
From: Roma, Jayne]
Sent: Friday, February 16, 2007 3:12 PM
To: Morykot, Donna
Subject: Jan 12 responses to EC Info Requests on the Deep Panuke EA Report

Donna:

Thank you for agreeing to meet with Environment Canada (EC) expert staff on Feb 20, 2007. As discussed, EC is seeking some specific clarification and detail on the EnCana Jan 12th responses to information requests regarding climate, air, water and wildlife issues. The following clarification and detail will be helpful to EC in contributing to a focused, efficient and effective concurrent review process.

Effects of the Environment on the Project

EC-ECA-1.16 and 1.17: Please provide a copy of the revised Environment Design Criteria report (completed by Amec Earth & Environmental).

Air Contaminant Issues

EC-ECA 1.1: Please clarify what would constitute a sustained exceedance of a 1-hour and 24-hour standard.

EC-ECA 1.2(c): Please clarify whether the prediction that "gas flared under normal conditions is expected to have a negligible H₂S content" is due to re-injection of the H₂S.

EC-ECA 1.4(a) (p. 2 and Table 1.1): The Flare Emissions section identifies the maximum continuous flare rate as 90,000 kg/hour and the minimum continuous flare rate as 490 kg/hour - a maximum to minimum ratio of 184. Table 1.1 lists maximum and minimum emission rates for various pollutants, however, the maximum to minimum ratio is only 28. Given that the emission factors are generally based on the actual flaring rates, please verify the emission rates and explain any discrepancies in the ratios.

EC-ECA 1.4(b): Please provide figures, such as those in Appendix F for normal operating/maintenance conditions, which depict the extent of maximum pollutant concentrations resulting from malfunctions and accidental events.

Water Contaminant Issues

EC-ECA-1.11(c): Please clarify why unused Water Based Mud (WBM) could not be reused or recycled at the end of the drilling program, rather than being discharged. Is it because the WBM is pre-mixed at this point?

EC-ECA-1.12(b): It is understood that the Woodburn and Stott (undated) reference cannot be located and that LC50 or EC50 values and test species cannot be provided for amine and TEG. General toxicity information for produced water is described, however amine is not a typical constituent of produced water discharge in this region. If specific toxicity information cannot be provided for amine and TEG, would EnCana be prepared to provide EC with a sample to help substantiate the statement that these substances have "low toxicity to fish and invertebrates in the concentrations present in produced water discharge and that these substances are readily biodegradable"?

EC-ECA-1.12(c): Please identify what other components were tested in produced water from the Margaree F-70 well. In addition, please provide a range of petroleum hydrocarbon concentrations that could generally be expected in produced water based on the literature currently available.

Wildlife and Habitat

EC-ECA-1.24(a): It is stated that "Greater Yellowlegs were observed during a terrestrial survey for the Keltic Petrochemicals Inc. and Maple LNG Environmental Assessment (EA) only in the Gold Brook wetland. No works associated with the Deep Panuke Project will occur in the Gold Brook wetland, thus making interaction between the Project and Greater Yellowlegs highly unlikely". However, the Keltic Petrochemicals EA describes the nesting habitat for Greater Yellowlegs in the Gold Brook area in the following manner:

"[a]t Map Site 2, Figure 8.8-1, a gas pipeline is located between Gold Brook wetland, and the northeast edge of the site. Black duck and green-winged teal breed here in the wetland and greater yellowlegs breed on higher ground in the same area" (p. 8-70).

Based on Figure 2.6 of the Deep Panuke EA Report, it appears that the onshore pipeline corridor overlaps with this area and that the Project could interact with nesting and chick-rearing habitat of the Greater Yellowlegs as a result. Please confirm whether the onshore pipeline corridor overlaps with nesting and chick-rearing habitat for the Greater Yellowlegs. If such an overlap does exist, please consider potential impacts and the necessary mitigation and monitoring measures.

EC-ECA-1.24(a) and (b): Short-eared Owl breeding habitat is not necessarily limited to wetlands if other open habitats (e.g., old pastures, grasslands) are present. Please provide a map of Short-eared Owl habitat in relation to the onshore pipeline corridor.

EC-ECA-1.24(a): Given that Erskine (1992) estimated a breeding population of only 30 pairs of Short-eared Owls in Nova Scotia, please provide further rationale for the prediction that adverse effects to this species or its habitat would be insignificant.

EC-ECA-1.24(b): Given the potential for interaction with the Short-eared Owl and

its habitat, please provide rationale as to why a monitoring plan has not been proposed.

EC-ECA-1.23(a), 1.24(b) and 1.25(b): EnCana has committed to the conduct of terrestrial field surveys (including those for the Short-eared Owl and Rusty Blackbird) in consultation with EC. Please elaborate on when proposed survey methods will be submitted for review.

At this time, EC can highlight the following survey design considerations:

- * the survey for Short-eared Owl should take into account the sensitivity of this species to human disturbance during egg-laying and incubation, the at risk status of the species, as well as the times of day when this species is more easily detected
- * the survey for Rusty Blackbird should take into account that this species breeds in a variety of habitats not limited to "tall shrub swamps" (see Avery (1995), COSEWIC (2006), and Erskine (1992)).

EC-ECA-1.26(a): There are several wetlands in the Betty's Cove Brook vicinity. Please indicate on Fig. 2.6 the one wetland that may be unavoidable by pipeline re-routing.

EC-ECA-1.26(d): Please clarify whether the access road would traverse any wetlands.

EC-ECA-1.26(f): Please describe the technical reasons why alternatives to trenching, such as horizontal directional drilling, are not being considered as a means of minimizing impacts should pipeline crossing of the wetland be unavoidable.

EC-ECA-1.27(b): Please clarify what communication equipment may be required on Sable Island and the basis for such a requirement.

We look forward to meeting with you. In the interim, please do not hesitate to call.

Regards,

Jayne Roma