

GENERAL COMMENTS

Department of National Defence (DND)

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 unexploded ordnates (UXOs) records was conducted to determine the possible presence of UXO within the proponent's project area. Given their understanding of the survey activities to be conducted, the associated UXO risk is 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 www.uxocanada.forces.gc.ca

Fisheries and Oceans Canada

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 surveys may occur at anytime from March to November from 2012-20, with surveys ranging in duration from 30-120 days. 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.

In Section 4.3 Commercial Fisheries the author avails of commercial fishing statistical information from 3 different sources. The text of the report is not entirely clear as to the source for various sections. For future reports it would be useful if the source is referenced more clearly in the text. Also it would be useful if the potential level of interaction between harvesters and gear could be indicated.

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

Fish, Food and Allied Workers

A consultation was held with fish harvesters during the development of this Environmental Assessment (EA) in December 2011. It should have been noted in the EA Report that harvesters are equally concerned about the impact of seismic surveys on the snow crab resource. Only concerns related to the impacts of seismic surveys on the shrimp resource were mentioned in the EA Report, page 183. This is an important point as the 2012 plans for Husky involve seismic on/near important crab fishing grounds for 3L fish harvesters. Harvesters specifically requested at the consultation in December that seismic not be conducted until after the snow crab season in the area has closed, approximately August 10th. A follow-up meeting in March 2012 was held with the operator once they knew their area of interest for 2012 and concerns related to the snow crab resource were stated again by harvesters at that time.

Further to this, if seismic work is conducted on/near crab fishing grounds while the area is being heavily fished there is significant potential for gear conflict. As stated in the EA Report, "the chief means of mitigating potential impacts on fishery activities is to avoid active fishing areas, particularly fixed gear zones (page 210)." The loss of fishing time, catch and/or gear that may be associated with gear entanglement in this area may be significant during this prime period so all efforts to mitigate conflicts should be used.

The overall study area for this EA is quite large but there is considerable fishing activity in the area. While historical fishing patterns have been detailed in the document (page 134) fishing activity can change from year to year and during season as well. It is very important that Husky maintain regular communication with the FFAW to keep apprised of ongoing developments with fisheries in the project area throughout the duration of this EA (2012-2020).

SPECIFIC COMMENTS

Environment Canada (EC)

Section 5.6.5 Species at Risk, pg 270 - Use of the Chardine protocol should be limited to stranded Leach's Storm-Petrel. Stranded Ivory Gulls would be an exceedingly rare occurrence, and would likely be related to an injury on the animal. EC-CWS should be immediately contacted should a stranded Ivory Gull be found.

Section 5.8 Mitigations and Follow-up, pg 276 - The CWS protocol for collecting data on seabirds at sea is "Gjerdrum et al.", rather than "Wilhelm et al.". This protocol can be cited as follows:

Gjerdrum, C., D.A. Fifield, and S.I. Wilhelm. 2011. Eastern Canada Seabirds at Sea (ECSAS) standardized protocol for pelagic seabird surveys from moving and stationary platforms. Canadian Wildlife Service Technical Report Series No. 515. Atlantic Region. vi + 36 pp.

Fisheries and Oceans Canada

Section 3.3 Physical Oceanography, pg 61– Additional information on physical oceanography can be found in Han et al., *Journal of Physical Research*, 2008) achieved by DFO Newfoundland and Labrador Region and Maritimes Region under the Program of Energy Research and Development (PERD).

Section 4.2 Fish and Fish Habitat, pg 98 – Sandlance is an important species in the study area and a description should be included in this section.

Section 4.2.3.1 Deep-water Corals and Sponges, pg 100 – Please see additional references for Deep water Corals and Sponges.

Kenchington, E., Lirette, C., Cogswell, A., Archambault, D., Archambault, P., Benoit, H., Bernier, D., Brodie, B., Fuller, S., Gilkinson, K., Lévesque, M., Power, D., Siferd, T., Treble, M., and Wareham, V. 2010. Delineating Coral and Sponge Concentrations in the Biogeographic Regions of the East Coast of Canada Using Spatial Analyses. DFO Can. Sci. Advis. Sec. Res. Doc. 2010/041. vi + 202 pp.

Kenchington, E., Power, D. and Koen-Alonso, M. 2010. Associations of Demersal Fish with Sponge Grounds in the Northwest Atlantic Fisheries Organizations Regulatory Area and Adjacent Canadian Waters. DFO Can. Sci. Advis. Sec. Res. Doc. 2010/039. vi + 27 p.

Also see attached documents scs08-24 and scs09-06.

Section 4.3.4.1 Northern Shrimp, pg 137 – Catch data for Northern Shrimp in this section does not match Table 4.7.

Section 4.5.1.4 Toothed Whales (Odontocetes), pg 166 – (Editorial) The reference to “DFO 2011j” should be corrected to the proper reference “DFO 2011i”

Section 4.6 Species at Risk, Table 4.14, p. 173 - In the table under the COSEWIC column it should be noted that Humpback Whale was assessed by COSEWIC as "not at risk".

Section 4.7.2 Coral Areas, Figure 4.34, pg 180 - Coral/Sponge Closure Area #5 has been revised. Please see attached. (Proposal for a Resolution concerning the extension of Closed Area 5).

Section 5.4.4.2 Geographic Extent, pg 188 – Geographic Extent rating criteria is defined as”, the 5 = >1,000-10,000 km² should be = >1,000-10,000 km².

Section 5.6.4.1 Sound, pg 224 - In addition to habituation, repeated exposures could also cause “sensitization” where the response increases upon repeated exposures (i.e., the disturbance effects do more than just “persist”.

Section 5.8 Mitigations and Follow-up, pg 276 – The use of a picket vessel manned by the marine mammal observer in advance of the seismic vessel may be a better place to detect and avoid marine mammals.

Canada-Newfoundland and Labrador Offshore Petroleum Board

Section 1.1 Relevant Legislation and Regulatory Approvals, pg 1 – The *Geophysical, Geological, Environmental and Geotechnical Program Guidelines (C-NLOPB)* were revised in 2012.

Section 2.1 Spatial and Temporal Boundaries, pg 5 – Please provide the total area of the Project Area and the Primary 2012 Activity Area. Also, the coordinates for all three areas (i.e. Study Area, Project Area, Primary 2012 Activity Area) should be provided.

Sections 2.3 to 2.6, pgs 11 – 16 – These sections do not appear to be part of the “Project Description” and seem out of place given that all of this is discussed in much greater detail in the report. It appears that they have just been copied from the 22 November 2011 Project Description. The text should be reviewed to ensure that statements made are consistent with those stated in later sections of the report.

Section 2.4.2 Physical Environment and Effects on the Project, line 8, pg 11 – “The scheduling of 2D/3D seismic surveys...the environment on the Project.” The survey is scheduled to begin in March. This is still winter when conditions are as you say “not typically good.”

Section 4.3.4.2 Snow Crab, pg 138 – This section appears again on page 141 of the report

Section 5.5 Effects of the Environment on the Project, pg 191 – This section should contain an integrative discussion of the intersection of the physical environment and the project aspects. It is not appropriate in the first sentence to point to the physical environmental data in Section 3.0 and ask the reader to make any inferences about the operability of the proposed equipment in that environment. As per Section 5.2.1 of the Scoping Document, the EA shall provide a brief summary description of the meteorological and oceanographic characteristics, including extreme conditions, and any change to the Project that may be caused by the environment. The discussion of the operability of vessels, seismic arrays, support craft and other equipment in the environment likely to be encountered could focus on:

- Wave height vs vessel operational capability (seismic vessel, chase vessel, service vessel, and seismic array within the program temporal window);
- Wind speed vs vessel operational capability (seismic vessel, chase vessel, service vessel, and seismic array within the program temporal window);
- Pack ice presence vs operability (seismic vessel, chase vessel, service vessel, and seismic array within the program temporal window); and
- Iceberg presence vs operability (seismic vessel, chase vessel, service vessel, and seismic array within the program temporal window).

Section 5.5 Effects of the Environment on the Project, 2nd para., line 1, pg 191 – It is stated that the Project time frame is “May to November”. The temporal scope has previously been stated as March to November for seismic operations. Please confirm the temporal scope.

Section 5.5 Effects of the Environment on the Project, 2nd para., line 10, pg 191 – It is stated that surveys will be suspended once wind and wave conditions reach certain levels. What are these levels?

Section 5.6.2 Fishery VEC, 3rd para., pg 210 – As previously stated, the *Geophysical, Geological, Environmental and Geotechnical Program Guidelines* were revised in 2012. The mitigation outlined should be reviewed against the revised guidelines to ensure it is still applicable (e.g. Section 4.2 is now 5.2).

Section 5.7 Cumulative Effects, last para., line 4, pg 275 – “It will be in the interests of the different parties...acoustic interference”. Will Husky participate in this coordination?

Section 5.8 Mitigations and Follow-up, 2nd para., line 5, pg 276 – “within 24 h of the contact”. The Guidelines state that it should be reported immediately.