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BAB 3990-25

February 9, 2010

Ms. Elizabeth Young
Environmental Assessment Officer
Canada-Newfoundland and Labrador Offshore Petroleum Board
5th Floor TD Place
140 Water Street
St. John's NL A1C 6H6

Dear Ms. Young:

Subject: ConocoPhillips Canada Laurentian Sub-basin Seismic Program 2010-2013

Fisheries and Oceans Canada (DFO) has reviewed the document entitled '*Environmental Assessment of ConocoPhillips Canada Laurentian Sub-basin Seismic Program 2010-2013*', dated December 2009 and offer the following comments for your consideration.

General

The environmental assessment (EA) provides a very thorough review of the effects of seismic activities on the valued ecosystem components within the marine environment. It is generally well-written and contains sufficient background information upon which sound interpretations and conclusions are based. It also recognizes that knowledge gaps associated with the use of seismic activities still exist.

However, there is no mention of how mitigation measures will be implemented or augmented during times of poor visibility (e.g., at night, in fog, during periods of high seas). It is also unclear how "safety zones" can be adequately monitored under these conditions. Furthermore, it should be noted that these concerns have been raised during previous reviews of proposed seismic operations in Newfoundland and Labrador.

Specific Comments

The document would benefit from a list of acronyms used within the text.

Page 25, Deep-sea Corals

For future EAs in the region, it would be useful to include the following, recently published report on coral distribution in the Maritimes region.

Cogswell, A.T., E.L.R. Kenchington, C.G. Lirette, K. MacIssac, M.M. Best, L.I. Beazley and J. Vickers. 2009. The current state of knowledge concerning the distribution of coral in the Maritime Provinces. Can. Tech. Rep. Fish. Aquat. Sci. 2855: v + 66p.

Page 29, Atlantic Cod

Although Atlantic Cod are listed in the section on Commercially Targeted Fish, the profile does not appear until the SARA section. Unless specified, it may appear to have been overlooked. Please reference the appropriate section.

Page 38, Capelin

Information in this section should be updated to include ‘*Capelin are often found along the coasts, especially during spawning season, and occur predominantly offshore while immature and maturing. However, Capelin do not normally 'roll' on sand, but usually fine to coarse gravels are the preferred substrate. On beaches, capelin usually spawns at 5-8.5 °C but has been observed to spawn at 4-10 °C. On the bottom, spawning temperatures can be as low as 2 °C on the Southeast Shoal. Males and most females do not survive to spawn a second time. Additionally, spawning now goes into the month of August, and eggs that are produced are yellow, not red, as stated in the EA. Once hatched, larval Capelin, especially after they are in the bays and offshore in the fall are distributed deeper, rather than near the surface*’.

Frank, K.T., J. E. Carscadden, and W. C. Leggett. 1993. Causes of spatio-temporal variation in the patchiness of larval fish distributions: differential mortality or behaviour? Fish. Oceanogr. 2:114-123.

Nakashima, B. S. and J. P. Wheeler. 2002. Capelin (*Mallotus villosus*) spawning behaviour in Newfoundland waters - the interaction between beach and demersal spawning. ICES J. Mar. Sci. 59:909-916.

Scott, W. B. and M. G. Scott. 1988. Atlantic Fishes of Canada. pp 145-150.

This information along with the appropriate references, was provided previously during the Southern Newfoundland Strategic EA.

Page 46, Figure 4.1

Please provide legible fishing zones labels.

Pages 48-49, Figure 4.2 and Table 4.4.

The information contained in Fig. 4.2 and Table 4.4. does not coincide. For example, total harvest in 2008 is 7,331 t in Table 4.4, but Figure 4.2 indicates that the invertebrates catch weight alone was close to 31,000 t. Please verify.

Section 4.3.4, Commercial Fisheries

The report acknowledges the significant fisheries and commercial species occurring within the study area during 2006 to 2008. However, there is little discussion regarding the fairly extensive and periodically lucrative 3Ps scallop fisheries that have occurred in parts of the study area over the past 20 years, even though they were not significant during 2006 to 2008.

At its first instance in the text, the acronym (FSC) should be provided for the term Food, Social and Commercial fisheries. In addition, the term IQ fisheries should be spelled out as individual quota the first time it appears.

Page 120, Marine Mammals

1st para, last sentence - During the 2007 aerial survey by DFO, the highest density of marine mammals were sighted on transects that were located in and near Placentia Bay, and the proposed seismic project area.

Page 127, Marine Mammals

3rd para, last sentence - Pilot whales are NOT considered abundant year-round residents of Newfoundland since the collapse of the squid stocks several decades ago. It is thought that their numbers and group size have declined markedly, and groups are found reliably in only a portion of these waters.

Page 135

2nd sentence - It states that “*attention must be paid to all of the SARA-listed species*” when referring to species on Schedule 1, Schedule 2 and Schedule 3 of SARA. The wording should be clarified; only species on Schedule 1 of SARA are considered to be officially SARA-listed.

Page 138,

1st para - The information in this paragraph on Recovery Strategies and Management Plans needs to be updated and corrected. For example, the document states that “*Currently, there are only two final recovery strategies and no action plans, or final management plans in place for species listed under Schedule 1, and which are known to occur in the Study Area*”. Note that there are final Recovery Strategies posted on the SARA Registry for Northern Wolffish/Spotted Wolffish (2008), Leatherback Turtle (2007) and North Atlantic Right Whale (2009). There is also a proposed Recovery Strategy for Blue Whale (2009) and a final Management Plan for Atlantic Wolffish (2008) posted. Please refer to the SARA Registry website (www.sararegistry.gc.ca) for the most up to date information.

Page 142, Leatherback turtle

The EA underestimates the presence of Leatherback Turtle in the Study Area. A population of Leatherback Turtle is known to migrate between the Gulf of St. Lawrence and from the southern coast of Newfoundland along the western bank of the Laurentian Channel to/from the Scotian Slope. There occupancy period ranges from June to November, although migration through the Study Area is likely to be highest from August to November. From the 2007 DFO aerial survey data, there were estimated to be more than 1,000 leatherbacks present on the south coast of Newfoundland in the late summer (as yet uncorrected for animals diving). That being said Leatherback Turtles can be expected in the Study Area throughout their entire leatherback northern foraging period (i.e. May to November). This includes ephemerally-resident foraging animals, as well as those transiting through the Study Area to arrive on the shelf proper. Contact Michael James, DFO-Maritimes [(902) 426-3515], for any further information regarding the Leatherback Turtle.

Page 145, Beluga Whales

It is mentioned that Beluga whales are sometimes observed in Newfoundland waters that are presumably from the St. Lawrence population. It is DFO understanding that Beluga whales from Arctic populations also occur in the region.

Page 146, Wolffishes,

The last sentence in this section states that “*the northern and spotted wolffish were... added to Schedule 1 of SARA ... legally protecting the species and its critical habitat.*” Note that there is currently no critical habitat identified for these species.

Page 147, Harbour Porpoise

1st para - The following sentence should be revised: “*Harbour porpoises found in the Atlantic are considered Threatened (Schedule 2) on SARA*”. The species is on Schedule 2 of SARA which is not the official list (i.e. Schedule 1) therefore it is not considered Threatened under SARA.

Page 149, Atlantic Cod

It would be useful to note that Atlantic cod will be re-assessed by COSEWIC in April 2010.

Page 150, Winter Skate

2nd sentence - So as not to confuse SARA-listed species with COSEWIC assessed species, the second sentence should be revised from “*The SG population is listed as endangered...*” to “*The SG population has been designated as endangered...by COSEWIC...*” This will be consistent with the text used in the other sub-sections under Section 4.6.

Page 157, Potentially Sensitive Areas

A comma should not be used when referring to the *Oceans Act* Marine Protected Areas..

Page 158

2nd para, first bullet - The term, EBSA is an Ecologically and Biologically **Significant** Area not *sensitive* area.

3rd para - It is stated that a number of EBSAs have either been designated or proposed by DFO. EBSAs for the PBGB LOMA have been identified and described by Science, they have not been *designated*. As for legal implications, an area that has been identified as an EBSA has been highlighted as an area that has particularly high ecological or biological significance and that a greater than usual degree of risk aversion in the management of activities in these areas should be exercised. Identification as an EBSA does not give it any special legal status; it simply provides guidance on the standard of management that is considered to be appropriate.

DFO - NL Region has identified 11 EBSA's within the PBGB LOMA as potential Areas of Interest (AOIs) for MPA designation and five of the 11 EBSAs were put forward for formal consultations with stakeholders. The two EBSAs that partially occur within the study area: the Laurentian Channel and Slope and the Southwest Shelf Edge and Slope, as well as, the St. Pierre Bank which abuts the Study Area, were included in the five that were put forward for the formal consultation. Following consultations, DFO NL Region will put forward one of the five EBSAs as the regional AOI for MPA designation by 2012.

In addition, this section does not make any reference to DFO Maritimes Region candidate AOIs for a future MPA pursuant to the *Oceans Act* or the Eastern Scotian Shelf Integrated Management Initiative (ESSIM) Strategic Plan for the LOMA, which are located adjacent to the western boundary of the proposed project Study Area.

Section 5.2, Consultations

The EA places the proposed seismic program in context of Newfoundland and Labrador. Although the NS-NL Offshore Boundary indicates that the Study Area falls into the C-NLOPB jurisdiction, the Study Area does extend into DFO Maritimes Region fisheries waters and, where appropriate, recognition should

be given in the EA to the implications of the proposed program on the fisheries in this region. In particular, the pelagic longline and groundfish fisheries that operate in DFO Maritimes Region waters were not identified in the consultation section of the EA. Consultation with these fishing industries should be undertaken. The following groups have been identified:

1. Groundfish Fishery, DFO Maritimes Region

It is likely that groundfish fisheries will fish in areas proximal to the Study Area. The groundfish fishing fleet representative in DFO Maritimes Region contact information is:

Nellie Baker-Stevens
PO Box 55
Musquodoboit Harbour, NS
B0J 2L0
Phone: 902-845-2408
Phone: 902-497-1787 (cell)
Fax: 902-845-2629
Email: nellie@esfpa.ca

2. Pelagic Longline and Harpoon Fisheries, DFO Maritimes Region

It is possible that pelagic fisheries may fish from time to time near the edge of Banquereau Bank on the Laurentian Channel side, proximal to the Study Area. The pelagic longline and harpoon fishing fleet representatives in DFO Maritimes Region contact information is:

Southwest Nova Tuna Association
Sam Elsworth
Phone: 902-543-6457
Email: sam.fish@ns.sympatico.ca

Nova Scotia Swordfisherman's Association (longline fleet)
Troy Atkinson
Phone: 902-457-4968
Email: hiliner@ns.sympatico.ca

Swordfish Harpoon Association (also head of the Atlantic Shark Association)
Patrick Gray
Phone: 902-471-2301 (cell) – **Long delay before his phone rings**
Email: pocket.fisheries@ns.sympatico.ca

Offshore Large Pelagics Licence Holder
Andy Henneberry
Phone: 902-456-7950
Fax: 902-868-2638

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Fisheries and Oceans should be referred to as Fisheries and Oceans Canada.

Page 172, Effects of the Project on the Environment

It is not appropriate to disregard the effects on fish habitat in the onset of the effects analysis. Even if it is determined that the effects are negligible at an early stage, they still should be considered as it was initially identified as a VEC and can be treated with zero rating in the significance table.

Page

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6th para - Wysocki et al. (2009) is mentioned as having determined that a species had “...*the best hearing sensitivity*”. Please present more information about the location or fish species to provide context or relevance to this discussion. It is not clear the purpose of this study in the analysis of the effects.

Page 210

2nd para - It is possible that the intermittent nature of seismic pulses near the source could allow for hearing and echolocation in the quieter periods between pulses. However, it is also possible that at greater ranges the signal pulses from the airgun array become “smeared” in time such that the periods between the peak energy of pulses are also filled with sound energy above ambient levels. In this case, there may be more opportunities for sound masking.

Page 228

2nd para - Sighting and satellite tracking information strongly suggests that the south coast of Newfoundland is an important feeding area for leatherback turtles in Atlantic Canada. It appears that most of the sighted and tracked turtles are concentrating their travels and feeding in areas nearer to shore than the proposed activities, so it is unlikely that these turtles will be adversely impacted by seismic sounds over greater distances.

Page 233

3rd para – This section suggests that turtles may need a longer time to swim away from seismic operations. If this is in fact true, then this should be taken into account when prescribing mitigation measures by ensuring a longer than average ramp-up period is conducted where appropriate.

Page 234

On this page and elsewhere, correct spelling of “harour seal” and “harour porpoise”

Page 237

2nd para - Although it is stated in the text that it is unlikely that an odontocete would remain close to a large airgun array, several observers on seismic vessels have reported to DFO Science that they have observed pilot whales approaching the central, higher-frequency source in the centre of an airgun array while the array was operating. If this is true, then it is possible that the loud sounds of the array are not sufficient to override the curiosity of these whales.

Page 260

Last para - It is mentioned that most SAR whales and leatherback turtles are not expected to occur regularly in the study area. Please see the previous comments concerning this issue.

Page 269, Mitigations and Follow-up

See general comments above.

Further, DFO Maritimes Region highlights Section 12 of the 'Statement of Canadian Practice with respect to the Mitigation of Seismic Sound in the Marine Environment' and the use of Passive Acoustic Monitoring (PAM) or similar detection technology as a further mitigation measure that can be used during periods of low visibility. The application of a PAM device (or other marine manual detection

technology) as a mitigation measure for the proposed program has not been discussed in this EA document.

Another potential conflict that is not discussed in the EA is with any potential marine science that may be on-going in the Study Area. On this note, they should be aware that DFO Science at BIO has two current meters moored on the Laurentian Fan. For more information, the Proponent can contact DFO Scientist John Loder by phone at [902-426-3146] on these moorings and future science initiatives within the area.

Appendix A

SARA Lewis does not need to be italicized or capitalized as it is a person, not an act in this circumstance.

Thank you for providing DFO the opportunity to comment on this EA document. If you have any questions or comments regarding the above, please contact Sara Lewis, Senior Biologist, Marine Section by phone at 772-4140 or by e-mail (sara.lewis@dfo-mpo.gc.ca).

Yours truly,

Original signed by Carole Grant

Carole Grant
Section Head – Marine Habitat
Habitat Protection Division
Oceans, Habitat and Species at Risk Branch

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