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Environmental Stewardship Branch
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July 22, 2011

File No.: 4194-10

Mr. Darren Hicks
Canada Newfoundland Offshore Petroleum Board
Fifth Floor, TD Place
140 Water Street
St. John's, NF A1C 6H6

Dear Mr. Hicks:

**RE: EA Report Addendum –Multi Klient Invest Offshore Labrador 2D EAS 2011-033C
Seismic Program 2011-2017**

As requested in your letter of July 4, 2011, Environment Canada has reviewed the addendum to the environmental assessment report for the above noted project. It is understood that Multi Klient Invest is proposing to conduct 2D seismic programs on the Labrador Shelf during 2011 - 2015.

The following EC comments stem from the department's mandate under the *Migratory Birds Convention Act* (MBCA) and Section 36 of the *Fisheries Act*. Pertinent EC expertise, and related comments, also originate with the *Canadian Environmental Protection Act* (CEPA), the *Canadian Wildlife Act*, and the *Species at Risk Act* as well as *Department of the Environment Act*.

REVIEW COMMENTS

The Canadian Wildlife Service of Environment Canada (EC-CWS) has reviewed the above project and has the following comments. The comments in black refer to EC-CWS's comments on the first draft of the EA document. The comments in red italics are EC-CWS's comments on the current draft. Where the proponent did not address EC-CWS's concerns, further information is provided.

1) In general, the marine bird section (5.3.5) is extremely brief, contains several factual errors and is missing required information. Several main reference sources for marine bird distribution at sea could have been consulted to better describe the seabird resource in the area. Those references are provided here:

- Brown, R. G. B. 1986. Revised Atlas of Eastern Canadian Seabirds. Canadian Wildlife Service, Ottawa, ON.
- Fifield, D. A., Lewis, K. P., Gjerdrum, C., Robertson, G. J., and Wells, R. 2009. Offshore Seabird Monitoring Program. Environment Studies Research Funds Report no. 183. St. John's. 68 p. Available at: <http://www.esrfunds.org/pdf/183.pdf>

- Lock, A. R., Brown, R. G. B., and Gerriets, S. H. 1994. Gazetteer of Marine Birds in Atlantic Canada: An Atlas of Vulnerability to Oil Pollution. Canadian Wildlife Service, Atlantic Region.

These references were requested in the previous draft, but were not added.

2) Page numbers were requested to be added to the final document.

This has been done to our satisfaction.

3) There was a reference (Section 5.7, Paragraph 1 and Table 9 in the March EA) to areas important to seabirds in the study area. The data was taken directly from Huettmann and Diamond 2000. This publication (and thus the table) only discussed areas of importance to juvenile and immature birds during a restricted period of the year taken from the Programme intégré de recherches sur les oiseaux pélagiques (PIROP) dataset. This data did not represent areas that are important to the species in general or during the entire year, and thus omitted a significant proportion of the population and annual cycle.

It appears that instead of providing more information to represent areas that are important in general or during the entire year, the proponent removed the existing information altogether. This should be rewritten to represent areas important to the species in general or during the entire year.

4) In Section 5.7 of the March EA, several species (including several that occur in significant numbers in the study area) were missing from Table 8 (and thus from the document). Species that should have been included were: Northern Gannet, Common Murre, Red-necked Phalarope, Sooty Shearwater, Manx Shearwater, South Polar Skua (which could simply be lumped in with Great Skua for simplicity), Dovekie, Herring Gull, Great Black-backed Gull, Glaucous Gull, Iceland Gull, and Arctic Tern.

The proponent has added these species to the table. EC-CWS is satisfied with the response.

5) One species, Arctic Loon, is restricted in range to a small section of the coast of Alaska and should have been removed from the table.

This has been done. EC-CWS is satisfied with the response.

5) Several species names were mis-spelled in the March EA document - correct spellings are: Leach's Storm-Petrel (*Oceanodroma leucorhoa*), Black Guillemot, Red-throated Loon, and Great Skua (*Stercorarius skua*). Correct spelling of common and Latin names can be found at: <http://www.aou.org/checklist/north/print.php>.

The proponent has made the corrections, though Red-throated Loon has been removed from the document. EC-CWS is satisfied with the response, though the removal of the Red-throated Loon is unexplained.

6) A small selection of species was chosen for closer attention, shown in Section 5.7 of the March EA. No justification was given for considering only those species, several of which are rare or non-existent in the study area. **Every species listed** in Table 8 (subject to the changes listed above) requires assessment for its occurrence in the study area. Species can be grouped (for example, all shearwaters, all jaegers, murre, gulls) for this exercise. The sections on each of these species/groups should identify what is known of the **distribution and abundance** of each group in the study area, including any **quantitative information available in the above referenced reports**.

*This was done in section 5.3.5.1, though the proponent failed to use the above references. The information provided was brief, particularly concerning abundances. The proponent should identify what is known of the **distribution and abundance** of each group in the study area, including any **quantitative information available in the above referenced reports.***

7) Section 5.7.1.1 of the March EA focused on the Thick-billed Murre, particularly Thick-billed Murres breeding in the arctic, while it ignored Thick-Billed Murres breeding elsewhere, and in fact ignored all Common Murres. Both murre species occur in the study area and can be difficult to differentiate at sea, so a section on the "murre" in general is appropriate. There was a sentence in this section that stated that Thick-billed Murres were not expected in the study area during seismic activity. This was incorrect: the literature sources that the proponent quoted to justify this conclusion specifically detail the movements of Thick-billed Murres breeding in the Canadian Arctic. Thick-billed Murres and Common Murres breed in significant numbers along the coast of Labrador as well, and the study area is well within their foraging range during the summer. Also, the proponent has focused only on breeding birds. Most seabirds take from 1 to 4 years to mature to breeding age and as such a large portion of most species populations are pre-breeders that are at sea for most of the year. An examination of the references provided above will help to clarify the distribution of murres, and will show that they occur in significant numbers in the study area during the study months.

In the current draft of the EA, the proponent removed the Thick-billed Murre section altogether, save for two lines in a paragraph in section 5.3.5.1. Overall, this section is extremely brief, and neglected to take into account the comments from EC-CWS stated above.

8) In Section 5.7.1.2 of the March EA, concerning Northern Fulmar, the third sentence stated that Northern Fulmars are not likely to be encountered in the study area. This was incorrect: Northern Fulmar is one of the most numerous birds found far from shore at all times of the year.

The proponent reworded their document to say that the Labrador Sea is a key wintering area for Northern Fulmar. EC-CWS is satisfied with the response. However, the proponent removed the distribution map, and it is unclear why the proponent decided to do this.

9) In section 5.7.1.5, information concerning the Ivory Gull was out of date. The Ivory Gull has been assessed by COSEWIC and has been listed as *endangered* by COSEWIC and is now listed on schedule 1 of SARA as such.

The proponent updated the status of the Ivory Gull in the current document. EC-CWS is satisfied with the response.

10) In Section 9.1.3 of the March EA, It was advised that that section should include information on the foraging habits of the different species groups.

This was done in Table 5.4 of the current EA. EC-CWS is satisfied with the response.

11) In Paragraph 5 of Section 9.1.3 of the March EA, the final sentence stated that the ramping up of the air gun would "reduce or remove the likelihood that birds will choose to come close enough to the array to experience hearing damage or other physical harm". There is no data to support this claim. In paragraph 3 of this section, the proponent states that Evans et al. (1993) detected no observable change in seabird behaviour, with birds neither being attracted to nor repelled from the seismic source. It may well be that the birds will not come close enough to incur physical damage, but there are no studies to show how close is too close for physiological damage.

In 6.1.3 of the current EA, the proponent states that there is no data suggesting that seismic surveys have adverse impacts on birds. It may well be that the birds will not come close enough

to incur physical damage, but there are no studies to show how close is too close for physiological damage. The proponent does concede that noise from the surveys could adversely affect surface-feeding and diving seabirds near the air source arrays.

12) In Paragraph 7 of this section, exposure to lights: It is common practice for all seismic vessels to have the Marine Mammal Observer search the vessel each morning for birds stranded on deck (typically storm-petrels) and care for them. Should storm-petrels or other species become stranded on vessels, the proponent is expected to adhere to the protocol described in Williams and Chardine's brochure entitled, *The Leach's Storm Petrel: General Information and Handling Instructions* (to be provided directly). A permit is required to implement the Williams and Chardine protocol. The proponent should be advised that it is required to complete a permit application form prior to proposed activities. This form is available from Andrew Macfarlane at the Canadian Wildlife Service of Environment Canada, who can be reached by phone at 506-364-5033 or email at andrew.macfarlane@ec.gc.ca.

The proponent has indicated in section 6.1.5.1 that this permit will be obtained and that the Williams and Chardine protocol will be observed. EC-CWS is satisfied with the proponent's response.

13) In Paragraph 8 of this section, the proponent asserts that the project will likely have a small impact on seabirds since there is a "small impact of seismic sounds in the air". The implication is that since the birds are in the air above the water and the seismic device is pointing downward into the water, the seismic sounds will not affect birds in flight. This ignores the fact (detailed in paragraph 4 of this section) that several of the species in the study area spend a considerable amount of time under water.

The proponent addressed this satisfactorily in Section 6.1.5.2.

14) In the previous EA document, the proponent stated that it was unaware of other seismic programs in the area that would take place during the study. This is incorrect; possible other projects include:

- Chevron Offshore Labrador Seismic Program, 2010-2017
- Investcan seismic, geohazard and VSP program on Labrador Shelf, 2010-2017
- Husky Labrador Shelf seismic and geohazard program on Labrador Shelf, 2009-2017

The proponent removed any mention of other seismic activities in the area, in the section 6.1.6 (Cumulative Effects). In order to effectively address cumulative effects, the above studies should be mentioned in this section.

15) Data - In an effort to expedite the process of data exchange, EC-CWS requests that the data (pertaining to migratory birds and species at risk) collected from surveys be forwarded in digital format to our office following completion of the study. These data will be centralized for our internal use to help ensure that the best possible natural resource management decisions are made for these species in Newfoundland and Labrador. Metadata will be retained to identify source of data and will not be used for the purpose of publication. EC-CWS will not copy, distribute, loan, lease, sell, or use of this data as part of a value added product or otherwise make the data available to any other party without the prior express written consent.

The proponent indicates that Marine bird data reports will be provided following this survey and any other subsequent seismic surveys. EC-CWS additionally requests that the raw data be forwarded to us under the above restrictions.

16) Fuel - The proponent should ensure that all precautions are taken by the contractors to prevent fuel leaks from equipment, and that a contingency plan in case of oil spills is prepared. Furthermore, the proponent should ensure that contractors are aware that under the *Migratory Birds Regulations*, “no person shall deposit or permit to be deposited oil, oil wastes or any other substance harmful to migratory birds in any waters or any area frequented by migratory birds.” Biodegradable alternatives to hydraulic fluid for heavy machinery are commonly available from major manufacturers. Such biodegradable fluids should be considered for use in place of petroleum products whenever possible, as a standard for best practices. Fuelling and servicing of equipment should not take place within 30 meters of environmentally sensitive areas, including shorelines and wetlands.

EC-CWS is satisfied with the response.

I trust that this information will be of assistance in your review of this proposal. If you wish to discuss these comments or have further questions, please do not hesitate to contact me at your convenience.

Yours truly,

Original Signed by Glenn Troke

Glenn Troke
Environmental Assessment Coordinator
Environmental Protection Operations Directorate
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cc Ian McCracken