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July 2, 2004

File No. 03-FCR-409

Mr. Andy Parker
Environmental Analyst
Canada-Nova Scotia Offshore Petroleum Board
6th Floor, TD Centre
Halifax, NS
B3J 3K9

Dear Mr. Parker:

RE: Cohasset Phase II Decommissioning – Comments on EA

Fisheries and Oceans Canada (DFO) has reviewed the document “CEAA Screening Environmental Assessment Cohasset Project Phase II Decommissioning” and Encana’s proposed amendments to the Cohasset Development Project Plan. Encana has proposed a change in the scope of the project from their original commitment to totally remove the flowlines, cables and Pipeline End Manifold (PLEM) to include an option of securing the flowline ends and leaving the flowlines and cable on the seabed and removing the PLEM or PLEM topsides.

As this project is the first decommissioning for offshore petroleum facilities in Canada, the regional and national policy issues raised during the review of this project warrant further discussion. The Oceans & Habitat Branch of DFO is interested in taking part in these discussions and fitting this proposed work into the broader ocean management requirements.

This letter will provide DFO’s comments on the technical merits only of the environmental assessment for decommissioning proposed by Encana.

The DFO Regional Advisory Process (RAP) office, Science Branch, has provided Habitat Management Division with a scientific review of this project proposal. The Science Branch comments are attached to this letter in their entirety for your consideration.

DFO feels that the EA document could be enhanced by including a section which discusses regulatory considerations. This section should include a more descriptive discussion of the potential Harmful Alteration, Disruption or Destruction (HADD) of fish habitat for the total removal option, the *Fisheries Act* Section 35(2) Authorization, and any possible compensation that might be required. DFO is not currently responsible for regulation of the Navigable Waters Protection Act, as stated in the EA document. Transport Canada has been given this role as of April 1, 2004. DFO is responsible for protecting aquatic species at risk in accordance with the *Species at Risk Act (SARA)*. This section should discuss the regulatory requirements of SARA. Specifically, the SARA prohibitions should be listed (Sections 32, 33 and 58), and the CEEA requirements for Species at Risk should be identified. Overall, a discussion of any potential regulatory requirements that may be associated with these project activities should also be included in this section.

DFO feels that a thorough analysis of Species at Risk has not been conducted by the proponent. The proponent's decision to analyse project impacts on species at risk within their discussion of Marine Fish and Marine Mammals as VEC's did not result in an adequate illustration of compliance with SARA. Selecting Species at Risk as a specific VEC would have allowed a more thorough assessment of environmental effects and discussion of mitigation measures relevant to these species. Within this section, Schedule I species should be considered, at a minimum. It would also be prudent to look longer-term and include as VEC's species that may be added to Schedule I as, once listed, SARA will apply these species regardless of any previously issued authorization, agreement or approved environmental assessment. More specific discussions on species at risk are included in the attached science comments.

DFO feels that follow-up monitoring will be a key component to the environmental assessment of this project. It will be very important in the development of the broader policy issues spoken of earlier. The follow-up monitoring plan proposed by the proponent is very limited and does not clearly state obligations and objectives. A more detailed discussion of this is included in the attached science comments.

Mr. Parker

(3)

July 2, 2004

If you have any questions on the above, please do not hesitate to call me at (902) 426-4692.

Sincerely,

Phil Zamora,

Habitat Management Biologist

Attachment: Science Expert Opinion on CEAA Screening Environmental Assessment for
Cohasset Project Phase II Decommissioning

c.c F. Scattolon
T. Worcester
T. Potter
T. Hall

D. McDonald (CEA Agency)
I. Travers (EC)
M. Donovan (TC)

Science Expert Opinion on

CEAA Screening Environmental Assessment for Cohasset Project Phase II Decommissioning.

Submitted : July 2, 2004

Issue

Habitat Management Division, Oceans Branch, has requested a scientific review of EnCana Corporation's Screening Environmental Assessment for Cohasset Project Phase II Decommissioning. The review and opinions presented were undertaken to determine the likelihood that this proposal would result in significant adverse effects on the marine environment, with a focus on:

- The relative risks of impact associated with two decommissioning options, and
- The suitability of proposed mitigation and monitoring plans.

General Comments

Ideally, the Cohasset/Panuke Decommissioning Phase II would be evaluated within a framework of clear decision rules concerning the removal, maintenance and monitoring of petroleum-related structures in the offshore environment, and within a comprehensive strategy to address any potential cumulative effects over time. The scope of this scientific review, however, has been limited to an evaluation of the expected impacts of this site-specific project proposal. It has not attempted to examine the potential for any long-term or cumulative impacts that may be associated with a policy of permitting the decommissioning of offshore petroleum (or other) structures *in situ*.

From a habitat perspective (Fisheries Act, Section 35), there is no strong scientific evidence to suggest that either decommissioning proposal presented by the proponent is likely to result in significant adverse effects to the marine environment. This conclusion is based on the specific conditions of this project and is not meant to apply to decommissioning of subsea structures more generally.

Partial removal of subsea equipment is considered unlikely to result in significant adverse effects on the marine environment based on the following factors:

- The materials to be left are considered to be fairly inert and are not expected to lead to significant levels of contamination during decomposition.
- While the structures to be left in place are quite different from the natural habitat present in the study area, the size and dimensions of these structures are such that they are not expected to impede natural biological and oceanographic processes to any significant extent.

Full removal of subsea equipment is considered unlikely to result in significant adverse effects on the marine environment based on the following factors:

- The project location on Sable Bank is characterised by sandy sediments that have high levels of natural disturbance. The benthic community is expected to recover from the disturbance associated with full removal of subsea structures.

- The size and dimensions of structures to be removed is such that they are expected to become alternately covered and uncovered by sand over time. The long-term habitat value of these structures is likely to be low under these conditions.

These conclusions are based on the expectation that sediment contamination in areas likely to be disturbed by decommissioning activities is low. Verification of sediment conditions is recommended. Where sediment contaminant levels are high, additional remediation and/or mitigation measures should be pursued.

This environmental assessment has not provided sufficient information to adequately assess potential adverse effects on species at risk. At first cut, it is considered unlikely that with appropriate mitigation either decommissioning proposal would result in significant adverse effects to any currently listed species at risk. However, this conclusion will have to be re-evaluated as new species are added to the COSEWIC and SARA listings, or as new information on currently listed species is made available. Appropriate mitigation may include scheduling of activities to reduce the risk of interaction of project activities with species at risk, particularly with migratory species such as leatherback turtle, blue whale, Atlantic salmon (including inner Bay of Fundy salmon) and porbeagle shark, or with species that may be spawning in the study area. Other mitigation measures may include marine mammal and turtle observer monitoring during decommissioning activities, with a clearly defined response plan. Scheduling of activities and observer monitoring have not been given adequate consideration as forms of mitigation within this assessment.

Follow-up monitoring is an essential part of an effective environmental assessment (EA) process; it assists in verification of EA conclusions and contributes to improved mitigation of future projects. At present, the Cohasset Decommissioning Phase II EA has presented a very limited follow-up monitoring plan composed of a post-decommissioning ROV seabed survey, the objectives of which are unclear. A more comprehensive monitoring plan could include sediment sampling to monitor contaminant levels and sampling of benthic organisms, such as quahogs, to monitor potential biological impacts. In addition to a post-decommissioning ROV seabed survey, high resolution side-scan sonar could periodically be used to delineate the location and state (buried/exposed) of any structures left *in situ*.

A more thorough scientific review of the Cohasset/Panuke Decommissioning proposal would require additional information, including:

- Current state of the physical structures, including inventory of exposed vs. buried surfaces, extent and depth of burial, and any trenching or spanning,
- Modelling of oceanographic conditions under which structures may become exposed and/or buried,
- Current state of sediments around platforms, including any contaminants, drill cuttings, etc. that may be present,
- Consideration of recent benthic survey conducted by DFO on Sable Bank, which more clearly delineates quahog and other benthic resources in this area, and
- A more detailed and comprehensive mitigation and monitoring plan.

Detailed comments on the contents of the Screening Environmental Assessment for Cohasset Project Phase II Decommissioning report are provided below.

Specific Comments

1.3 Decommissioning Practices and Requirements

- It should be noted that the guidelines for “Decommissioning of Offshore Installations and Pipelines under the (UK) Petroleum Act 1998 state that “small diameter in-field or inter-field pipelines and flexible flowlines which are neither trenched nor buried should normally be entirely removed.” (DTI 2000, p.27) It is recognized that this is a national UK policy rather than an international policy but is relevant to the international regulatory context.
- p.1-6. DFO is not currently responsible for the Navigable Waters Protection Act.

2.1 Project Overview

- No reference is made to the history of the production facilities, including any residual drill cuttings and other contamination, in the project overview. This history is relevant to the evaluation of potential effects of decommissioning activities.

2.2.2 Subsea equipment

- What is the depth of sand coverage over subsea equipment?
- “It is reasonable to assume that if a survey were conducted today, the sand coverage would be more extensive.” (p. 2-2) A reference to oceanographic conditions or modelling that would support this statement is encouraged. It is unclear how this statement relates to statements made in section 4.1.5 about the “current” amount of hard substrate available for colonization.
- It would be useful to include some preliminary information on that composition of the different subsea components (e.g. concrete, steel, etc.) in this section.

2.2.4.1 Work Plan - Subsea equipment

- How will the decision be made to remove either the PLEM or PLEM topsides during partial removal?

2.2.4.3 Disposal of Recovered Material

- Limited information is provided in this section.

2.2.4.5 Schedule

- Scheduling to minimize potential impacts on marine life should be taken into consideration.

2.3.2 Alternative Means of Carrying out the Project

- Has an alternative been considered in which flowlines and cables are removed but subsea mattresses are left place? Long, linear structures of variable composition may be of greater environmental and social concern than “boulder-sized” concrete mattresses.

2.4.1 Potential Emissions and Discharges

- Under Bilge/ballast water of heavy lift barges and support vessels, Table 2.4 states that “Ballast water is not treated or contaminated.” The potential for invasive species to be present in the bilge/ballast water of vessels of foreign origin has not been given due consideration. Mitigation measures have not been proposed.

3.2.1.2 Consultation with Stakeholders

- Results of fisheries consultation should be described in more detail. While issues have been identified, it is unclear whether mitigation measures were considered acceptable to those interviewed or whether alternate measures were proposed.
- The probability of fishing vessels avoiding an area in which subsea structures were not fully removed may be of interest to Fisheries Management.

3.3 Selection of VECs

- Table 3.4 – Leatherback turtles are on schedule 1 of the Species at Risk Act, in addition to being listed by COSEWIC. While the likelihood of interaction is expected to be low, schedule 1 species should be considered as a VEC if an activity is to occur within their normal range.

4.1.3.2 Sediment Chemistry

- The EA states that evidence of drill cuttings (based on barium and total petroleum hydrocarbon concentrations) were observed 100 m from the Cohasset platform and 50 m from the Panuke platform, but that cuttings piles were not observed using an ROV survey. No discussion is provided on whether or not remediation of the site is likely to be required. Verification of current sediment conditions is recommended. While it is considered unlikely that the site would require remediation, some analysis and alternative courses of action should be provided.

4.1.3.3 Marine Benthic Communities

- Location (including number and density) of benthic habitat and epifaunal sampling stations should be provided. This would better enable a determination of whether the sampling methodology used was considered adequate for benthic and epifauna characterisation.

4.1.4 Environmental Effects Evaluation (Marine Benthos)

- p. 4-12 Under “leaching of corroded metals”, the reader is referred to Table 2.5. This table is related to batch diesel spills characteristics. Table 2.4 is the related reference.
- No evaluation of the potential effects of contaminated sediments near platforms, or of potential for resuspension of these contaminated sediments during removal of platform structures and mooring operations, is provided.

4.1.5 Residual Environmental Effects (Marine Benthos)

- p. 4-14 states that “the exposed portions of cable, flowlines and PLEMs currently cover 969 m² of sandy habitat and provide 1,425 m² of colonizing habitat for epibenthic organisms.” Is this based upon the 1998 or 2000/2001 surveys? If so, this is not a current evaluation and should not be stated as such. See additional comments under section 4.1.3.3.

4.2.3.4 Summary of Species of Special Status (Marine Fish)

- Porbeagle shark has recently been evaluated by COSEWIC and listed as endangered. Additional consideration should be given to this species, particularly as related to potential scheduling of activities during peak migration.
- Atlantic salmon (including inner bay of Fundy salmon) may also be present in the study area. This species is listed as endangered by COSEWIC and is on the Species at Risk Act schedule 1.
- Some explanation should be provided as to why Atlantic, northern and spotted wolffish (SARA schedule 1) are not considered likely to be present in the study area.

4.2.4 Environmental Effects Evaluation

- Scheduling of activities to avoid peak migration, spawning, and other sensitive life-history events of marine fish (particularly species at risk) present in the study area should be given some consideration.

4.3.3.2 Marine Mammals

- Estimates of mean numbers of cetaceans observed on the Scotian Shelf provided in Table 4.7 is based solely on one reference, Palka 2001, which in turn is based on two aerial surveys conducted in 1995 and 1998. This source is not considered an adequate basis for the determination of probable occurrence in the study area. Results from the OGOP observer program should also be taken into consideration.
- Bottlenose whales are not restricted to the Gully and have been observed on other parts of the Scotian Shelf and Slope.
- Table 4.9 states that “potential noise associated with project activities...will likely be attenuated to ambient levels within the exclusion zone.” However, the exclusion zone relates to other human activities and does not represent an exclusion zone for marine mammals. Measures to ensure that marine mammals are not exposed to harmful impacts within this exclusion zone have not been proposed. No observations or monitoring of marine mammals has been proposed.

4.3.3.3 Summary of Species of Special Status

- The status of these species in relation to the Species-at-Risk Act (i.e. schedule 1, 2 or 3) should also be provided in Table 4.8.

4.6.3.2 Post-Project Fisheries

- Quahog fishery is not described in much detail. Preliminary results from DFO's 2003 benthic survey should be used to better define potential overlaps with fisheries resources.

7.1 Summary of Mitigation and Monitoring

- At present, only a post-decommissioning survey is proposed. Details of how this survey will be conducted have not been provided. No long-term monitoring has been identified. No contaminant monitoring has been proposed.
- Quahog may be a useful species to consider in any follow-up monitoring program.

7.2 Data Deficiencies and Uncertainties

- Information to address some of these proposed data deficiencies is available but has not been accessed by the proponent, including aforementioned benthic survey results and marine mammal observations.
- Concerns about regulatory requirements related to species-at-risk should be addressed through consideration and discussion of the Species at Risk Act.
- Uncertainties associated with the current state of structures (% buried or exposed, depth of burial, etc.) have not been discussed in this section. Uncertainties related to the current condition of the site could be addressed through a more recent site survey.

7.3 Conclusions

- Table 7.2 – 1,425 m² of benthic habitat are not expected to be permanently provided by the subsea equipment. Given the oceanographic conditions of the project location, subsea structures are expected to be both covered and exposed over time. The average percent exposure vs. burial, depth of burial when buried, and duration of exposure when exposed is not known.