

GENERAL COMMENTS

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

The proponent is required to submit environmental reports on seabird and marine mammal observations, including the raw data to EC-CWS and DFO, respectively, within a year of completing seismic surveys. The C-NLOPB is to be copied on this correspondence.

In order to consider the ocean bottom cables (OBC) adequately assessed, more information/details on the actual activity is required. See specific comments in Section 2.2.11. Without this information, the assessment ratings for each VEC, as determined in the various subsections in Section 5.0, are not considered valid. For example, Section 5.6.1 on page 109 states that “*placement and retrieval of OBCs which contain receivers (hydrophones) may cause some small disturbance to the seabed but the area involved and the rapid return to normal suggest no change in the prediction of Negligible residual effects on fish habitat of the Study Area.*”. There have not been enough details provided on OBCs to make this determination. There has not been enough information provided to demonstrate the accuracy of the predicted effects.

Department of National Defence (DND)

The report notes that DND will be contacted in regard to potential unexploded ordnance (UXO) in the area prior to any deployment of ocean bottom cables; however, DND provided additional comments on the project during the scoping phase and the comments are not fully represented in the EA Report. DND requests these comments, stated below, be included in the report.

DND is likely to be operating in the vicinity of the study area in a non-interference manner during the project timeframe.

A search of the unexploded ordnance (UXO) records was conducted to determine the possible presence of UXO within the proponent's project area. Records indicate there are no wrecks present within the survey area. Given DND's understanding of the survey activities to be conducted, the associated UXO risk is assessed as negligible. Nonetheless, due to the inherent dangers associated with UXO and the fact that the Atlantic Ocean was exposed to many naval engagements during WWII, should any suspected UXO be encountered during the course of the proponent's operations it should not be disturbed/manipulated. The proponent should mark the location and immediately inform the Coast Guard. Additional information is available in the 2012 Annual Edition - Notices to Mariners. Section F, No.37. In the event of activities which may have contact with the seabed (such as drilling or mooring), it is strongly advised that operational aids, such as remote operated vehicles, be used to conduct seabed surveys in order to prevent unintentional contact with harmful UXO items that may have gone unreported or undetected. General information regarding UXO is available at our website at www.uxocanada.forces.gc.ca.

Fisheries and Oceans Canada (DFO)

Please be advised that the "Statement of Canadian Practice with respect to the Mitigation of Seismic Sound in the Marine Environment" (SOCP) specifies the mitigation requirements that must be met during the planning and conduct of marine seismic surveys, in order to minimize impacts on life in the oceans. These requirements are set out as minimum standards to be implemented during the planning and conduct of seismic programs. As such it is advised that the proponent adhere to all relevant minimum mitigations outlined in the SOCP including the Planning Seismic Surveys, Safety Zone and Start-up, Shut-down of Air Source Array(s), Line Changes and Maintenance Shut-downs, Operations in Low Visibility and Additional Mitigative Measures and Modifications sections of the SOCP.

The report indicates that the 4D survey for 2013 may occur at any time from May 1 to December 31. Any potential other seismic surveys conducted during subsequent seasons in 2014-End of Field (EF) will also occur during the same temporal window of 1 May to 31 December. While the proponent does acknowledge that *Species at Risk Act (SARA)* requirements could change over this timeframe and that they will reassess accordingly, DFO would like to note that changes to the SARA could include additions to species on Schedule 1 of SARA, changes in species status, new recovery strategies, action plans and/or management plans and identification of critical habitat. Please continue to refer to the Species at Risk Public Registry (www.sararegistry.gc.ca) to get the most up to date information.

As is common practice sightings data for marine mammals and sea turtles should be forwarded to DFO.

Fish, Food and Allied Workers

In light of the Study Area involving or being precariously close to some of the most fruitful harvesting grounds for members of the FFAW, both for Shrimp and Snow Crab. Further, considering the changing environmental circumstances and species composition, the FFAW would suggest that having an Environmental Assessment covering seismic '2013-life of field' is not tenable.

With environmental changes there will be changes to where species are harvested. For Snow Crab this could cause harvesting taking place in shallower water as the water on the Grand Banks plateau is expected to remain cold as there as some deeper waters come to have higher temperatures.

With regards the discussions on seismic activity and fisheries science (i.e., page 63 and pages 136-37), the FFAW maintains its stance that there should be no seismic activity on or near the Industry-DFO Collaborative Trap Survey for Snow Crab locations until said locations have been completed. As this scientific survey is a collaborative effort it would necessarily require consultation with both entities pursuing the research. The document suggests that DFO was consulted on something of this nature in 2002 and these consultations then necessarily still apply. However, the FFAW was not brought into the discussions around the suggested temporal and spatial separation plan in 2002. The

research locations have been the same since the beginning and it is paramount for the scientific integrity that these remain such, especially due to the importance it can have on the future economics for the harvesting fleet.

SPECIFIC COMMENTS

Canada – Newfoundland and Labrador Offshore Petroleum Board

Section 2.1 Spatial and Temporal Boundaries of the Project, 1st para., line 4, pg 5 – *“It also includes any additional turning area if required.”* The seismic vessel turning area should be included in the ‘Project Area’. As per the March 4, 2013 Scoping Document, the Project Area is the area in which seismic survey activities are to occur, including the area of the buffer zone normally defined for line changes. The ‘Study Area’ encompasses the Project Area plus a 20-km buffer area around the Project Area to account for any propagation of seismic survey sound beyond the Project Area.

Section 2.1 Spatial and Temporal Boundaries of the Project, 1st para., last sentence, pg 5 – *“The temporal boundaries include 2013-EF wherein surveys may occur anytime between 1 May and 30 December.”* Section 2.2 Project Overview, 2nd and 3rd para. states *“31 December”*.

Section 2.2.5 Site Plans, line 1, pg 7 – Should “2012-EF” be “2013-EF”? Also stated in Section 2.6.1.

Section 2.2.11 On Bottom Cables, pg 9 – It is not enough to say “More specifics can be provided in the future if and when OBCs are to be used”. Project details are required in this EA report in order to consider the assessment valid. Details such as how many cables or nodes, how do they stay on the seabed, how long would they be on the seabed (timing for deployment and removal), vessel and equipment description, surface markers, energy source.

Section 2.4 Project Site Information, 2nd para., line 3, pg 11 – The turning area must be within the identified “Project Area”.

Section 2.4 Project Site Information, last line, pg 12 – *“The 702 km² area and a 20 km turning zone are defined by the coordinates in Table 2.2”*. Please confirm that the turning zone is within the Project Area.

Section 4.3.4.1 Snow Crab, page 55, first and last paragraph, there are two references to (R. Dunphy, Hibernia Management & Development Co. Ltd. – ExxonMobil Canada Properties Environmental Lead, pers. comm., 2013). The more appropriate, and proper, reference is what the reviewer finds in Section 6.0 Literature Cited, “...reference to the One Ocean Board Meeting Jan. 2013 Minutes...” The way it is now may be interpreted as a conflict of interest as the consultant (LGL) is quoting the client (HMDC).

Section 4.3.4.2 Northern Shrimp, pages 59-60, last paragraph, there is a reference to (R. Dunphy, Hibernia Management & Development Co. Ltd. – ExxonMobil Canada Properties Environmental Lead, pers. comm., 2013). The more appropriate, and proper, reference is what the reviewer finds in Section 6.0 Literature Cited, “...reference to the One Ocean Board Meeting Jan. 2013 Minutes...” The way it is now may be interpreted as a conflict of interest as the consultant (LGL) is quoting the client (HMDC).

Section 5.5 Effects of the Environment on the Project, 2nd para., line 4, pg 108 – “Icebergs may cause some detours in May...”. Please discuss “detours”. Specifically, what mitigation will be in place if these detours are outside the Project Area?

Section 5.5 Effects of the Environment on the Project, 1st para., pg 109 – More detail is required in the event that extreme weather conditions have to suspend surveys. What would typically be done in this scenario? Would streamers be taken out of the water? If the vessel has to leave the Project Area, what mitigation would be applied?

Section 5.6.2.2 Vessel Presence Including Streamers and OBC, pg 136 – “During transit to the seismic survey area, streamers may be deployed. Therefore, a separate route analysis will be prepared and discussions with fishing interests will be conducted before the transit”. The transit area has not been identified nor assessed. As per previous comments, all project activities associated with the proposed program are to take place within the area identified in the EA report as the “Project Area”. This activity does not fall within this area.

Section 5.6.2.2 Vessel Presence Including Streamers and OBC, subsection Avoidance, page 136, last paragraph, first sentence, this sentence is incorrect as the onus is on the proponent to request such information from those involved in DFO and joint DFO/Industry research surveys.

Section 5.8.3 Fisheries, pages 204-205, last paragraph, last sentence, “... this EA will be updated accordingly if it is determined the project differs substantially from the activity assessed herein.” This is incorrect, the sentence should read, “... this EA will be ~~updated~~ AMENDED accordingly if it is determined the project differs substantially from the activity assessed herein.” Activities that were not scoped or assessed for this environmental assessment cannot be authorized without an amendment.

Environment Canada – CWS

EC-01, Section 2.2 Project Description, EC-CWS continues to recommend the implementation of a seabird monitoring protocol for all offshore projects. Although it was originally provided with the EC-CWS comments concerning the guidelines for this project, EC-CWS again provides the CWS monitoring protocol for pelagic seabirds at sea (attached), as well as a guide for pelagic seabirds of Atlantic Canada (attached) for assistance in identifying pelagic seabirds in the area. As is noted in Section 5.8.2 of the environmental assessment, surveys of this nature are typically performed by the Marine Mammal Observer in cases where a dedicated Seabird Observer is not available. A report of the seabird monitoring program, together with any recommended changes, is to be submitted to EC-CWS on a yearly basis. In an effort to expedite the process of data exchange, EC-CWS recommends that the data (as it relates to migratory birds or Species at Risk) collected from the monitoring program be forwarded in digital format to the EC-CWS office following completion of the study. These data will be centralized for EC-CWS's internal use to help ensure that the best possible natural resource management decisions are made for these species in Newfoundland and Labrador. Metadata will be retained to identify source of data and will not be used for the purpose of publication.

EC-CWS will not copy, distribute, loan, lease, sell, or use of this data as part of a value added product or otherwise make the data available to any other party without the prior express written consent.

EC-02, Section 2.3 Mitigations, The pelagic seabird monitoring program recommended in the guidelines and in EC-01 should be added to this section.

EC-03, Section 5.6.3.1 Sound, The protocol of ramping up the airgun prior to use should be listed as a mitigation activity in this section, similar to how it is referenced throughout the previous sections concerning marine mammals. Though this mitigation is referenced as a deterrent for marine mammals, it functions as a similar deterrent for avifauna.

EC-04, Section 5.6.3.2 Vessel Lights, Quote: "Deck lighting can be minimized (if it is safe and practical to do so) to reduce the likelihood of stranding." EC-CWS recommends changing this to "Deck lighting will be minimized (if it is safe and practical to do so) to reduce the likelihood of stranding."

EC-05, Section 5.6.3.2 Vessel Lights, The section regarding Leach's Storm-Petrel on page 144 should be moved to or referred to in section 5.8.2 (Mitigations).

EC-06, Section 5.6.3.7 Accidental Releases, EC-CWS continues to support the use of solid seismic streamers due to the potential of the release of streamer fluid from liquid-filled seismic streamers. Though potential accidental releases of Isopar M are predicted to be small in magnitude, these releases should still be discussed in the oil spill response plan. Solid streamers do not release sheen-inducing substances, and so are not likely to negatively affect migratory birds.

EC-07, Section 5.6.5 Species at Risk, In addition to the mitigations listed, strandings of Ivory Gull (regardless of injury) should be recorded by the seabird observer and submitted annually with the bird survey data mentioned in section 5.8.2.

EC-08, Section 5.8.2 Seabirds, Quote: "Storm-petrels showing signs of possible oiling must be captured and released as per "Williams and Chardine" protocol." Any birds contaminated with oil should be kept in a separate box and not mixed with clean birds. Contact the Canadian Wildlife Service at 709-772-5585 for instructions on how to deal with contaminated birds.

EC-09, Section 5.8.2 Seabirds, Quote: "Injured birds: Sabina Wilhelm, Canadian Wildlife Service (709-764-1957 sabina.wilhelm@ec.gc.ca) must be notified and contacted for instructions immediately upon discovery." The proper contact information for Sabina Wilhelm is (709) 772-5568, sabina.wilhelm@ec.gc.ca.

EC-10, Section 5.8.2 Seabirds, Quote: "Dead Birds: Non-oiled birds found dead or that die before release should be identified, recorded and disposed of at sea." If more than 10 birds are found dead in the same event, they need to be collected and sent ashore to Canadian Wildlife Service personnel at Environment Canada. Details of how to

undertake this are included in the attached protocol designed for handling non-oiled, dead birds (attached).

Fish, Food and Allied Workers

Section 4.2.4.2 Other Fishes Caught in the Commercial Fishery, Atlantic Cod, page 37, there are scientific opinions that differ from the perspective portrayed in the quoted DFO reports. Independent science has indeed argued/showed that there are in fact regions with significant spawning biomasses. Further, there is disagreement as to what is to be considered as an acceptable return in the biomass.

Section 4.3.4.1 Snow Crab, page 56, second paragraph, first sentence, it is indicated that harvesting and seismic activities might overlap in space and time. This would not be acceptable for the FFAW – seismic activity should not be pursued on active fishing grounds.

Section 4.3.4.1 Snow Crab, page 56, second paragraph, first sentence, there was no indication that Ocean Bottom Cables would be used in the 2013 program, whereby the indicated discussion should not be pertinent for the 2013 discussion as is indicated.

Section 4.3.4.2 Northern Shrimp, page 59, first paragraph, the concern of conflict should not be confined to gear, there is a real concern amongst harvesters that seismic activity has an impact on catch per unit effort or it changes a species distribution. A change to distribution during a season incurs significant costs for harvesters – likewise do potential decreases in catch per unit effort.

Section 4.3.4.2 Northern Shrimp, page 59, second paragraph, there should have been a stronger reference in the document with regards to the opening on fisheries – the reference used is personal communication with a proponent staff member.

Section 4.3.4.2 Northern Shrimp, Figure 4.23, page 62, there should have been given a greater context to what is being depicted. It would be pertinent to note the timing of who fishes where and when. The cause of the volume harvested in January and February is due to the offshore fleet not having access to northern grounds at that time of year. However, there is no note of such facts in this document.