

Merits Review – Hebron Project

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Gail Fraser, Faculty of Environmental Studies, York University, 4700 Keele St., Toronto ON M3J 1P3
gsfraser@yorku.ca

Dear Commissioner Ayre;

Please consider the following comments below as a submission for the Merits Review process for the Hebron Development Project. Below, I discuss two main concerns I have relating to the Hebron Development Project Comprehensive Study Report (CSR).

- 1) Predictions on environmental effects where data exists, but are not presented in the CSR. I note two examples:
 - a. The occurrence of oil sheens associated with legal discharges of produced water. The CNLOPB has asked operators to collect oil sheen data in relationship to discharges of produced water. The presence of oil sheens can occur with discharges that are within the limits as identified in the Offshore Waste Treatment Guidelines (National Energy Board et al. 2010, see also Fraser et al. 2006). Diving birds exposed to oil via oil sheens may be at risk of death via hypothermia (Jensen *et al.* 1985; see also O’Hara and Moradin 2010). Thus, oil sheens from legal discharges represent a risk to seabird populations occupying the area around the discharging platform. The oil sheen data being collected by operators are relevant to the prediction examining the environmental effects of produced water discharges on marine birds (Hebron CSR, pg 9-48; “Wastewater (*e.g.*, produced water, storage displacement water, deck drainage)”). Fraser et al. (2006: pg 34) specifically notes that because oil sheen data were not publicly available, the lack of data compromised their model’s estimates of seabird mortality as they relate to produced water discharges. Five years after this publication the data are still not presented and analyzed in the Hebron CSR.
 - b. Data pertaining to the proponent’s success in containing, cleaning up or assessing impacts to wildlife from spills of hydrocarbons or synthetic-hydrocarbons for the Hibernia project. Oil pollution through the occurrence of small hydrocarbon spills (<1 bbl; CSR pg 14-3; or spills between 1-49.9 bbl; CSR pg 14-13) or spills of synthetic based muds (CSR pg 14-14) represents a significant source of pollution which has the potential to negatively impact seabird populations. In section 14.1.7 the “ExxonMobil Experience” there was an opportunity to discuss the efforts and effectiveness of how small spills were dealt with by the proponent for the Hibernia project. For example providing the # of spills where: 1) the use of containment and recovery equipment was deployed; and 2) the quantification of the distribution of marine wildlife occurred.

The proponent’s response to the above request for data June 17, 2011 ([EMCP Response to Additional Review Comments, Part I](#)), reveals the problem of not providing data which allow the public to understand the effectiveness of responses to small spills. Specifically, the proponent states “*Spills <1 L are usually dissipated before spill containment equipment can be deployed. The operator, including our environmental contractors, are not aware of data collected on seabirds potentially affected by spills <1 L.*” This response: a) assumed I was asking for spills less than 1 L

(even though the proponent's definition of small spills are those < 1bbl); b) did not provide the number of small spills which dissipated ("usually" is not a number); and c) did not provide data on the number of times (or proportion) seabird assessments were conducted with the occurrence of small spills. Knowledge of how the proponent dealt with hydrocarbon and synthetic-hydrocarbon spills is a critical piece of information that is missing from the CSR and compromises the public's capacity to understand the possible impacts to wildlife from hydrocarbon and synthetic hydrocarbon spills.

In Section 14.1.7 the "ExxonMobil Experience" there was also an opportunity to be clear on the historical spill record for the proponent. The proponent notes "...since 2001, ExxonMobil drilling operations in eastern Canada have not had a reportable spill greater than 1 bbl for the 63 wells drilled in the region." Yet, this statement is misleading as it does not include synthetic based mud or synthetic based fluid spills (e.g., 23,700 L spilled Jan 28, 2003; CNLOPB spill dataset). SBMs/SBFs are not an innocuous substance; they have the potential to change seabird feather structure and therefore, may cause hypothermia to diving birds exposed in the spill (O'Hara and Moradin 2010). So it is a concern that the proponent chose not to include SBM/SBF spills in their drilling record. Further, one must also question why the proponent selected 2001 as the start year for their record as ExxonMobil reported 52 spills of hydrocarbons and synthetic-hydrocarbons between 1997 – 2000 for the Hibernia Project (e.g., 1000 L crude spilled Nov 25, 1997; and SBM/SBF spills > 1bb: 2000 L SBF spilled Nov 9, 1998; 1,500 L SBM spilled Jan 15, 1999; 2,000 L SBM spilled April 30, 1999; 920 L SBM spilled Oct 3, 2000; 1,100 L SBM spilled March 23, 2000; 750 L SBM spilled Feb 29, 2000). So, the full dataset ranging from 1997 to 2010 includes spills greater than 1 bbl for the proponent.

2. I have raised this issue repeatedly and I will do so again here so it is on the record. I do not support the CSR's approach of providing EA predictions with no level of scientific certainty or confidence rating. In earlier comments I stated (see Jun 17, 2011, [EMCP Response to Additional Review Comments, Part I](#)), "In the current EA, each phase, rather than each prediction is provided with a confidence level rating and scientific certainty. I am very concerned about the change in formatting between White Rose and Hebron EAs. This is the fourth development and production EA for this jurisdiction and each EA has a different approach. One could argue that the different approaches are an improvement on the process. But I would argue that the change between the White Rose EA and the Hebron EA reduces the available information rather than improves on the process. As the RA, the C-NLOPB should be ensuring consistency and improvement for each EA. This current change is not an improvement."

It is very important to understand which predictions do not have strong scientific certainty and link these predictions to an Environmental Effects Monitoring follow-up program. By providing an overall rating for each phase does not allow the C-NLOPB, as the RA to make these clear linkages; nor does it allow the public to understand how predictions were linked to a follow-up program. The response that I received from the proponent indicates that the ratings of scientific certainty and confidence levels were assessed by the consultants, but are not included in the CSR; this approach means those ratings are untraceable and therefore there is no public record. **This is not a transparent process and should be amended.** If the consultants have already gone through the work of assessing scientific certainty and confidence level for each prediction, then it should not be difficult to put that information into the CSR – where it is made absolutely clear which predictions are weak – and can be evaluated in the post EA phase. **Just because a prediction is deemed not significant does not mean**

that it has strong scientific certainty. For example, I use seabird attraction to light/flares assessed in the White Rose CSR. The non-significant effect prediction rating for the development phase had a medium level of scientific certainty for the impact of lights on seabirds; and gas flaring had a low level of scientific certainty. The non-significant assessment for the impact of lights on seabirds during production was rated medium for the level of scientific certainty; and gas flaring was rated with a low level of scientific certainty (Husky Oil 2000: Table 4.4-2). The CEA-Agency (2010) explicitly links EA scientific uncertainty to follow-up programs where “*The focus of the monitoring and follow-up program should be on those potential environmental effects associated with the greatest risk and uncertainty.*” If uncertainty is not presented on a per-prediction basis then it is impossible to link predictions to the EA follow-up program. It is very disappointing to see neither CEAA nor the CNLOPB being concerned with this issue as it is their responsibility to ensure the CSR is of high quality.

I appreciate your consideration of these comments.

Kind Regards,

Dr. Gail Fraser

Literature Cited

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