

GENERAL COMMENTS

Environment Canada – CWS

Please note that EC's previous comments on the scoping document and project description (submitted to you on 15 January 2014) are still applicable to the project as described in the EA report.

Please note that documents mentioned in the comments are as follows:

- Protocol for Collecting Dead Birds from Platforms.pdf;
- Birds and Oil - CWS response plan guidance updated June 2012.pdf;
- O'Hara and Morandin.pdf;
- Stranded Bird Encounters Datasheet.xls; and
- Oiled Birds Protocol.pdf

Fish, Food and Allied Workers (FFAW)

There is a recurring mention within the Environmental Assessment about the utilization of a 7 day temporal pre-research survey separation. It is the understanding of the FFAW|Unifor that this is being accepted by DFO when it comes to their Spring and Fall Research Vessel Trawl Surveys, but it is not feasible to be utilized in connection with the execution of the Industry-DFO Collaborative Post-Season Trap Survey for Snow Crab. If there are further questions on these matters it would be worthwhile to communicate with the shell-fish research scientists at DFO. The reviewer would suggest that in the document when there is any mention of the 7 day temporal separation, it **has** to specify what science context this applies. Any possible impact, be it negative or positive, on the Industry-DFO Collaborative Post-Season Trap Survey for Snow Crab cannot be accepted.

SPECIFIC COMMENTS

Canada – Newfoundland and Labrador Offshore Petroleum Board

Section 2.0 Project Description, 1st para, line 3, pg 6 – If 2D and 3D programs using two different vessels are proposed for the same year, then the cumulative effect should be assessed.

Section 2.1 Spatial and Temporal Boundaries, page 6 – Only 4 coordinates of the Project Area have been provided. The reviewer can identify at least 8 more, please provide all coordinates of the Project Area.

Section 2.1 Spatial and Temporal Boundaries, page 6 – The coordinates for the Study Area should be provided.

Section 2.2.6.1, Seismic Vessel page 9 - It should be Gibraltar.

Section 2.2.8, Seismic Streamers, last line, page 9 – It is not evident that both 2D programs with one streamer and 3D programs with up to 16 streamers have been assessed.

Section 3.2.3.1, Temperature, page 25 – “...in all regions and coldest March in all regions...” this is an awkward sentence and needs to be addressed.

Section 3.3.1, Major Currents in the Study Area, paragraph 4, page 28 – This is a very awkward paragraph with multiple grammatical errors. “In *the* Laurentian Channel...”, “...on the eastern side of *the* Cabot Strait...”, “...along the western side of *the* Laurentian Channel.”

Section 3.3.1, Major Currents in the Study Area, paragraph 5, page 28 – “...which creates strong northwest winds, *cold* air and sea...”

Section 4.2.1.3, Plankton, page 35 – “The spring bloom *tends* to be...”

Section 4.2.1.4, Benthos, page 38 – “...would include barnacles, tunicates, *bryozoans*,...”

Section 4.2.1.4, Benthos, Subsection Deep-water Corals and Sponges last paragraph, page 41 – It should be *hexactinellid*.

Section 4.3.3.1, page 56 – The section’s title is misspelled, it should be *Historical*.

Section 4.3.3.2 Study Area Catch Analysis, 2005-2010, Subsection Fishing Gear in the Study Area, 1st paragraph, page 61 – If trawls and dredges accounted for 47% of the total catch weight and pots/traps and gillnets (fixed gears) accounted for 37% of the total catch weight, where is the other 16% of total catch weight?

Section 4.3.8 Industry and DFO Science Surveys, last paragraph, page 87 –

“Research station locations in relation to the Study Area *and Project Areas* are shown in Figure 4.42.”

Section 4.4 Seabirds, last paragraph, page 89 – There are several other birds on Schedule 1 that may traverse the Study Area. These should be identified and discussed.

Section 4.4.2 Information Sources, first paragraph, page 90 – It should read SEA maps, not SAE maps.

Section 4.5 Marine Mammals and Sea Turtles, page 102 – A general discussion of sea turtles should be included here.

Table 4.10, page 103 – There are three instances where “palagic” is used. The reviewer assumes it is meant to be “pelagic”, if so, this needs to be corrected.

Section 4.6.1.3 Northern Bottlenose Whale, paragraph 2, page 127 – It should read, “The recovery goal for this population is to...”

Table 4.14, page 135 – It should read, “Important migratory corridor for various fishes.”

Table 5.1, page 142 – only 4 coordinates of the Project Area have been provided. The reviewer can identify at least 8 more, please provide all coordinates of the Project Area.

Section 5.2.2 Program Consultations, pg 139 – In Section 4.34 Traditional and Aboriginal Fisheries on page 77 it is stated that portions of the Study Area waters are used by the Conne River Band Council (Miawpukek First Nation Government). Were they included in the consultations undertaken for the proposed MKI seismic program?

Section 5.2.2 Program Consultations, pg 140 – Please report on the consultations with the CNSOPB and the Government of France.

Section 5.6.3.1 Avoidance of Commercial Fishing Areas, page 154 – “~~To the best of its ability~~, MKI will avoid active fishing areas during the seismic survey.” This is more appropriate statement.

Section 5.8.4.1 Underwater Sound, subsection Behavioural Effects (Invertebrate Fisheries), paragraph 1, page 171 – Anecdotal information requires multiple observations (in these cases it would require multiple fish harvesters observing the same events). If it is only a single report from a fish harvester, which it appears to be, then the “anecdotal” needs to be removed and the observation by each fish harvester needs to be properly described as a single observation.

Section 5.9.2, Marine Transportation, pgs 216-219 – More detail should be provided on the amount of traffic in the area and not just the routes.

Section 5.9.3 Other Oil and Gas Activities, 1st para, pg 220 – Although historically there have been two or three seismic programs operating during any one season, there has been an increase in the number of seismic programs operating in Newfoundland and Labrador waters in a given year. For example, MKI is proposing to conduct up to two programs (i.e. 2D and 3D) with two vessels in the same year between 2015 and 2018.

Section 5.9.3 Other Oil and Gas Activities, 3rd para, line 2, pg 220 – MKI is included as an example of another seismic program. Further discussion is warranted regarding MKI's plans to conduct 2 separate programs in the same year.

Section 5.9.3 Other Oil and Gas Activities, 3rd para, line 6, pg 220 – Please expand on the statement “However, there are uncertainties regarding this prediction”.

Section 5.9.3 Other Oil and Gas Activities, 3rd para, line 8, pg 220 – Future activity of seismic programs (2014-2018). Are you referring to activities in 2015-2018?

Environment Canada (EC) – Canadian Wildlife Service (CWS)

Section 2.2.10 Logistics and Support, page 12 - Aircraft, particularly helicopters, have been known to cause significant negative impacts to migratory birds during various life stages (i.e. chick rearing, moulting). Mitigation measures such as timing and adjusting the altitude and pattern of helicopter flight lines can minimize disturbance. Helicopter use near seabird breeding colonies should be avoided from May 1st - August 31st (with an end-date of September 30th for Northern Gannet Colonies).

Section 4.4.2 Information Sources, page 90 - It should be noted in this section that the ECSAS program is ongoing. Updated information in the region that have been collected since the publication of Fifield et al. 2009 can be obtained by contacting Carina Gjerdrum, EC-CWS pelagic seabird biologist, at Carina.gjerdrum@ec.gc.ca

Section 4.4.2 Information Sources, paragraph 3, page 90 - Quote: "Some seabird nesting colonies have been re-surveyed since the SEA and that information has been incorporated here."

Population numbers for seabird colonies in this report are in large part from dated sources, and should be updated through the use of the most recent information available. Seabird colony numbers are routinely assessed and updated by EC-CWS and its partners, and data are compiled and stored in the CWS Atlantic Region Colonial Waterbird Database. These data can be obtained by contacting Sabina Wilhelm, EC-CWS colonial seabird biologist, at Sabina.wilhelm@ec.gc.ca.

Section 4.4.3.1 Overall Pelagic Seabird Distribution and Abundance, page 91 - It should be noted in this section that the ECSAS program is ongoing. Updated information in the region that have been collected since the publication of Fifield et al. 2009 can be obtained by contacting Carina Gjerdrum, EC-CWS pelagic seabird biologist, at Carina.gjerdrum@ec.gc.ca

Table 4.7 Monthly Relative Abundance of Seabird Species with Reasonable Likelihood of Occurrence in the Study Area, page 92 - It should be noted in this section that the ECSAS program is ongoing. Updated information in the region that have been collected since the publication of Fifield et al. 2009 can be obtained by contacting Carina Gjerdrum, EC-CWS pelagic seabird biologist, at Carina.gjerdrum@ec.gc.ca

Table 4.8 Estimated Numbers of Pairs of Colonial Seabirds Nesting at Important Bird Areas (IBAs) and other Important Sites (not designated IBAs) along Newfoundland's South Coast, page 93 - Population numbers for seabird colonies in this report are in large part from dated sources, and should be updated through the use of the most recent information available. Seabird colony numbers are routinely assessed and updated by EC-CWS and its partners, and data are compiled and stored in the CWS Atlantic Region Colonial Waterbird Database. These data can be obtained by contacting Sabina Wilhelm, EC-CWS colonial seabird biologist, at Sabina.wilhelm@ec.gc.ca.

Section 5.6.5.3 Ramp-Up/Soft Start, page 157 - We recommend to always perform a ramp-up/soft start of the airgun prior to use. This beneficial management practice will help deter migratory birds from diving in the area.

Section 5.6.5.7 Seabird Strandings, page 158 - A protocol for handling non-oiled but dead birds found on the vessel is attached.

Section 5.6.5.7 Seabird Strandings, page 158 - Quote: "MKI will request the ships to minimize lighting on board to the extent that it does not affect safety."

In Atlantic Canada, nocturnal migrants and night-flying seabirds (e.g. storm-petrels) are the migratory birds most at risk of attraction to lights and flares. Attraction to lights at night or in poor visibility conditions during the day may result in collision with lit structures or their support structures, or with other migratory birds. Disoriented migratory birds are prone to circling light sources and may deplete their energy reserves and either die of exhaustion or be forced to land where they are at risk of depredation.

To minimize risk of incidental take of migratory birds due to human-induced light, Environment Canada recommends at minimum the following beneficial management practices:

- The minimum amount of pilot warning and obstruction avoidance lighting should be used on tall structures;
- The use of only strobe lights at night, at the minimum intensity and minimum number of flashes per minute (longest duration between flashes) allowable by Transport Canada, is recommended; and
- Using the minimum number of lights possible is recommended.

Table 5.2 Summary of Mitigations Measures by Potential Effect, page 161 - Quote: "Temporary or permanent hearing damage/disturbance to marine mammals."

EC recommends adding migratory seabirds to this category in addition to marine mammals. Ramp-up of airguns should be listed as a potential mitigation used to deter migratory birds from the location.

Table 5.2 Summary of Mitigations Measures by Potential Effect, page 161 -

Strategies to minimize or prevent accidental or chronic releases must be emphasized in a mitigation program. Proponents are required to demonstrate response preparedness and to identify provisions for ensuring measures are implemented to eliminate or minimize resulting sheens or slicks in the event of accidents and malfunctions involving the release of oil. The following considerations are requested to be factored into the development of a response plan that would help reduce impacts on seabirds:

- Measures for containing and cleaning up spills (of various sizes) either at the drill site or during transport;
- Equipment that would be available to contain spills;
- Specific measures for the management of large and small spills (e.g., breaking up sheens);

- Mitigation measures to deter migratory birds from coming into contact with the oil;
- Mitigation measures to be undertaken if migratory birds and/or sensitive habitat becomes contaminated with the oil; and
- The type and extent of monitoring that would be conducted in relation to various spill events.

In order to assist proponents in preparing a plan for dealing with an oil spill which would potentially threaten birds, EC-CWS has prepared a guidance document (attached), as well as a sample protocol document used for oiled birds on beaches (attached).

Section 5.8.6.3 Vessel Lights, 1st paragraph, page 194 - Change from "migratory bird salvage permit" to "live seabird handling permit".

Section 5.8.6.4 Helicopter Presence, page 194 - Aircraft, particularly helicopters, have been known to cause significant negative impacts to migratory birds during various life stages (i.e. chick rearing, moulting). Mitigation measures such as timing and adjusting the altitude and pattern of helicopter flight lines can minimize disturbance. Helicopter use near seabird breeding colonies should be avoided from May 1st - August 31st (with an end-date of September 30th for Northern Gannet Colonies).

Section 5.8.6.7 Accidental Releases, 1st paragraph, page 195 - Quote: "It is expected that solid streamers also will be used during the subsequent 2D and 3D seismic surveys (2015-2018), but details have not been finalized yet."

We recommend a commitment to using solid streamers instead of liquid streamers. If liquid streamers are used, a contingency plan for mitigating potential leaks in the streamers must be made. Please consult O'Hara and Morandin (2010; attached) for information regarding the effects that even very small quantities of oil can have on thermoregulatory ability in migratory birds.

Section 5.8.6.7 Accidental Releases, 4th paragraph, page 195 - Quote: "The illegal discharge of oily bilge water off the southeast coast of Newfoundland is a chronic problem (Wiese and Ryan 1999, 2003)."

With regard to the above statement, EC advises the proponent that although chronic ship-source oil pollution continues to threaten wildlife in eastern Canadian waters, Wilhelm et al. (2009) have documented a decline in oiled bird occurrences and oil pollution detections in recent years.

Please refer to the following article:

Sabina I. Wilhelm, Gregory J. Robertson, Pierre C. Ryan, Stan F. Tobin, Richard D. Elliot, 2009. Re-evaluating the use of beached bird oiling rates to assess long-term trends in chronic oil pollution. Mar. Poll. Bull. 58(2): 249-55.

Table 5.20 Summary of Mitigations Measures, page 221 - EC recommends adding migratory seabirds to this category in addition to marine mammals. Ramp-up of airguns should be listed as a potential mitigation used to deter migratory birds from the location.

Section 5.10 Mitigations and Follow-up, 4th paragraph, page 222 – Quote: "It is understood by MKI that a CWS Migratory Bird Handling Permit will be required and that it will be secured as it has been in the past."

The permit should be referred to as a Migratory Birds Convention Act (MBCA) permit, not a Canadian Wildlife Service (CWS) permit.

Fisheries and Oceans Canada (DFO)

Section 4.3.3 Domestic Fisheries, page 56 - Since the seismic program is planned to continue into 2018 and the Environmental Assessment report utilizes catch and effort data only up to 2010, it would be prudent to periodically revisit the potential impacts on commercial fisheries if the fish activity or the planned seismic activity varies significantly from that described in this report.

Section 4.3.3.1 Historical Fisheries, 1st paragraph, last two sentences, page 57 - It should be noted that American Plaice has been under moratoria in 3M since 1996 and in 3LNO since 1995. It is suggested that the 2nd last sentence be deleted and replaced with *"Atlantic Cod and American Plaice in a number of NAFO Divisions remain priority species for Canada and rebuilding plans are currently in place for several of these stocks."*

Table 4.10 Marine Mammals Known or Expected to Occur in the Southern Grand Banks Study Area, page 103 - When referring to SARA listed species the population should also be identified.

Table 4.10 Marine Mammals Known or Expected to Occur in the Southern Grand Banks Study Area, page 103 - Please note that Schedule 1 of the SARA is the official list of SARA species. Schedules 2 and 3 identify species to be assessed by COSEWIC using revised criteria when SARA came into effect. Table 4.10 should be amended to delete the wording "Schedule 3 Special Concern" and "Schedule 2 Threatened" from the "SARA status" column for Humpback Whale and Harbour Porpoise respectively.

Table 4.10 Marine Mammals Known or Expected to Occur in the Southern Grand Banks Study Area, page 103 - The Davis Strait-Baffin Bay-Labrador Sea population of Northern Bottlenose Whale should be included in this table as individuals from this population may occur in the Project Area/Study Area.

Table 4.10 Marine Mammals Known or Expected to Occur in the Southern Grand Banks Study Area, page 103 - Sperm Whale is a mid-priority candidate species under COSEWIC. This should be amended accordingly in the table.

Table 4.10 Marine Mammals Known or Expected to Occur in the Southern Grand Banks Study Area, page 103 - Hood Seal and Harp Seal are both high priority candidate species under COSEWIC. The respective sections of the table should be amended accordingly.

Section 4.5.3 Toothed Whales (Odontocetes) and 4.5.3.1 Sperm Whale, pages 111-117 - The last sentence should refer to COSEWIC assessments under Schedule 2 rather than SARA listings.

Section 4.5.3 Toothed Whales (Odontocetes) and 4.5.3.1 Sperm Whale, pages 111-117 - As noted Sperm Whale is a mid-priority candidate species under COSEWIC as such

the last sentences of both the 1st paragraph Section 4.5.3 and 1st paragraph Section 4.5.3.1 (page 111) should be amended accordingly.

Section 4.5.3 Toothed Whales (Odontocetes) and 4.5.3.1 Sperm Whale, pages 111-117 - The Davis Strait-Baffin Bay-Labrador Sea population of Northern Bottlenose Whale should be detailed in Section 4.5.3.1 as individuals from this population may occur in the Project Area/Study Area.

Section 4.5.4 True Seals (Phocids), last sentence, page 117 - In regards to the last sentence of this section, Hooded Seal and Harp Seal are both high priority candidate species under COSEWIC. This sentence, as well as similar references to hooded and harp seal in Sections 4.5.4.3 (page 119) and Section 4.5.4.4 (page 119) respectively, should be amended accordingly.

Table 4.13 SARA Schedule 1 and COSEWIC-listed Marine Species with Reasonable Likelihood of Occurrence in the Study Area, page 124 - The title of this table should be revised to read as, "*SARA-listed and COSEWIC-assessed Marine Species that May Occur in the Study Area*" as species are assessed by COSEWIC, not listed.

Table 4.13 SARA Schedule 1 and COSEWIC-listed Marine Species with Reasonable Likelihood of Occurrence in the Study Area, page 124 - When referring to SARA listed species the population should also be identified.

Table 4.13 SARA Schedule 1 and COSEWIC-listed Marine Species with Reasonable Likelihood of Occurrence in the Study Area, page 124 - The Right Whale should be referred to as the North Atlantic Right Whale.

Table 4.13 SARA Schedule 1 and COSEWIC-listed Marine Species with Reasonable Likelihood of Occurrence in the Study Area, page 124 - Atlantic salmon should be listed as separate populations with their respective COSEWIC status.

Table 4.13 SARA Schedule 1 and COSEWIC-listed Marine Species with Reasonable Likelihood of Occurrence in the Study Area, page 124 - The Davis Strait-Baffin Bay-Labrador Sea population of Northern Bottlenose Whale should be included in this table as individuals from this population may occur in the Project Area/Study Area.

Table 4.13 SARA Schedule 1 and COSEWIC-listed Marine Species with Reasonable Likelihood of Occurrence in the Study Area, page 124 - Hood Seal and Harp Seal are both high priority candidate species under COSEWIC their status in this table should be amended as per earlier comments.

Table 4.13 SARA Schedule 1 and COSEWIC-listed Marine Species with Reasonable Likelihood of Occurrence in the Study Area, page 124 - Sperm Whale is a mid-priority species under COSEWIC its status in this table should be amended as per earlier comments.

Section 4.6 Species at Risk, page 125 - The document, "Recovery Strategy for the North Atlantic Right Whale (*Eubalaena glacialis*) in Atlantic Canadian Waters" should be referenced in this section; as such the listing provided in the 3rd sentence 2nd paragraph should be amended accordingly to include North Atlantic Right Whale.

Section 4.6 Species at Risk, page 125 - Please note that the Recovery Strategy for the St. Lawrence Estuary Population of Beluga Whale is no longer considered "proposed", the final version is now posted on the SARA Public Registry, and as such the 4th sentence 2nd paragraph (page 125) should be amended to reflect the same.

Section 4.6 Species at Risk, 3rd paragraph, page 125 - states, *"MKI will monitor SARA issues through the law gazettes, the Internet and communication with DFO and Environment Canada, and will adaptively manage any issues that may ariseduring the course of the Project (2014-2018), and will continue to monitor any status changes."* We would like to emphasize the importance of these statements as well as request that the proponent revise the latter statement to include future identification of critical habitat during the life of the project.

Section 4.6.1.1 North Atlantic Right Whale, first paragraph, last sentence, page 126 - this should be revised as critical habitat has been identified and is no longer considered "proposed".

Section 5.6 Mitigation Measures, pages 149-161 - It is strongly recommended that the proponent be required to, and commit to, 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.

Section 5.6 Mitigation Measures, pages 149-161 - The measures proposed to avoid interference with fisheries science surveys appear adequate. It should be noted that DFO did not specifically prescribe the temporal and spatial separation measures outlined in section 5.6.3.3.

Section 5.8.8 Species at Risk VEC, page 212 - *"If species not currently designated on Schedule 1 of SARA do become listed on this legal list during the remainder of the life of the Project (2014-2018), the Proponent will re-assess these species considering the prohibitions of SARA and any recovery strategies or action plans that may be in place,"* As noted previously DFO would like to emphasize the importance of this statement as well as request that the proponent revise the latter statement to include future identification of critical habitat during the life of the project.

Section 5.8.8 Species at Risk VEC - As noted earlier (for Section 4.6), the document "Recovery Strategy for the North Atlantic Right Whale (*Eubalaena glacialis*) in Atlantic Canadian Waters" should be referenced in this section, as such the listing provided in the

3rd sentence (page 215) should be amended accordingly to include North Atlantic Right Whale.

Section 5.8.8 Species at Risk VEC - The document, "*Recovery Strategy for Northern Wolffish (Anarhichas denticulatus) and Spotted Wolffish (Anarhichas minor), and Management Plan for Atlantic Wolffish (Anarhichas lupus) in Canada*" should be referenced in this section.

Section 5.8.8 Species at Risk VEC - Please note that the Recovery Strategy for the St. Lawrence Estuary Population of Beluga Whale is no longer considered "proposed", the final version is now posted on the SARA Public Registry. As such, the 4th sentence page 215 should be amended accordingly.

Table 5.18 Assessment of Effects of project Activities on Species at Risk VEC, page 213 - The row for Support Vessel under Underwater Sound has been left blank, was this an accidental omission? Please explain and/or provide values.

Fish, Food and Allied Workers (FFAW)

Section 2.2 Project Overview, Page 7 - Spelling: on board vs. onboard, there is a lack of consistency in the language use.

Section 2.2.6.2 Support Vessel, page 9 - The FLO should lead the communications with fishing vessels in the vicinity of the Seismic Program, not the master of the support vessel.

Section 4.2.2.1 Macro-invertebrate and Fish Species Harvested during Commercial Fisheries, Snow Crab subsection, second paragraph, Page 43 - There is an introduction of CW without any explanation of what this is. Although the reviewer is aware of this notion, as this is a public document any abbreviations have to be explained.

Section 4.2.2.1 Macro-invertebrate and Fish Species Harvested during Commercial Fisheries, Snow Crab subsection, third paragraph, Page 43 - “due to a recent warm oceanic regime” would be better and more accurate to read “due to a warming oceanographic regime”.

Section 4.2.2.1 Macro-invertebrate and Fish Species Harvested during Commercial Fisheries, Atlantic Cod subsection, Page 47 - Atlantic Cod section has no mention or discussion of 3Ps Cod, which is an independent stock within the Study Area. It is a significant point that the Cod in 3Ps is not mentioned, especially as this is a stock being harvested year round.

Section 4.2.2.1 Macro-invertebrate and Fish Species Harvested during Commercial Fisheries, Atlantic Cod subsection, Page 48 - There is clear evidence within academic and governmental stock research that there have been strong signs of improvements to the abundance of cod.

Section 4.2.2.1 Macro-invertebrate and Fish Species Harvested during Commercial Fisheries, Stimpson’s Surf Clam subsection, Page 50 - In the discussion of Clam it is worth noting that the entire quota is held by a single company in Nova Scotia.

Section 4.3.1 Information Sources, Page 54 - Unit Area (UA) is first defined here, but is also used in long form on page 44. The UA short form is used several times before being define on page 54. For document consistency, introduce the short form at first use in document and then follow through with it.

Section 4.3.1 Information Sources, - The reviewer would like to know if all of the groups listed actively engaged in the consultations, or is this a list of who was contacted by the component.

Section 4.3.3.1 Historical Fisheries, Pages 56 and 57 - In the context of the changing composition of the commercially harvested species, it is worth to note how there have

been changes to the environmental regime that impacts the species composition – independent of the harvesting activity.

Table 4.5, Page 86 - There is no qualifier for what measurement is used for the “Mean Catch Depth Range”.

Section 4.3.8 Industry and DFO Science Surveys, Page 87 - There appears to be a diminishing of the importance of the Industry-DFO Collaborative Post-Season Trap Survey for Snow Crab, it is a survey that has been ongoing for over a decade using conventional commercial equipment.

Section 5.8.5.1 Underwater Sound, Avoidance subsection, page 181 - Avoidance needs to mention Cod as it is a rebounding stock that is harvested in 3Ps (in the Study Area) year round.

Section 5.8.5.2 Vessel Presence (including towed seismic equipment), Avoidance subsection, page 185 - any direct mention of “fixed gear” should be removed, as all active fishing grounds have to be avoided.

Section 5.8.5.2 Vessel Presence (including towed seismic equipment), Page 186 - The locations of the Industry-DFO Post-Season Trap Survey for Snow Crab have been fixed for the past decade.

Figure 5.4 Page 218 - it would be appear to have been pertinent to include the shipping lanes for Terra Nova and White Rose petroleum production also.

Section 5.9.3 Other Oil and Gas Activities, first paragraph, Page 220 - this may hold true historically, but in recent years there has been an increase in the Seismic Programs operating in Newfoundland and Labrador waters in a given year.

Section 5.9.3 Other Oil and Gas Activities, third paragraph, Page 220 – this paragraph should mention the proposed Southern Grand Banks Seismic Program proposed by GXT.

Appendix 1, Page A1-1: It is factually impossible that the Azores are in any way considered to be west of Newfoundland and Labrador.

Appendix 1, Page A1-2 – With reference to the NL Dept of Fisheries and Aquaculture Stakeholder participants, it should read Tom Dooley.

Department of National Defence (DND)

The proponent is reminded that DND is likely to be operating in the vicinity of the Study Area in a non-interference manner during the project timeframe; thus, there is potential for interaction with naval operations in areas where seismic activities will occur. Please keep DND informed of dates and locations of seismic activities.

Attachment 1

**Comments from the
Harbour Authority of Francois**

Attachment 2

**Comments from the
Harbour Authority of Lamalines**

Attachment 3

**Comments from the
Harbour Authority of Lawn**

Attachment 4

**Comments from the
Harbour Authority of Point-Au-Gaul**