

GENERAL COMMENTS

Fisheries and Oceans Canada

Please be advised that the Department of Fisheries and Oceans (DFO) recommends that Chevron adhere to the “*Statement of Practice with Respect to the mitigation of Seismic Sound in the Marine Environment*” (SOCP) when conducting seismic programs. The SOCP specifies the mitigation requirements that must be met during 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 in order to minimize impacts on life in the oceans. These requirements are set out as **minimum standards**, which will apply in all non-ice covered marine waters in Canada.

Marine Mammal Observers (MMO) are noted a few times through the document. It is suggested that the role of the MMO be better described within the EA Report to ensure reviewers that the best possible methods will be employed.

DFO conducts scientific surveys in the general area of the proposed program. The timing of the DFO scientific surveys will vary from year to year; therefore, the proponent should contact DFO to ensure there are no timing conflicts.

Department of National Defence

It was observed that the information provided to the C-NLOPB by the Department of National Defence (DND), through the Federal Coordination Regulations process, has not been included in the report. This is unacceptable. The assessment of the possible presence of this wrecked submarine and the potential for the presence of unexploded ordnates (UXO) is extremely important. DND and the C-NLOPB requests that Chevron Canada Resources include the information provided to the C-NLOPB by the DND, through the Federal Coordination Regulations process, and provided to Chevron Canada Resources, via the Draft Scoping Document Review Comments, by the C-NLOPB on February 14, 2011 in the assessment report for the proposed project.

Environment Canada

Seabird Data Collection

This survey provides a good opportunity to collect additional seabird data from the area. CWS has developed a pelagic seabird monitoring protocol that we are recommending for all offshore projects. This protocol is a work in progress and we would appreciate feedback from the observers using it in the field. A guide sheet to the pelagic seabirds of Atlantic Canada is available through CWS in Mount Pearl. In an effort to expedite the process of data exchange, the Canadian Wildlife Service would appreciate that the data (as it relate to migratory birds or species at risk) collected from these surveys be forwarded in digital format to our office following completion of the study. These data will be centralized for our

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. The Canadian Wildlife Service 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.

Fish, Food and Allied Workers

To clarify a point made in the document (page 196), fishing gear may only be retrieved from the water by the gear owner (i.e. fish license owner). This includes buoys, radar reflectors, rope, nets, pots, etc. associated with fishing gear and/or activity. If gear contact is made during seismic operations it should not be retrieved or retained by the seismic vessel. There are conditions that may warrant gear being retrieved or retained if it becomes entangled with seismic gear, however, further clarification on rule and regulations regarding fishing gear should be directed to the Conservation and Protection Division of Fisheries and Oceans Canada (NL Region). Also, to clarify, shrimp harvesting for the inshore fleet generally starts April 1 (not August) and could continue to October (Page 103).

It is important that Chevron maintain regular communication with the FFAW to keep apprised of ongoing developments with fisheries in the project area. Harvesters are spread out over a wide geographic area and communication is vital to the safety of all involved. As stated in the document, “good communication is one of the best ways to minimize interference with fishing activities.”

The unknown long term effects of seismic activities continue to concern harvesters. There have been reports from harvesters that fish behaviour has been affected following seismic blasts and shellfish have disappeared from areas following seismic work being undertaken. There have also been reports from vessel captains that ground fish catches have been impacted when oil and gas activities have been ongoing. While the research has not determined any direct mortality of fish or shellfish attributable to seismic activity there may be behavioural changes that could affect migration and/or reproductive spawning activities as well as movement of the exploitable biomass in an area. This, in turn, can impact catch rates in years to come. There is need for further research on impacts on seismic activity on important commercial species including shrimp, crab, turbot and Atlantic cod to address data gaps.

The commercial fishery will be actively prosecuted by FFAW members at the time that Chevron is proposing to conduct its program in 2011 and beyond. While historical fishing patterns have been detailed in the document, fishing activity can change from year to year and during the season as well. As noted in the document the southwest corner of the project area is heavily fished by about 300

vessels in the inshore fleet for crab, shrimp and turbot. The offshore fleet and other international vessels may also be fishing in the area during the summer months.

In addition to the deployment of a Fisheries Liaison Officer onboard the seismic vessel, to mitigate potential conflicts with fishing vessels and fishing gear (both towed and fixed) in the southwest corner of the project area, we recommend the company consider the deployment of a Fisheries Guide Vessel when they work this heavily fished area. The loss of fishing time, catch and/or gear that may be associated to mitigate conflicts should be considered.

SPECIFIC COMMENTS

C-NLOPB

Legends in some of the Figures are confusing. For example, Figure 1.1's legend should start with Study Area, not Project area as it is the larger area. There are several instances of this. However, there are some that are properly described in the Legend, for example, Figure 4.7. Please be consistent and accurate.

All references to the “*Geophysical, Geological, Environmental and Geotechnical Program Guidelines*” throughout the report should be changed from 2008 to 2011 as they were updated in 2011. Please refer to www.cnlopb.nl.ca.

Section 1.1.1, pg 3 – Along with the documentation submitted to the C-NLOPB, CCL should “outline CCL’s planned activities for the upcoming year”.

Section 1.1.1, pg 3, para. 1 - Depending on the changes to the project, an “amendment” might not be the only option available to CCL.

Section 2.2, para. 1, pg 6 – The Geophysical, Geological, Environmental and Geotechnical Program Guidelines state that “*Operators are expected to implement a **seabird** and marine mammal observation program throughout survey activities. Such a program should involve a designated observer **trained** in marine mammal and **seabird** observations*”.

Also, as stated in the Guidelines, “*A report on the monitoring program and its results should be submitted to C-NLOPB no later than one year after completion of the survey.*”

Section 2.3, pg 11 – Mitigation measures are summarized in Section “5.8” not “5.9”. Please ensure that the table contains a complete list of measures detailed throughout the EA (e.g. seabird observations).

Section 3.2.1, Page 19, para. 3, line 3 – “...large annual variation in the steric height over...”. Steric – of or relating to the spatial arrangement of atoms in a molecule. Is this what the author intended? If not, then please address.

Section 4.3.1.1, Page 41, para. 3 - Why is most of this paragraph in parentheses? Please clarify or address.

Section 4.3.5, para. 1, pg 67 – Although reference is made to “pers. comm.” in the report, they are not included in the reference section.

Section 4.6.1.2, pg 97 - The Fin Whale is listed under Schedule 1 of the SARA. The profile of this species should be included in the report.

Section 4.6.1.1, Table 4.13, Page 95 - Either match the text in the document with Table 4.13 or match Table 4.13 with the text so it flows logically. Also, please fix Table 4.13 so “Seabirds” is consistent with “Marine Mammals”, “Sea Turtles” and “Marine Fish.”

Section 5.7, pg 195 – The C-NLOPB public registry should be revisited.

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Section 4.2.5, Page 28 - It is recommended that the authors' include deepwater sponges within the EA Report as well as the NAFO coral/sponge fisheries closures. The following link may also help:

http://www.dfo-mpo.gc.ca/CSAS/Csas/publications/sar-as/2010/2010_041_e.pdf

Section 4.2.8, Page 40, Table 4.4 - It is stated that Greenland Halibut spawn in “*winter months*.” There may be some major spawning during this time, but evidence suggests a very poorly defined spawning season for this species with multiple peaks in spawning activity and even some degree of spawning observed throughout the entire year.

Section 4.2.8, Page 40, Table 4.4 - It is stated that Redfish have no Planktonic stage, while that is true to some degree, the larvae are by no means benthic (which is what may be interpreted from “*no planktonic stage*”). Redfish larvae have been collected in shallow surface layers and therefore may be susceptible to any surface spills. In addition, Redfish exhibit diurnal variation coming off bottom at night making them more vulnerable at these times to any impacts to pelagic zones compared to bottom dwelling behaviour.

Section 4.3.2, Page 45, 3rd sentence - It is suggested to replace the term “*formerly underutilized species*” with “*other*”, as “*formally underutilized species*” implies that they were present, but not fished. It may be that they were not there previously.

Section 4.3.3.1, Page 50, 2nd sentence - It is stated that the “*study area overlaps with parts of SFA 6*”. However, SFA 6 ends at the 200 mile limit. Please clarify whether the study area does or does not overlap with SFA 6.

Section 4.3.3.2, Page 61, 2nd sentence - It is suggested that the word “*Landed*” be placed before the word “*Prices*” to distinguish between prices paid to harvesters and final market prices.

Section 4.3.4, Page 66, 2nd paragraph - This sentence is confusing and should be rewritten.

Section 4.5.1.2, Page 81 - DFO has population estimates for many cetacean and pinniped species in Atlantic Canada. These are based on systematic surveys such as those detailed in Lawson and Gosselin (2009) and Stenson *et. al.* (2011). These figures could be quoted in place of the NOAA estimates unless the latter includes species for which the DFO surveys did not enough sighting events to generate an acceptable estimate.

Section 4.5.1.3, Page 81, 3rd sentence - Based on aerial searches and acoustic recordings, the south eastern edge of the Grand Banks remains an area populated by cetaceans during the winter. Therefore, the statement “*although some individual baleen whales may be present in offshore waters of NL...*” is not necessarily accurate.

Section 4.5.1.5, Page 91 - More information should be provided on the importance of the area for feeding Harp and Hooded Seals. The area of the NE Grand Banks, slope and Flemish Pass is critical for seals during the spring when they need to replenish their energy reserves. Satellite telemetry studies have shown that this area is used extensively by Hooded Seals in May. By late May they have left the area for the moulting ice, although harps are still present through June. Hap Seals tend to remain on the continental shelf while Hooded Seals dive in the deep shelf waters.

Section 4.5.1, Page 92 - It is noted in the EA Report that Grey Seals are considered rare in the Study Area. DFO have indicated, in their review, that Grey Seals would be unlikely to be this far offshore and there is no evidence that they would be found in the area.

Section 4.6, Page 93 - The word “*designated*” should be replaced with “*listed*” throughout these sections when referring to SARA listed species. The term “*designated*” would be more appropriate when referring to species that have been assessed by Committee on the Status of Endangered Wildlife in Canada (COSEWIC), but not listed on SARA.

Section 4.6, Page 94, 2nd paragraph - There is also a final recovery strategy posted on the SARA Registry for the North Atlantic Right Whale, with critical habitat identified in the Grand Manan Basin (Bay of Fundy) and Roseway Basin (Scotian Shelf). Please make note of this.

Section 4.6.1, Page 95, Table 4.13 - It should be noted that for Atlantic Salmon designatable units (DU) occurring in NL, only the South Newfoundland DU was assessed as threatened by COSEWIC. Similarly, for the Deepwater Redfish, it is the Northern DU that was assessed by COSEWIC as threatened.

Section 4.7, Page 99 - This section of the EA Report notes that “*there are a variety of regulatory frameworks that deal directly or indirectly with sensitive areas...*”, yet the *Oceans Act* is mentioned. *Oceans Act* Marine Protected Areas are established by DFO to protect and conserve important fish and marine mammal habitats, endangered marine species, unique features and areas of high biological productivity or biodiversity.

Section 4.7.1, Page 99 - In referring to the Placentia Bay/Grand Banks Large Ocean Management Area, the existence of the Ecologically and Biologically Significant Area (EBSA) (i.e., the Northeast Shelf and Slope within the study area) as a potential Area of Interest (AOI) is accurate. However, it should also be noted within the EA Report that the *Oceans Act* provides the Minister of Fisheries and Oceans with a leadership role for coordinating the development and implementation of a federal network of Marine Protected Areas (MPA), of which can include areas within and outside of the Integrated Management (IM) area that has yet to be developed specifically within the Region to date. Therefore, there is potential for subsequent identification of EBSAs, AOI, MPAs and other sensitive areas in the study area within the future.

Section 5.6.5, Page 191- The word “*designated*” should be replaced with “*listed*” throughout these sections when referring to SARA listed species. The term “*designated*” would be more appropriate when referring to species that have been assessed by Committee on the Status of Endangered Wildlife in Canada (COSEWIC), but not listed on SARA.