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Your file Votre référence

August 8, 2017

Our file Notre référence
PATH #17-HNFL-00022

Darren Hicks
Canada-Newfoundland and Labrador Offshore Petroleum Board
140 Water St., 4th Floor
St. John's, NL A1C 6H6

Dear Mr. Hicks:

***Re: Review of Nexen Energy ULC Eastern Newfoundland Offshore Geophysical,
Geochemical, Environmental and Geotechnical Program (2018-2027),
Environmental Assessment***

I am writing further to your Jun 27, 2017 letter requesting review of the June 2017 Environmental Assessment (EA) Report prepared in relation to the above noted offshore program proposed by Nexen Energy ULC.

Based on review of the above noted EA Report the following comments are offered for your review and consideration.

- Section 3.4.7 Cumulative Environmental Effects (page 35) – Regarding “...concrete GBS which is being constructed at Bull Arm...” should be updated.
- Section 4.2.4 Special Areas (pages 157-171) – the report mentions areas protected under “agreements” due to their ecological characteristics or importance – voluntary fisheries closures should be included in this section.
- Section 4.2.4.1 Canadian (Federally) Identified and Designated Areas (Fisheries Closure Areas within Canada's Exclusive Economic Zone, page 158) – Additional Fisheries Act Closures that should be listed include:
 - The Hawke Channel
 - Lobster closures established to protect lobster habitat that are located on the Eastern side of Newfoundland (i.e., Gander Bay, Glovers Harbour, Gooseberry Island, Moose Island)
 - Crab closures and conservation areas closed to protect crab habitat on the Eastern side of Newfoundland (i.e., Bonavista Bay Exclusion Zone A, Bonavista Bay Exclusion Zone B, Crab Trinity Bay Exclusion Zone A, Crab Trinity Bay Exclusion Zone B, Crab Nearshore Conservation Exclusion Zone, Crab Conception Bay Exclusion Zone, Crab Eastern Avalon Exclusion Zone, Crab



Southern Avalon Exclusion Zone, Crab Area 8Bx Conservation Zone, Crab Area 9a Exclusion Zone)

- Proposed Fisheries Act closures (Hopedale Saddle and Tobin's Point). Fisheries and Oceans Canada are currently consulting with stakeholders on these areas, which are proposed for the end of 2017.
- Section 4.3.1.7 Aboriginal Fisheries (bullet d, page 233) – This document should include swordfish for Miawpukek First Nation.
- Section 5.2.3 Required and Planned Mitigation Measures (page 261) – Regarding “*Should such organisms be observed on-site during conduct of the field program, the relevant technical crew and Nexen representatives will discuss to determine the appropriate mitigation approach.*”, will the technical crew and Nexen representatives be trained in identification of sensitive benthic species?
- Section 5.4.2 Potential Environmental Issues, Interactions and Existing Knowledge (page 265) – Regarding “*Studies indicate that plankton, eggs or larval mortality (if it occurs) would be limited to within a few metres of a seismic array.*” should have a reference. There is also evidence for mortality of plankton, eggs or larvae at distances further than a few meters – this should be mentioned.
- Section 5.4.2 Potential Environmental Issues, Interactions and Existing Knowledge (page 266 Table 5.2) –In the “*Summary of Existing Knowledge*” and throughout, the method used to describe the amplitude of the sound pressure level should be included, e.g. root-mean-square (RMS), peak to peak, or peak. Also, in selected examples of studies where damage to fish from seismic sound has been noted (page 272) - the distance from the sound source should be included in these examples.
- Section 5.4.3 Environmental Effects Assessment (Table 5.3 page 278; Table 5.9 page 300; Table 5.17 page 321) – Regarding the “*Certainty*” rating of “*H*”, for “*Seismic Sound*”, given the knowledge gaps associated with effects of seismic sound - recommend changing the rating from “*H*” to “*M to H*” for Fish and Fish Habitat and Marine Fisheries VECs and changing to “*M*” for Marine Mammals and Sea Turtles VEC.
- Section 5.8.3 Environmental Effects Assessment (pages 311-315)
 - This section focuses on how the activities proposed for the Project will not interact with the seabed and benthic animals, but does not address impacts to pelagic organisms. Please describe potential effects on pelagic species.
 - This section addresses the ‘short duration’ of contact which will occur with the seafloor but does not discuss potential impacts to fragile, long lived, slow growing sponges and corals or the recovery time for these organisms. Please describe potential impacts to corals and sponges, including recovery time, and any significant adverse effects.
 - The report does not acknowledge the known impacts of seismic testing on zooplankton, krill and other small marine crustaceans such as copepods (Day et al., 2010 and Neo et al., 2015), which are important food sources for many



marine fish, marine mammals and seabirds. Please describe potential impacts to these species and any significant adverse effects.

Thank you for providing the opportunity to review and provide comments on this project EA Report. If you have any questions or comments with respect to the above or if you require anything further please contact me by phone (709.772.6105) or email (catherine.andrews@dfo-mpo.gc.ca).

Sincerely,

Catherine Andrews
Senior Fisheries Protection Biologist – Marine, Coastal, Oil and Gas Development
Fisheries Protection and Regulatory Reviews
Ecosystems Management Branch