations but also in their environmental assessment practices.
- Paragraph 19(1)(a) of CEAA 2012 specifies that a project EA must take into account environmental effects, including cumulative environmental effects that are likely to result from the designated project in combination with other physical activities that have been or will be carried out. 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; therefore section 5.8 should detail a scenario that includes one of these combinations each year for 10 years to assess cumulative effects.
- The maintenance of adequate separation of seismic projects is insufficient to reach a conclusion of "not significant" impacts to VECs. The concept of avoiding overlapping sound does not assess the impacts of diverted migration patterns or movements from multiple seismic projects, nor does it assess the impacts of multiple exposure events to VECs. Section 5.8.3 should detail the references and studies used to conclude that "any cumulative effects... will be additive (not multiplicative or synergistic) and predicted to be not significant."
- In addition, a 10-year environmental assessment should assess the impacts to the marine environment over 10 years. Section 5.8.3 of the environmental assessment has only assessed the potential for "*cumulative effects with other seismic programs proposed for 2016 (e.g., WesternGeco, MKI, Statoil, GXT)*". If 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.

The Nunatsiavut Government also takes issue with the referencing of previous EA studies to validate or defend a position. Rather than providing evidence to support conclusions, the proponent has instead asked the reviewer to refer to past EAs that are not included in the document. This practice is done throughout the document (ex. 4.5.11, 5.5, 5.7.4.1, 5.7 etc). This is poor EA practice and should be discouraged by the regulator.

A major gap within the EA is the absence of a defined monitoring plan. A monitoring plan needs to be in place if they wish to provide new plans for each year. Clarification and details on the plan is requested from the proponent.

Section 5.9 *“commits to ongoing communications with other operators with active seismic programs within the general vicinity of its seismic program to minimize the potential for cumulative effects on VECs.”* Please clarify how these reports will be incorporated into the monitoring program and reported within the post-season follow-up.

The Nunatsiavut Government recommends that sound source verification be conducted in advance of project commencement (within a week prior to project start date), as is common practice in other Canadian jurisdiction. Verified sound propagation and modeling would ensure that seismic sound stays contained within the project area, including outside of the ‘the Zone’, and ensures that it does not exceed disturbance levels. Results of verification should be sent to regulators and relevant stakeholders immediately.

The language regarding consultation in Section 5.1.1.1 is unclear. The section states that Setiel will consult with stakeholders after the survey is permitted, but also states that before permitting that there will be discussions regarding issues and concerns, communications, and mitigations. Please clarify the difference between the ‘consultation meetings’ and the meetings prior to the permitting process. In addition, please clarify what will be reported to the stakeholders within the follow-up communications after each project is completed. Please clarify how a monitoring plan will be developed and incorporated into this reporting prior to the approval of the environmental assessment.

Section 5.5 states that the mitigation measures will *“be adhered to during each survey year, with necessary adjustments based on monitoring and follow-up.”* It is common practice to provide the environmental and mitigation monitoring plan within the environmental assessment. This is not included. Please clarify the type of monitoring plans that will be included prior to the approval of the environmental assessment and the consultation that will occur prior to the completion of the monitoring plans.

Section 5.7.7.1 should distinguish between difference classes within species (e.g. cow calf pairs) as well as providing references with regards to the conclusions of only localized and short-term effects for cetaceans and marine turtles. The Strategic Environmental Assessment for the Labrador Shelf Offshore Area states that there is limited information regarding cetaceans and marine turtles in the assessment area, leading to data constraints and uncertainty of impacts.

The EA states that DFO has not adopted any noise exposure criteria. With regards to the issue of preventing temporary threshold shift (TTS) and behavioral disturbance, the Western Arctic and Pacific Regions of DFO Canada have recommended precautionary noise exposure criteria within their advice provided to the National Energy Board. In the Western Arctic, criteria are based on 180 dB to avoid temporary threshold shift. It should be noted that seismic operations were successful in gaining their data when applying the mitigation recommended by DFO Western Arctic. In the Pacific Region, a safety zone is required to be modelled to correspond to 160 decibels is established to avoid behavioural disturbance (CSAS, 2014). This approach is based on Section 13 of the Statement of Canadian Practice with respect to the Mitigation of Seismic Sound in the Marine Environment that allows for incorporation of new mitigation measures based on sound variation in the environment as well as cumulative effects.

Considering the high number of potential projects in the area over the 10-year span of this EA, a precautionary approach to seismic mitigation for cetaceans and sea turtles is recommended. 500m is stated as a minimum in Section 2.2 of this environmental assessment. It is recommended that sound propagation modelling should be done to assess the potential impacts to marine life throughout the project area. It should be noted that the Statement of Practice is based on a 2004 CSAS document that outlines the large data gaps and potential consequences in seismic mitigation. It states that “risks of these consequences are poorly quantified, often unknown, and likely to be variable with both conditions of the environment and of the organisms exposed to the sounds.”

Section 5.9 outlines the mitigation measures in regards to a marine mammal or sea turtle occurrences within 500m of the array. Please clarify if 500m will be used as a minimum standard as recommended by the Statement of Practice and cited in Section 2.2. Please also further define scenarios within marine mammal mitigation with regards to what happens in low visibility and outline the discretion that MMOs have within the shutdown process.

An environmental assessment is meant to show the assessor the specifics behind conclusions of significant impacts. Section 5.7.8 should clarify the ways that the “potential effects of activities associated with Seitel’s proposed seismic program are not expected to contravene the prohibitions of SARA (§ 32(1), 33, 58(1)).” There is no description of the prohibitions within SARA and how each will not be contravened.

With regards to the consultations in the appendices, please explain why specific recommendations regarding scallops and bivalves were not specifically included in mitigation and monitoring measures as encouraged by Ocean Choice International.

Sincerely,

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[REDACTED]

Direct of Non-Renewable Resources
Nunatsiavut Government

cc. [REDACTED]

Research Manager
Nunatsiavut Government