

Information for Project Planning Purposes

The following comments were provided by reviewers and are offered for consideration in the design and planning of drilling activities.

General Comments

Chlorinated wastewater effluent through once-use coolant systems is listed as a toxic substance under the *Canadian Environmental Protection Act* (CEPA) 1999. If chlorine is to be employed, the proponent should indicate which chlorine product has been selected for use and consider the potential for the dechlorination of cooling water prior to discharge. The Pest Management Regulatory Agency should be contacted with respect to the applicability of the *Pest Control Products Act* and use of chlorine in any non-closed-loop cooling water systems.

One Ocean is the liaison organization for the fishing and petroleum industries in Newfoundland and Labrador and therefore has the responsibility to ensure and facilitate effective communication and consultation between the two industry sectors. One Ocean did participate in a consultation(s) with Husky Energy on this proposed project and because of the time frame (2008-2017) formally requested that Husky provide One Ocean and the Fish, Food and Allied Workers (FFAW) union, with applicable updates/information regarding scheduled activities.

Commercial Fisheries data has been documented in several Husky Reports for this region. Because of the time frame to 2017, it is imperative that as activities are undertaken each year, fishing activity in the project area be reviewed. If there is a change in commercial fisheries species, as previously experienced in this province, up-to date data should be made available in consultations with fishers.

Given the large spatial and temporal period for this program, a wide range of operations will be performed by Husky Energy. These operations involve: drilling, delineation, excavation, dredging, sub-sea structures, all types of seismic, and decommissioning. This will inevitably create challenges to coordinate with other users of the ocean, fish harvesters in particular. To help mitigate any disturbances or incidents, it is absolutely critical to consult with the fishing industry. One valuable resource in this process is the use of Fishery Liaison Officers onboard seismic vessels to improve the communication process. This consultation process has to be done effectively, with as much notice as possible, for every operation/phase planned by the operator. The consultation process has had proven success in recent years, avoiding conflicts between the oil and fishing industries, while interacting in the same environment.

Specific Comments

§5.4.1, p. 118, Seasonal Abundance of Seabirds in the Study Area: The document reflects changes that have been requested in the EAs for previous Husky drilling programs for the Jeanne d’Arc Basin. However, Table 5.10 continues to reflect old population estimates for Middle Lawn and Green Islands. Most recent estimates are available in: Robertson, G.J., J. Russell and D. Fifield. 2002. Breeding population estimates for three Leach’s Storm-petrel colonies in southeastern Newfoundland, 2001. Canadian Wildlife Service Technical Report Series No. 380. Atlantic Region.

§5.5, p. 123, Marine Mammals: The Department of Fisheries and Oceans conducted a large-scale aerial survey of eastern Canada in the summer of 2007. This survey included several transect lines that passed through Husky’s study area. Marine mammals sighted during these efforts approximate those listed previously in the Husky EA (2006) and in the DFO sightings database. The results of this survey are being prepared for publication now and will be available to proponents in the near future.

§5.5, p. 125, Marine Mammals, Table 5.12: There is a document with a more recent estimate for fin whale abundance in Newfoundland (Lawson, J.W. 2006. Preliminary information on distribution and abundance of fin whales (*Balaenoptera physalus*) in Newfoundland and Labrador, Canada. SC/14/FW/21-SC/M06/FW21. Joint NAMMCO/IWC Scientific Workshop on the Catch History, Stock Structure and Abundance Of North Atlantic Fin Whales. Reykjavík, Iceland, 23-26 March, 2006. 12 p.). This describes results of DFO’s aerial surveys, which include an estimate for the number of fin whales in Newfoundland waters (relatively nearshore to at least 172 km). These analyses yielded an uncorrected point estimate of 1,103 fin whales (95% CI: 459-2,654) in the study area. There is also a recent document with the first abundance estimate for killer whales in Atlantic Canada (Lawson J.W., T.S. Stevens, and D. Snow. 2007. Killer whales of Atlantic Canada, with particular reference to the Newfoundland and Labrador Region. DFO Res. Doc. 2007-062. 14 p.). This study identified at least 63 individual killer whales, plus likely a number that exist in offshore waters as well.

§5.5.2.2, p. 130, Toothed Whales (Odontocetes): There have been sightings of northern bottlenose whales in waters less than 500 m (including within meters of shore), so depth should not be the sole criteria used to exclude the possibility that this species might be seen in the project area.

§7.2.3.1, p. 170, Assessment of Effects of Routine Activities on Commercial Fishery VEC, Table 7.7: For other project activities, the “access to grounds” column should be marked, as the EA Report states that StatoilHydro may be drilling at the same time as Husky Energy in Study Area.

§7.2.7, p. 177, Species at Risk: There is no discussion regarding recovery strategies or SARA Management Plans, or any mitigations or requirements which may be listed within the strategies, for the Study Area.

§8.1.6.2, p. 189, Newfoundland and Labrador Offshore Area, Table 8.7: The NLOA experience over the 1997-2006 timeframe is less successful regarding small and medium-sized spills than the US GOM experience decades earlier. One would expect that experience and technological advances in environmental and safety equipment would have led to a decrease in spill frequency percentage, especially in closely regulated jurisdictions. Based on the values provided, it can be expected that 21 small spills and 1 medium spill will occur as a result of drilling 18 wells; statistics that this Region should be striving to reduce.

§10.1, p. 220, Environmental Assessment Validation Process: The commitment to confirm that “the nature of the species at risk in the project activity and study areas have been validated and have not changed” has been made. This should include reviewing Recovery Strategies or SARA Management Plans, or mitigations or requirements, which may be listed within the strategies for the Study Area.

Information for Future Environmental Assessment Purposes

General Comments

The **Scoping Document** (Section 5.4 Cumulative Effects) requests that a description of other projects or activities that have been or will be carried out (i.e., other seismic and drilling activities; fishing activities, including Aboriginal fisheries; other oil and gas activities; marine transportation) be included. There does not appear to be a description of Marine Transportation in the EA.

The **Scoping Document** states that a ‘brief summary’ of physical oceanographic conditions should be included. However, the EA report contains approximately 69 pages of text and figures.

In referencing previous Environmental Assessment (EA) reports, the titles of the EA reports should be consistent. For example, Husky (2007) is referenced in the report as “New Drill Centre EA” or “Husky’s New Construction and Operations Programs EA.”

There is a discrepancy in the temporal scope of project activities within the environmental effects analysis sections. Project activities are referred to as existing over an eight-year or nine-year timeframe.

For the environmental effects analysis, including accidental events, the impact assessment tables for each VEC should have been included in the report.

A large majority of the figures in the EA report are difficult to read.

There should be a section, however brief, discussing traditional and historical fishing activities in the Study Area. As DFO and NAFO are committed to encouraging the recovery of depleted fish stocks, a description of the patterns of abundance of depleted species in this area would be useful. Past and present fishing activities and information

on species moratoria should be presented in context in order to provide a more complete and informative overview. Additionally, the document should include a discussion of the underutilized species commonly found in the Study Area as determined from analyses of past DFO research vessel and industry survey data, with emphasis on those being considered for potential harvesting.

As presented, the absence of some species from the discussion on species at risk raises several questions. It is unclear whether a particular species is not included in the “list of marine species that potentially occur in the area” because it was overlooked, because it was not on the website when it was reviewed for the document, or because it actually is likely not to occur in the project area. In order to facilitate a proper review of possible impacts to species at risk, a different approach to describing potential effects is recommended. The section should begin with a comprehensive list of species for the general area, which includes those listed and those under consideration for listing under the *Species at Risk Act*. Details on those species likely to occur in the immediate project area should be provided.

Throughout the document, there are numerous typos and mis-spellings. One reference is missing from the reference section (pg. 135 Moulton et al. 2006c), and one figure (Fig 4.6) has the units mislabeled. Closer attention to detail during editing would be appreciated in EA documents.

Specific Comments

§4.2.1.3, p. 27, Wind Climatology: It is stated in the first paragraph that “The Study Area has a highly variable wind climate due to its large coverage.” DFO suggests that this statement is false and is not sufficient.

§4.2.1.3, p. 27, Wind Climatology: In the second paragraph the assertion is that the “stronger, and slightly more westerly, wind field...” is due to the proximity of the Icelandic Low and Azores High. This is highly doubtful; a more reasonable explanation would cite sea surface temperature and the proximity to the Labrador Current and Gulf Stream.

§4.2.1.4, p. 28, Wave Climatology: In the second paragraph the statement concerning fully developed seas and the 1000 km boundary should be tempered with a comment about fetch and duration.

Several comments are made regarding the stability of the marine boundary layer. Some of these appear to be contradictory (e.g. pg 43, pg 46, pg 49). Some discussion of stability should be provided.

§4.2.6.1, p. 49, 2nd paragraph, Extreme Value Estimates for Winds from the Gumbel Distribution: Although it may not have been possible to adjust winds observed on platforms for atmospheric stability, the actual measurements could have been used to set upper limits on wind speeds.

§4.3.1, p. 59, 1st paragraph, Water Mass Structure: “However, in April 2006 this cold water and the strong temperature gradient was not observed.” This statement is false as it can be observed in Figure 4.21.

§4.3.2, p. 59, Water Properties in the Project Area: The authors used archived temperature and salinity data at BIO and omitted all of the T-S data recorded by NWAFC trawl mounted CTDs that is archived at NWAFC and MEDS. Consequently, only a small fraction of available data was captured.

§4.3.3, p. 77, Major Currents in the Study Area, 2nd Paragraph: The reference to Lazier and Wright (1993) is misleading because most of the increased flow in autumn is in deep water. Thus, mass or volume transport is more greatly affected than current speed.

§4.3.3, p. 78, Major Currents in the Study Area, 3rd Paragraph: The assertion that Figure 4.32 illustrates effects of the North Atlantic Current is incorrect, as it is not observed.

§4.3.4.2, p. 85, Sub-area 2, 2nd Paragraph: The observation that currents at White Rose are stronger than those at Terra Nova does not make them an anomaly.

§4.4, p. 89, Ice and Icebergs: Please provide the source for the ice analyses “update.”

§4.4.2, p. 89, Sea Ice: The statement “... sea ice was present only during...” does not define where the ice was actually present.

§5.2.2, p. 96, Profiles of Commercially-Important Species: The report should summarize the main species of fish listed in the report and not refer readers to other EA reports.

§5.2.4, p. 99, Figures 5.1-5.14, DFO Research Survey Data, 2005-2006: Does the absence of ‘red dots’ indicate lack of data or no fish?

§5.3.3.4, p. 113, Principal Fisheries, Offshore Clams: What gear is used to harvest this species?

§5.7, p. 133, Species at Risk: The discussion of SAR and their potential distribution within the project area contains no real explanation of “potential occurrence.” Is it based on literature searches, known occurrences, visual observation, etc?

§5.7.1, p. 135, Profiles of SARA Schedule 1- and COSEWIC-Listed Species: This section is entitled *Profiles of SARA*, however, very little information related to the understanding of a profile of a species (biological information) is actually included within. There is reference to where these profiles can be found and for some species,

detailed information is provided. Consistency in format with respect to the kind of information provided and the details of the information is recommended in the future.

§8.7.5, p. 211, Marine Mammals (and subsections): A summary description for the species listed in the subsections (e.g. cetaceans, sea turtles) should be provided.

§8.7.7, p. 214, Species at Risk (and subsections): Reference is made on page 215 to Table 8.14 in the discussions regarding the potential interactions of accidental events and VECs, however Table 8.14 is “Fraction of Time that Recovery is Possible” (page 203).