



Fisheries and Oceans
Canada

Pêches et Océans
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Your file *Votre référence*

Our file *Notre référence*
BAB 3990-25

May 5, 2010

Mr. Darren Hicks
Environmental Analyst
Canada-Newfoundland and Labrador Offshore Petroleum Board
5th Floor TD Place
140 Water Street
St. John's NL A1C 6H6

Dear Mr. Hicks:

Subject: Husky Energy Sydney Basin Seismic Program 2010-2017 Environmental Assessment Report

Fisheries and Oceans Canada (DFO) has reviewed the document entitled '*Husky Energy Sydney Basin Seismic Program 2010-2017 Environmental Assessment Report*', dated February 2010 and offer the following comments for your consideration.

General Comments

It is important to note that the proposed operation is planned to occur within a potential Area of Interest (AOI) in DFO's Marine Protected Areas (MPA) program, of which cetaceans and other species have been recognized as conservation priorities through the identification of Ecologically and Biologically Significant Areas (EBSAs).

Overall, information provided in relation to seismic surveys and their potential risks is well documented in this environmental assessment (EA) report. It was noted, however, that the evaluation of risks for fish and shellfish in relation to magnitude, geographical extent and other factors is generally rated as non-significant. Although it is recognized that this ranking is acceptable in both the context of the Canadian Environmental Assessment Act (CEAA) guidelines as well as information presently available in relation to risk, it should be noted that the CEAA guidelines also require a somewhat major impact at the population level before being ranked as significant. It is also important to note that rankings in this assessment are based on old information dealing with mortalities or grossly overt effects. In this respect, it is now commonly accepted (various researchers as well as agencies) that there is a major knowledge gap related to the potential for sub-lethal effects and whether or not injuries may occur as a result of seismic activities. The EA report is not faulted in this respect and has correctly noted that there are uncertainties about risk, which can be attributed to data gaps. While appropriate, a qualifying statement about the lack of data for assessing potential sub-lethal physiological and pathological effects represents an important knowledge gap and would be useful to include in the executive summary.

Fish and Fish Habitat

One of the concerns in relation to the survey is its potential for affecting the reproduction of redbfish, which is a commercially important species in the area. Although, there are uncertainties regarding the potential effects of seismic activities on fish reproduction, in this instance, seismic activities are taking place in a major traffic corridor and it is possible that chronic noise from marine traffic in the area could far outweigh any additional seismic-induced noise.

Fish and Shellfish

The EA report states that follow-up and monitoring are not recommended at this time for fish and shellfish during seismic surveys. This is reasonable since limited information can be attained, particularly with respect to potential effects on feeding or moulting in lobster or snow crab, by temporarily caging animals along a survey line for example. With respect to snow crab and/or lobster migration, laboratory studies by DFO (and earlier by a consulting company) noted, unlike similar studies carried out on various fish species, the absence of animal movement when exposed to (including high levels of) sound. In order to provide assurance of this through the provision of field data, a properly designed survey would be required, which could not be piggy-backed on a regular seismic survey.

Marine Mammals

There were several inadequacies noted throughout the descriptions related to marine mammals. Firstly, only the harbour porpoise is dealt with in any detail in the species descriptions; right and blue whales also occur in the project area and should also be included. It should be noted that there is an updated set of abundance estimates for cetaceans on the Atlantic Canadian coast by Lawson and Gosselin (2009) (Lawson, J.W., and Gosselin, J.-F. 2009. Distribution and preliminary abundance estimates for cetaceans seen during Canada's marine megafauna survey - a component of the 2007 TNASS. DFO Canadian Science Advisory Secretariat Research Document 2009/031. iv + 29 p.), which should be referenced where appropriate throughout the report. Additionally, Figure 5-51 seems to show individual sightings of marine mammals in the study area, yet the source of these sightings is not provided. It is likely that the studies spanned different time periods and therefore some indication of timing might help to inform any assessment regarding the frequency and/or timing of these occurrences. It is also unclear as to whether these are all opportunistic sightings rather than specific research surveys. At the same time, the cetacean migration map presented is incorrect; this representation is based on outdated information which is not supported by any reliable data (such as tagging studies) and should therefore be removed from the EA. There is anecdotal evidence from killer, blue, fin, and humpback whale sightings of animals moving along the nearshore margins of Newfoundland, and through the proposed Husky study area, as they enter and exit the Gulf.

A map depicting the distribution and abundance of leatherback sea turtles was produced based on a 2007 Trans North Atlantic Sightings Survey (TNASS) of Atlantic Canada (see citation above), which revealed that the south coast of Newfoundland had the highest density of leatherbacks in this province.

The EA report should include an Appendix describing how marine mammal information will be collected and recorded. Protocols exist and the observer schedule, visual aides, and shutdown protocols should be explicitly described. This aspect of operational monitoring is too important to be described in such a limited manner.

The Federal Marine Mammal Regulations prohibit harming or disturbing all marine mammals, not just those that are endangered or threatened. The proposal to shut down only for endangered or threatened

cetaceans, while consistent with previous operations approved in some Canadian waters, does not represent the most precautionary approach to mitigating potential impacts of exposure to seismic sounds. Since the seismic survey includes the acquisition of data using a large airgun seismic array, as well as single-beam echosounder, multibeam echosounder, side-scan sonar, chirp / pinger sub-bottom profiler, and sub-bottom profiler, there is a possibility that these activities could affect marine mammals in the operations area. While the operational mitigation measures will help to reduce potential impacts, marine mammals and sea turtles will certainly be able to detect the variety of sound sources proposed.

It is recommended that the proponents employ multiple Marine Mammal Observers (MMOs) to monitor operations during the day, rather than a single Fisheries Liaison Observer (FLO) or "Environmental Observer" as proposed and which has been used in some other more extensive seismic surveys. More than a single MMO (assuming this "environmental observer" is qualified as a marine mammal observer) is required to ensure efficacy of this mitigation method as even two observers would likely have difficulty in maintaining the required rest and hence effectiveness for a 30+ day operation. The decreased horizontal visibility during the summer due to fog as well as during nighttime operations, also reduces the efficacy of MMOs significantly. Therefore, the use of a picket vessel could be an excellent mitigation tool if it can be used in advance of the seismic vessel and manned by experienced MMOs; from this arrangement the operation is better-placed to detect and avoid marine mammals. Overall, the currently proposed scope and competency level for marine mammal monitoring should not be accepted as a sufficient mitigation and monitoring regime for an operation that will take place in such an important area.

The 30-minute ramping up is a recognized mitigation measure for seismic surveys within the Statement of Canadian Practice with Respect to The Mitigation of Sound in the Marine Environment. However, it should be noted that some uncertainty still exists as to the efficacy of this strategy as there have been no formal field studies of this ramp-up procedure to date that address past recommendations (DFO 2004) for further analysis and evaluation of the effectiveness of these mitigation measures. For example, the possibility remains that ramp up may actually have the opposite effect in some cases (e.g., see Gordon et al. 2004; Lawson and McQuinn 2004).

In general, there is very little data to be able to assess the impact of masking. Although whales have been observed to continue calling in the presence of seismic pulses, it is questioned as to whether they can actually "hear" under those conditions. Whale calls may actually be longer than the time between pulses and therefore important information may be lost to them. Also, as has been suggested elsewhere, the impulsive nature of seismic sounds could still mask baleen whale communication as the arrays' low-frequency sounds "smear" into longer duration impulses at greater distances from the array source. Also, multipath and bottom sound reverberance effects can cause multiple and overlapping sound impulses at greater distances. Therefore, it is simplistic to assume that the impulsive and "short duration" nature of an airgun source could not result in masking of baleen whale sounds over larger received areas.

In addressing cumulative effects, it is not accurate to state that sounds from seismic surveys "do not 'accumulate' in the environment". This statement incorrectly interprets how cumulative effects are to be assessed. It is not the "accumulation" of seismic sounds that is considered, it is the cumulative physical effects on the species within the study area. These species could be experiencing increasing damage to their auditory organs by exposure to repeated seismic surveys. Repeated seismic surveys or exposure to long durations of pulsing during one survey does have the potential to have a cumulative effect on species in the area. While research to date may indicate that there are no immediate effects of such activity, again the amount of research is limited and large-scale population effects may not be immediately apparent, but may only be evident over longer periods of time and/or may be exacerbated by

repeated surveys. Overall, there seems to be an assumption within the EA, as it relates to marine mammals (and sea turtles), that the effects of seismic surveys are completely “reversible”. This assumption does not seem to be completely warranted by the limited data available at this time.

The south coast of Newfoundland appears to be a significant feeding area for the leatherback sea turtles (and is actually being considered for designation as Critical Habitat), and it is likely that sea turtles will be spending significant time at the surface capturing and processing jellyfish prey. During this time, leatherbacks appear to be less likely to flee approaching vessels. Therefore, the statement within the EA that they spend more time submerged is not as mitigative as is the fact that they occupy this area at relatively low density. Additionally, it is mentioned in the EA that the surveys will likely not affect the prey of sea turtles, including jellyfish. However, given the fragile nature of jellyfish, studies should be carried out to assess this more closely, including the possibility for the loss of streamer fluid to taint marine invertebrate food sources of leatherbacks in a localized area. In the absence of this information, careful monitoring to ensure this does not take place, to the extent practicable, is important since the streamer fluid disperse or evaporate rapidly and could go otherwise unnoticed upon release.

SARA Species

Since the intent of this document is to deal with the seismic program from 2010-2018, it raises questions in terms of considering species at risk. During that timeframe, it is possible that more species could be added to Schedule 1 of SARA; COSEWIC will assess new species (examples of upcoming species assessments include Atlantic Cod, Deepwater and Acadian Redfish, Loggerhead Sea Turtle); new Recovery Strategies, Management Plans or Action Plans could be posted for listed species; and critical habitat could be identified; etc. There could be a lot of changes over this time period that may affect a species' status and its requirements under SARA. It is important to know how this will be addressed by the proponent.

Species within the study area which are coming up for assessment by COSEWIC (e.g., Atlantic Cod, Deepwater/Acadian Redfish and Spiny Dogfish are being assessed in April 2010) should be mentioned in the report. Check the COSEWIC website for a listing of other upcoming species assessments/status reports.

This report seems to have fully identified and explained the limitations of the research to date dealing with the effects of seismic sounds on marine species which are expected to occur within the study area. Generally, an appropriate level of uncertainty has been expressed, although a “medium” level of confidence is probably more accurate for the assessment of sea turtles and species at risk. The mitigation measures are comprehensive and follow accepted guidelines in this area.

Specific Comments

LGL Limited (2009) is also referred to as LGL (2009) and LGL et al. (2009) throughout the text. Please ensure consistency.

Executive Summary

Page ii

It is likely that cetacean avoidance reactions will occur beyond the stated 1 km distance from the sound source; for some species such reactions have been documented at significantly greater distances than this.

Section 5.2.1.3 Air and Sea Temperature

Page 5-14

Last para- The text states that the minimum sea surface temperature is -2.85°C . The minimum sea surface temperatures in winter are below -2°C (Figure 5-14). The data are from ICOADS. It should be clarified that it is referring to extreme values and not the mean values.

Section 5.2.1.4 Visibility

Page 5-16

The terms “rather good” and “rather bad” with regard to visibility are not quantified and should be omitted.

Page 5-16

The legends in Figures 5-15 and 5-16 are small and not described in the text.

Section 5.2.1.6 Vessel Icing

Page 5-18

Please provide a description of the four icing rates.

Section 5.3.2 General Ocean Circulation

Page 5-24

There are a couple of recent studies on Gulf Stream warm core rings and associated currents in the Laurentian Fan region, For example: Han G. 2004. TOPEX/Poseidon-Jason comparison and combination off Nova Scotia, *Marine Geodesy*. 27: 577-595. The ring currents are significantly greater than the mean flow in this region. Also, the description of circulation would benefit if the geographic landmarks in the maps, which have been referred to in the text, were added.

Section 5.3.3 Tides

Page 5-26

The parameters of tidal ellipses in Table 5.6 should be defined and made clear whether they are average values. One-month data are used so there are many ellipses. Conventionally tidal ellipses are presented constituent by constituent.

Section 5.3.5 Ice

Page 5-32

The captions for Figures 5-30, 5-31, and 5-32 are offset by one figure (i.e., Figure 5-31 is given as 5-30, etc.)

Section 5.3.6 Icebergs

Figure 5-32 - The resolution of color contours to discuss sea ice extent are illegible and the associated text (last para on page 5-33) is unclear.

Section 5.5.2 Benthos - Subtidal Community

Page 5-45

The discussion surrounding subtidal habitat and species is somewhat confusing. It is not well understood whether all the species listed are actually present in the study area.

Metzer (1996) should be Meltzer (1996).

Section 5.5.2 Benthos - Deep Sea Corals

Page 5-46

This section could benefit from a diagram showing the distribution of deep sea corals relative to the study area.

Section 5.5.3 Marine and Migratory Birds - Coastal Waterfowl

Page 5-54

The web site provided (www.e-map.gc.ca) is not sufficient for documenting nesting areas as this site requires special access and does not lead to the specific information referred to in the text.

Section 5.5.4 Marine Fish and Shellfish

Pages 5-62 to 5-67

References provided for the descriptions of fish habitat and spawning behaviour in Tables 5-10 to 5-13 are sparse.

Skates

Page 5-66

The text states that three species are present in the study area, but lists four.

Hagfish

Page 5-68

Met (1997) should be MET (1997) and the acronym should be spelled out in full the first time it appears in the report. Also, Walvig 1963 is cited by Grant (2006). Even when references are cited by another source, they should be given their own entry in the reference list. Meltzer (1996) is now cited as in JW 2007. This was referenced individually earlier. Also on Page 5-78, Meltzer (1996) is referenced in a different format.

Cetaceans

Page 5-80

Migration timings are indicated on the figure, but the size of the text is very small.

Section 5.5.7.1 Marine Fish

Page 5-83

1st para- The authors need to distinguish between SARA listed species and COSEWIC assessed species. Also when referring to SARA listed or COSEWIC assessed species, the population should be specified, as appropriate. For example, it states that cod is considered threatened, but the population is not specified. In 2003, COSEWIC's recommendations for cod were: Newfoundland and Labrador population – endangered; Laurentian North population - threatened; Maritimes population - special concern; Arctic population - special concern. For winter skate, the only population assessed as endangered by COSEWIC is the southern Gulf of St. Lawrence.

Page 5-83 Table 5.16

For SARA listed species, it is not necessary to include the COSEWIC recommended status (the SARA status is what applies).

Atlantic Cod

Page 5-86

It is worth noting that Atlantic Cod is up for re-assessment by COSEWIC in April 2010.

Cusk

Page 5-86

It states that pursuant to subsections 27 (1.1) and (1.2) of the Species at Risk Act it was decided in April 2006 to refer the assessment of cusk back to COSEWIC for further information and consideration. Note that subsequent to this, COSEWIC re-affirmed their assessment of cusk. Check the Species at Risk Public Registry for the most recent information.

Page 5-87 Table 5.17

As mentioned in a previous comment if a species is SARA listed, there is no need to provide the COSEWIC recommended status. Also for Sowerby's beaked whale it lists SARA Schedule 3. Note that SARA Schedule 1 is the legal list of species at risk while Schedules 2 and 3 are lists of species that need to be assessed or re-assessed by COSEWIC (species listed in Schedules 2 and 3 have no legal SARA status).

Harbour Porpoise

Page 5-88

It states that pursuant to subsections 27 (1.1) and (1.2) of the Species at Risk Act it was decided to refer the assessment of Harbour porpoise back to COSEWIC for further information and consideration. Note that subsequent to this, COSEWIC re-affirmed its assessment of Harbour porpoise.

Section 5.5.8 Sensitive Areas

Page 5-90

The study area is located within Canada's NL-Labrador Shelves Marine Ecoregion. This is important to note as two primary uses of this biogeographic classification system are: i) assessing and reporting on ecosystem status and trends, and ii) spatial planning for the conservation of ecosystem properties and management of human activities. Furthermore, these areas (and information) may be used in guiding the selection of future representative marine protected areas.

Section 5.5.8.3 Ecologically and Biologically Significant Areas (EBSA)

Page 5-93

1st para- It is recommended that the following statement be added to the end of this paragraph: '*Rather, it is a tool for highlighting an area that has particularly high ecological or biological significance and to facilitate provision of a greater than usual degree of risk aversion in the management of activities in these areas*'.

2nd para- To clarify Burgeo Bank, an EBSA, has **not** been considered as a potential *Oceans Act* MPA.

It should be noted that the Placentia Bay Extension is also managed as a Coastal Management Area (CMA). The Placentia Bay Integrated Management Planning Committee (PBIMPC) is a multi-stakeholder group which was formed to aid in addressing issues and concerns caused by multiple users within Placentia Bay, as an integrated and collaborative initiative.

Section 5.5.8.4 Areas of Interest

Page 5-94

It should be noted that the Area of Interest (AOI) process is not just taking place on the Scotian Shelf. Of the 11 EBSA's identified within the PBGB LOMA, five were put forward for formal consultation with stakeholders. Of the five EBSA's put forward for this formal consultation, three: The Laurentian Channel and Slope, St. Pierre Bank, and Southwest Shelf and Slope, are located within the project area, study area or Regional Area of the project. Following consultations, DFO – NL Region will recommend one of the five EBSA's as the Regional Area of Interest (AOI) for *Oceans Act* MPA designation by 2012.

Section 5.6.2 Aboriginal Fisheries

Page 5-99

1st sentence - This could be interpreted as saying the aboriginal group has the greatest level of fishing activity of all users. This sentence should say, "...*the greatest level of fishing activity among aboriginal groups...*"

Section 5.6.3 commercial Fisheries (3Pn, 3Ps, and 4Vn)

Page 5-102

Table 5.2.1 - Landed Weight should be in tonnes, not Kgs.

Section 6.2.4.2 Noise Emission - Shellfish Sound Sensory

Page 6-10

Discussion of production and detection of sound by crustaceans lacks sufficient references. The studies on goldfish seem inadequate to determine the potential effect on species such as cod in a field environment. It is unclear whether the clicks used as interfering sounds in the study were at all comparable to the pulsing of the air sleeve during a seismic survey.

Section 6.2.4.2 Noise Emission - Auditory Masking

Page 6-11

There is no reference provided for work on cod spawning. A separate reference should be listed for Fay (1998) even though it is cited in another paper. Also, extrapolating results of individual studies to population scale effects may be difficult. It may require a large response for an effect to become obvious in any one study or survey. Population scale effects may therefore not become obvious until some time has passed. Also, the studies to date have involved different species, environments, sound levels, field and lab conditions, which may be difficult to make comparison.

Section 6.2.4.2 Noise Emission - Behavioral Effects

Pages 6-12 to 6-13

Gausland (2003) and DNV Energy (2007) are missing from the Reference list. The names of senior scientists who reviewed these papers should also be given as a "personal communication".

Page 6-14

2nd para - It is questioned whether DFO (2004c) is the appropriate reference. This report deals with snow crab, while the section is discussing finfish. Should probably be DFO (2004b).

Section 6.2.4.2 Noise Emission - Physical and Anatomical Effects

Page 6-16

Table 6.4 - The paper by Booman et al. (1996) specifically discusses mortality for cod larvae and fry, however this is not discussed in the text.

Page 6-18

3rd para- Saetre and Ona (1996) is "as cited in Dalen et al (2007)", but was cited individually earlier in the report.

Section 6.2.4.3 Accidental Events

Page 6-20

1st para - There is no reference provided for discussion of risk to fish and shellfish from spills. Also, Riley (1984) is missing from the reference list.

Section 6.2.5 Cumulative Effects

Page 6-20

Although the effects of seismic surveys may not be on the order of magnitude of fishing, this does not necessarily indicate that they are insignificant on their own especially, since the data to assess their impact is so limited.

Page 6-21

4th para- A reference is needed to support the statement that “...no apparent measureable effects to fish or fisheries” have resulted from previous seismic surveys off Newfoundland and Nova Scotia.

Section 6.2.6 Monitoring and Follow-up

Page 6-21

Although follow-up and monitoring are not recommended, this might provide a useful exercise to add to the paucity of data available.

Section 6.3.4.1 Vessel Presence

Page 6-25

The mitigation efficacy of reduced vessel speeds in the operational area is unproven, but given the data on injury and ship strikes as it relates to vessel speeds, it seems that this is a good strategy that should be encouraged.

Section 6.3.4.2 Noise Emissions

Page 6-25

1st para - DFO (2004c) should actually be DFO (2004b).

Page 6-28

It is important to note that the 500 m safety zone has not yet been proven to be a “safe zone” for cetaceans as it relates to seismic sound energy impacts.

Section 6.3.4.3 Behavioral Effects

Page 6-29

It should be noted that “*Level B Harassment*” is an American designation for a type of disturbance and Southall et al. 2007 have introduced proposed new sound exposure levels for disturbance, TTS, PTS and injury within the American context.

Page 6-30

4th para- Richardson and Malme (1995) should be (1993).

Section 6.3.7 Summary

Page 6-34

Table 6.6 - Mitigations should also include continuing to pulse the smallest airgun during changes in line.

Sections 6.4.6 & 6.5.5 Monitoring and Follow-up

Pages 6-38 & 6-47

Tables 6.7 and 6.8 indicate that there is a “high” level of confidence in the assessment for marine turtles. Based on the lack of studies in this area, and the fact that sea turtles are harder to observe, it would seem prudent to say that the level of confidence is more likely to be “medium” rather than “high”.

Table 6.7 – Leatherback sea turtles are known to inhabit the south coast area from mid-summer to late fall; this is a significant overlap with the planned duration of the operation (not “transitory”).

Section 6.5 Species at Risk

Page 6-39

Largely deals with similar issues already discussed above and would have the same concerns with respect to a lack of data. The main consideration seems to be spatial and temporal, which overlap with species at risk.

Section 6.5.4 Effects Assessment

Page 6-41

It states that recovery plans for species that are pending will be considered over the course of the 9 year period once or if they become available. There also needs to be consideration given here that new species may be listed during this timeframe; critical habitat could be defined, etc. So the legislative requirements could change and the proponent will need to ensure that any new requirements are met.

Section 6.5.4 Effects Assessment - Fish Species at Risk

Page 6-43

There is no reference for the study of acoustic sound production in Atlantic Cod.

Section 6.5.4 Effects Assessment – Marine Mammals at Risk

Page 6-44

A Recovery Plan for the blue whale was approved in March 2010.

Section 6.5.6 Cumulative Effects

Page 6-46

Cumulative effects are not the “accumulation” of seismic sounds in the environment. Time of exposure and repeated exposures may cause cumulative effects for species within the study area, which may only become apparent in the long-term.

Page 6-47

Table 6.8 - Under Mitigation it states "*Adherence to the Statement of Canadian Practice on Mitigation of Seismic Noise to the extent reasonably practical*". Please clarify what is meant by “*reasonably practical*”.

Section 6.6 Sensitive Areas

Page 6-48

EBSA’s **may be** (not are) candidates for AOIs.

Section 9.2 Summary of mitigation and Follow-up

Page 9-1

Table 9.2 – Sightings data for marine mammals and sea turtles should be forwarded to DFO as well.

Comments provided by DFO in the Maritimes Region

Section 3.3.2. Project Phases

Page 3-4

The report states that “*The Project will proceed in three phases once activities begin. The actual timing of these activities within the temporal scope will be dependent on economic feasibility, vessel availability*”

and the results of interpretation of survey work from preceding phases.” This statement should also acknowledge that timing should take into consideration the use of the area by other resource users (i.e. fishers) as well as avoiding sensitive periods for fish (e.g. spawning). The purpose of an EA is to assess potential environmental impacts associated with a project and identify mitigative measures that can be used to reduce these impacts. Timing can often be used as a form of mitigation and the EA states that fishers have identified certain time periods when seismic surveys should not be carried out. These comments made by fishers are taken into consideration later in the document, but should also be identified up front.

Section 4.2.1 Identification of Valued Environmental Components

Pages 4-2 to 4-3,

Table 4.1 – Although this table refers to the Newfoundland fishery, there is no mention of the Nova Scotia Fishery. It is important to consider fisheries in both provinces in the context of the EA since the license area, proposed seismic shot lines and study area for the proposed project are within both jurisdictions.

Section 5.5.4. Marine Fish and Shellfish

Page 5-55

It states that “*There are 256 different species of marine fish that might be present on Burgeo Bank, St Pierre Bank, Grand Banks and channels*”. The study area also overlaps Rose Blanche Bank and St. Anns Bank. Were these areas considered in the assessment of marine fish? And why were the Grand Banks considered here?

Section 5.5.8.4. Areas of Interest

Page 5-94

DFO is in the process of selecting one new AOI in *both* the Maritimes Region and NL Region. See: <http://www.mar.dfo-mpo.gc.ca/oceans/e/ocmd/mpa/aoi-e.html> for a description of the selection process for the Maritimes Region. The Misaine Bank and Eastern Shoal Candidate AOI also extends into the Laurentian Channel and should probably be noted (even though the St Anns Bank site is closer to the exploratory license). On the EBSA’s map, the St Anns Bank site should be referred to as a "Candidate AOI" rather than an EBSA.

Section 6.6. Sensitive Areas

Page 6-48

1st para- As mentioned above, NL Region is also in the process of selecting an AOI. St Anns Bank is referred to as "the AOI" in at least one case. It is not an AOI at this stage; it is still a candidate AOI.

Section 6.7.4. Effects Assessment and Mitigation

Page 6-54

DFO Maritimes Region encourages the proponent to consult with all Maritimes Region fishing industry stakeholders that may be affected by this project.

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 Elizabeth Bennett, Senior Biologist, Marine Section by phone at 772-0853 or by e-mail (elizabeth.bennett@dfo-mpo.gc.ca).

Yours truly,



Carole Grant
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