



Canadian Environmental
Assessment Agency

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May 16, 2017

Sent by E-mail

David Pinsent
Husky Energy
Atlantic Region
351 Water Street Suite 105
St. John's NL
David.Pinsent@huskyenergy.com

Dear Mr. Pinsent,

SUBJECT: Outcome of conformity review of the Environmental Impact Statement

On April 13, 2017, the Canadian Environmental Assessment Agency (the Agency) received the Environmental Impact Statement (EIS) and EIS Summary for the Husky Energy Exploration Drilling Project (the Project) from Husky Energy. The Agency reviewed the EIS and EIS Summary in consideration of the requirements of the *Guidelines for the Preparation of an Environmental Impact Statement (EIS Guidelines)*, issued to Husky by the Agency on March 27, 2017. In addition to the Agency's internal review, advice on the conformity review was also provided by Fisheries and Oceans Canada, Environment and Climate Change Canada, Health Canada, Transport Canada, Natural Resources Canada, and the Canada-Newfoundland and Labrador Offshore Petroleum Board.

During the conformity review, the Agency considered whether the EIS and EIS Summary conform with the requirements of the EIS Guidelines; whether the information provided is sufficiently robust and comprehensive to merit a wider technical review and public comment; and whether any deficiencies warrant correction to facilitate efficient and effective review by participants in the environmental assessment.

The Agency has determined that the information provided by Husky Energy does not fully conform with the requirements outlined in the EIS Guidelines including in relation to accidents and malfunctions, impacts to species at risk and baseline data. Annex 1 provides the specific deficiencies that must be addressed by Husky Energy.

In addressing the deficiencies identified in Annex 1, the Agency requires that Husky Energy submit a fully revised EIS that includes insertions or changes made throughout the EIS main text, Addenda, and EIS Summary. In addition, the revised EIS must include the information requested by the Agency on April 27, 2017 regarding potential effects to additional Indigenous groups.

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Once a revised EIS is received, the Agency will conduct a conformity review of the revised document in accordance with its *Operational Policy Statement: Information Requests and Timelines, February 2016*” https://www.ceaa-acee.gc.ca/Content/E/6/5/E65B85D2-1F68-4E0C-A405-4322BB425454/OPS-Information_Requests_and_Timelines.pdf. If the Agency determines that the deficiencies identified are not addressed in the revised documents, the Agency will identify and notify Husky Energy what deficiencies remain.

I would note that where an inadequate rationale is provided to support the use of existing baseline and modelling information, further data gathering and analysis may be required.

If the Agency determines that the revised EIS conforms to requirements, the Agency will commence the technical review of the EIS. This involves posting the documents on the Agency’s website for public comment; Indigenous groups’ review and comment; and review by subject matter experts in federal departments. Following that wider review, the Agency would then consider comments received, and request additional information, as required, until it has sufficient information to prepare the Environmental Assessment Report to inform the Minister of Environment and Climate Change’s decisions under the *Canadian Environmental Assessment Act, 2012* (CEAA 2012).

This letter and Annex will be shared with federal authorities and Indigenous groups and will be posted on the Canadian Environmental Assessment Registry Internet Site: <http://www.ceaa-acee.gc.ca/050/details-enq.cfm?evaluation=80130>.

As per the Agency’s *Operational Policy Statement on Information Requests and Timelines*, the timeline for the environmental assessment, which resumed on May 14, 2017, will be paused as of May 16, 2017. While Husky Energy addresses the deficiencies identified and revises the EIS for the Project, the Agency will continue its review and analysis of the information provided in preparation for the next phase of the environmental assessment process.

The Agency would be available to discuss the outcome of this conformity review with you at your earliest convenience. Specifically, the Agency would suggest meeting to discuss proposed rationales for the use of existing information. If you have any questions, you can contact me at 902-426-8268 or via email at CEAA.Husky.ACEE@ceaa-acee.gc.ca.

Sincerely,

<Original signed by>

Catherine Ponsford
Acting Team Lead
Canadian Environmental Assessment Agency, Atlantic Region

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Cc: Gareth Igloliorte, Husky Energy
Elizabeth Young, Canada - Newfoundland Labrador Offshore Petroleum Board
Dave Burley, Canada - Newfoundland Labrador Offshore Petroleum Board
Darrin Sooley, Fisheries and Oceans Canada
Glenn Troke, Environment and Climate Change Canada
Allison Denning, Health Canada
Jason Flanagan, Transport Canada
Veronica Mossop, Natural Resources Canada
Charlotte Landry, Major Projects Management Office

Attachment (1)

Annex 1: Deficiencies identified during the conformity review of the Husky Energy Exploration Drilling Project Environmental Impact Statement, dated April 13, 2017

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Deficiencies identified during the conformity review of the Husky Energy Exploration Drilling Project Environmental Impact Statement, dated April 13, 2017

(1) Accidents and Malfunctions

Context and Rationale

Section 6.6.1 of the EIS Guidelines require Husky Energy to identify the probability of potential accidents and malfunctions related to the Project, including an explanation of how those events were identified, and to identify the potential consequences and environmental effects associated with the plausible worst case scenarios for each accident and malfunction type. The EIS Guidelines also require hydrologic trajectory modelling for worst-case large-scale spill scenarios that may occur from this Project, accompanied by supporting documentation of methodologies. Where well locations have not yet been identified, the EIS Guidelines require that points of origin selected for worst-case large-scale spill scenarios be conservative.

In Section 7 of the EIS (Accidental Events), it is not clear how potential accidents and malfunctions were identified (e.g. oil spills) or excluded (e.g. marine riser loss during mobilization and demobilization) for the Project.

Section 7 of the EIS relies upon the results of existing oil spill models completed for other previous projects in 2012 (White Rose Extension Project) and 2002 (for Tuckamore and Annieopsquotch) to support the assessment and conclusions for worst-case large-scale spill scenarios originating within the Project's four exploration licences. However, it is not clear how the existing spill models completed for other projects are representative of worst-case large-scale spill scenarios for this Project, nor that these existing models are adequate to inform the assessment of potential environmental effects from this Project. All points of origin for a spill used in the spill model scenarios for other projects are located outside of the Project's four exploration licences, and three of these licences overlap with special areas and sensitive environmental features (i.e. Flemish Pass/Eastern Canyon Closure Zone, Northeast Shelf and Slope Ecologically and Biologically Significant Area, and potential critical habitat for Spotted Wolffish). Therefore, more clarity is required on how the points of origin for a spill used in the spill model scenarios for other projects are conservative for this Project and whether the characterization of effects to these special areas and associated VCs (in the unlikely event of a large-spill) are reliable to understand the potential effects from this Project. Because the technical reports supporting the existing spill models for spill scenarios in the Flemish Pass were not provided in the EIS, it is difficult to understand the methodologies or verify the information provided and the relevance of these older spill models to the Project currently being assessed.

For the Agency to consider the use of existing oil spill modelling completed for other projects in place of project-specific spill models, a better understanding of how the existing modelling is representative of worst-case large-scale spill scenarios for this Project and a robust rationale for its applicability are required. Such a rationale would address the degree to which each of the assumptions and inputs used in the existing spill models for other projects (e.g. points of spill origin, spill duration, flow rate, water

depth, oil type, winds, oceanographic conditions, fate and behaviour, etc.) are relevant to this Project, and would identify all associated limitations and inferences made to reach conclusions.

Furthermore, the EIS Guidelines require a description of the safeguards that will be established to protect against the occurrence of accidents and malfunctions. Section 7.3 of the EIS provides some information listing examples of some preventative measures that will be implemented to safeguard against accidental oil spills and makes reference to the Husky Operational Integrity Management System (HOIMS). Sections 1.2.2 and 2.7.1 of the EIS provides a high-level description of HOIMS, but it is not clear the extent to which these preventative measures would reduce the likelihood of accidental events occurring.

Finally, section 6.6.1 of the EIS Guidelines requires Husky Energy to demonstrate what long-term actions it would be prepared to undertake to remediate spill-affected lands and waters. It is not clear that this information is provided in the EIS.

Specific Conformity Information Requirements

Update both the EIS and EIS Summary, as applicable, to include the following information:

- a) Provide an explanation of how potential accidents and malfunctions that may occur during the Project were identified or excluded.
- b) Provide hydrologic trajectory modelling for worst-case large-scale spill scenarios that are specific to this Project, and provide all supporting documentation of methodologies. If relying on existing spill modelling completed for other previous projects, provide a robust rationale that clarifies how this modelling represents worst-case large-scale spill scenarios specific to this Project, including the degree to which each of the assumptions and inputs used in the modelling are relevant to this Project. Identify any limitations associated with the use of existing spill modelling and any inferences made to predict effects and reach conclusions. Update the assessment of effects from accidents and malfunctions on relevant VCs, as appropriate.
- c) Provide a more fulsome description of the preventative measures that will be implemented to protect against occurrence of accidental events, including a large-scale oil spill, and explain how each of these measures will help reduce the likelihood of accidental events occurring. Identify any preventative measures that are required by regulations (e.g. pursuant to the *Accords Acts*).
- d) Describe long-term actions Husky Energy would be prepared to undertake to remediate spill-affected lands and waters.

(2) Baseline Conditions for Fish and Fish Habitat

Context and Rationale

Part 1, Section 4.3, and Part 2, Section 6.1 of the EIS Guidelines require that baseline information be presented in sufficient detail to characterize the environment before any disturbance to the environment due to the Project, and to identify, describe, assess and determine the significance of the potential adverse environmental effects of the Project. Part 2, Section 6.1.3 of the EIS Guidelines requires a description of baseline conditions for fish and fish habitat within areas that could be affected by routine project operations and/or by accidents and malfunctions. Specific baseline requirements are articulated on pages 22 and 23 of the Guidelines and include the need to describe "*benthic flora and fauna and their associated habitat, including sensitive features such as corals and sponges (Note: a benthic habitat survey (ROV / camera), including transects of seafloor in the area of the well locations, may be required)*".

Section 4.2 of the EIS provides a general description of baseline conditions for the marine biological environment of the slope of the Grand Banks, Flemish Pass and Flemish Cap derived from secondary information sources. However, it is not clear that the baseline conditions for benthic fish and fish habitat specifically within the areas that may be affected by routine project operations (i.e. within the Project's four exploration licences) and/or by accidents and malfunctions are adequately described to support the assessment of effects. Site-specific baseline information for benthic habitats and communities is particularly important because of potential effects to sensitive environmental features from drilling activities on the seafloor. Further to concerns regarding potential coral and sponge aggregations, three of the licences overlap with special areas and sensitive environmental features (i.e. Flemish Pass/Eastern Canyon Closure Zone, Northeast Shelf and Slope Ecologically and Biologically Significant Area, potential critical habitat for Spotted Wolffish).

Specific Conformity Information Requirement

Update both the EIS and EIS Summary, as applicable, to include the following information:

- a) Provide a description of the site-specific benthic baseline conditions for fish and fish habitat within each of the specific project exploration licences that could be affected by routine project operations or by areas that could be affected by accidents and malfunctions. Identify primary and/or secondary sources of baseline information used to characterize fish and fish habitat within the Project's exploration licences and direct the reader to where supporting data and methodologies can be found.
- b) Identify all instances where information about benthic fish and fish habitat outside of the Project's exploration licences is used to make inferences about baseline conditions within the Project's exploration licences, and identify any associated limitations, uncertainties, and knowledge gaps related to key conclusions as well as the steps to be taken to address these knowledge gaps.
- c) Update the effects assessment (direct, cumulative, and from accidents and malfunctions), including monitoring and follow-up programs, accordingly.

(3) Predicted Effects to Fish and Fish Habitat

Context and Rationale

Part 2, Sections 3.1 and 6.3.1 of the EIS Guidelines require the use of dispersion modelling to describe the nature, composition and fate of drilling wastes from this Project, and to assess the associated effects on marine benthos and other components of the aquatic environment from this Project, recognizing that the disposal of these wastes is expected to be a primary cause of effect on benthos.

Section 2.6.1 of the EIS relies upon the results of existing dispersion modelling completed for other projects to support the effects assessment for the deposit of drilling waste originating within the Project's four exploration licences. However, it is not clear that these existing dispersion models are representative of the nature, composition and fate of drilling wastes from this Project, nor that the assessment takes into consideration the proximity of this Project to special areas and sensitive environmental features (i.e. Flemish Pass/Eastern Canyon Closure Zone, Northeast Shelf and Slope Ecologically and Biologically Significant Area, potential critical habitat for Spotted Wolffish). Because the technical reports supporting the existing dispersion models in the Flemish Pass (i.e. Annieopsquotch, Tuckamore, and Mizzen) were not provided in the EIS, it is not clear that the methodologies used or the information provided from those older reports are adequately relevant to inform the effects of this Project.

Specific Conformity Information Requirement

Update the EIS and EIS Summary, as applicable, to include the following:

- a) Describe the nature, composition and fate of drilling wastes from this Project using dispersion modelling (include supporting documentation of methodologies). If relying on existing dispersion modelling completed for other projects, provide a robust rationale for its applicability to this Project.
- b) Update the assessment of effects (direct, cumulative, and from accidents and malfunctions) on marine benthos and other relevant VCs, and monitoring and follow-up programs, as appropriate.

(4) Baseline Conditions and Predicted Effects on Species at Risk

Context and Rationale

Part 2, Section 6.1.5 of the EIS Guidelines require a list of **all** potential or known federally listed species at risk as well as federal species designated by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC) that may be affected by the Project or that may occur in the Project Area. The EIS Guidelines also require a description of federal species at risk and their habitat at the project site and within areas that could be affected by routine project operations or accidents and malfunctions.

The South Newfoundland Population of Atlantic Salmon is identified in Section 4.2.4.4 of the EIS. However, the Agency has learned that a number of other Atlantic Salmon populations designated by COSEWIC as “endangered” or “special concern” may occur in the Project Area and within areas that could be affected by routine project operations or accidents and malfunctions; these are not identified in the EIS (e.g. Outer Bay of Fundy Population of Atlantic Salmon).

The Eastern Scotian Shelf-Newfoundland Population of Winter Skate is listed in Table 4.23 of the EIS, (Fish Species at Risk and Species of Conservation Concern with Potential to Occur in the Study Area). However, a description of the Eastern Scotian Shelf-Newfoundland Population of Winter Skate and its habitat is not provided in the EIS.

Specific Conformity Information Requirement

Update the EIS and EIS Summary, as applicable, to include the following information:

- a) Provide a list of all Atlantic salmon populations designated by COSEWIC that may be affected by the Project and/or occur in the Project Area. Include the COSEWIC designation for each population.
- b) Provide baseline conditions for each Atlantic salmon population and their habitat, and for the Eastern Scotian Shelf-Newfoundland Population of Winter Skate and its habitat.
- c) Update the assessment to encompass effects to the species above (including effects from routine project operations, cumulative effects, and effects of accidents and malfunctions), as appropriate.

(5) Effects of Potential Accidents and Malfunctions on Special Areas

Context and Rationale

Part 2, Section 6.6.1 of the EIS Guidelines requires an assessment of the effects of worst-case large-scale spill scenarios on relevant VCs, including on special areas. Three of the Project’s four exploration licences (ELs) overlap with special areas (i.e. EL 1134 overlaps with Flemish Pass/Eastern Canyon Closure Zone; ELs 1121 and 1151 overlap with the Northeast Shelf and Slope Ecologically and Biologically Significant Area). As such, the Project as proposed includes potential drilling within these special areas.

Section 7.3.5 of the EIS provides an assessment of the potential effects to special areas from a large-scale oil spill originating both outside the four Project exploration licences and outside of the above mentioned special areas; however it is not clear that the assessment describes potential effects from worst-case large-scale spill scenarios in which an oil spill originates within these special areas.

Specific Conformity Information Requirement

- (a) Update both the EIS and EIS Summary, as applicable, to identify, describe, assess and determine the significance of the potential adverse environmental effects of a worst-case large-scale oil spill or blowout originating within each of the special areas where drilling may occur.

(6) Mitigation and Follow-up Programs

Context and Rationale

Part 2, Section 6.4 of the EIS Guidelines requires a description of mitigation measures in relation to species and/or critical habitat listed under the *Species at Risk Act* (SARA) and that these measures be consistent with any applicable recovery strategy and action plans. Section 79 of SARA requires measures be taken to avoid or lessen adverse effects of the Project on listed wildlife species and their critical habitat. The EIS does not appear to describe specific mitigation measures in relation to species listed under SARA, or explain how any of the proposed mitigation measures are consistent with applicable recovery strategy and action plans (e.g. Northern Bottlenose Whale - Scotian Shelf, Northern Wolffish).

Section 79 of SARA requires measures to be taken to avoid or lessen adverse effects of the Project on listed wildlife species and their critical habitat, and to monitor them. Part 2, Section 8 of the EIS Guidelines requires that the development of the follow-up program include a consideration of project impacts on environmentally sensitive areas and VCs. The EIS identifies adverse effects of the Project on fish, including listed fish species; however, it does not appear to describe a program to monitor mitigation measures and adverse effects of the Project on listed fish species. As well, Part 2, Section 8 of the EIS Guidelines requires that the development of the follow-up program include consideration of the nature of cumulative effects.

Specific Conformity Information Requirement

Update the EIS and EIS Summary, as applicable, to include the following:

- a) Describe how the proposed mitigation measures relate to SARA-listed wildlife species and explain how these measures are consistent with any applicable recovery strategy and action plans;
- b) Provide a follow-up program to monitor adverse effects to listed fish species; and
- c) Describe how consideration was given to the need for a follow-up program with respect to cumulative effects from the Project

(7) Predicted Effects to Marine Mammals and Turtles and Species at Risk

Context and Rationale

Part 2, Section 6.6.3 of the EIS Guidelines requires a description, assessment and determination of the significance of potential effects from underwater noise on marine mammals. Part 1, Section 4.3 of the EIS Guidelines requires a robust effects assessment with sufficient detail to allow the reader to understand the Project, the effects assessment and the conclusions.

Section 6.3.10 of the EIS relies upon the results of existing underwater noise modelling completed for other projects to support the assessment and conclusions for effects to marine mammals and sea turtles from the mobile offshore drilling unit (MODU), drilling-associated surveys (vertical seismic profiling, VSP), and supply and servicing associated with this project. However, it is not clear how the existing noise models completed for other projects are representative of underwater noise from this Project, nor that these existing models are adequate to inform the assessment of potential environmental effects from this Project. Drilling locations used in the underwater acoustic modelling scenarios for other projects presented in the EIS are all located outside of the Project's four exploration licenses. Furthermore, it is not clear the extent to which the drilling equipment used in the existing models for other projects are representative of the MODUs that could be used for this Project (e.g. concrete gravity structure compared to noise from the types of MODUs being considered for this Project). Also, it is not clear how the possibility of multiple MODU generating underwater noise at the same time was considered in the assessment.

For the Agency to consider the use of existing underwater noise modelling completed for other projects in place of project-specific underwater noise models, a better understanding of how the existing modelling is representative of underwater noise that could be generated from project activities undertaken for this Project and a robust rationale for its applicability are required. Furthermore, the results of such modelling should then be compared to existing baseline information.

Specific Conformity Information Requirement

Update the EIS and EIS Summary, as appropriate, to include the following information.

- a) Describe the baseline noise levels and incorporate this information into the assessment of effects from underwater noise to marine mammals and turtles (including species at risk).
- b) Update the effects assessment (direct and cumulative) to include a description of the expected spatial extent of where underwater noise from this Project will exceed injury and behaviour thresholds for species of marine mammals and turtles (including species at risk) that may be present in the Project Area, including the possibility of multiple concurrent sources of noise (e.g. multiple MODUs operating simultaneously).
- c) Include all modelling used to inform the assessment and supporting documentation of methodologies.

- d) If relying on existing underwater noise modelling completed for other projects, provide a robust rationale for its applicability to this Project, including: how this modelling represents conservative underwater noise scenarios specific to this Project; the degree to which each of the assumptions and inputs used in the modelling are relevant to this Project; and any limitations associated with the use of existing underwater noise modelling and any inferences made to predict effects and reach conclusions.

(8) Cumulative Effects Assessment

Context and Rationale

Part 2, section 6.6.3 of the EIS Guidelines directs Husky Energy to identify and assess the Project's cumulative effects using the approach described in the Agency's Operational Policy Statement *Assessing Cumulative Environmental Effects under the Canadian Environmental Assessment Act, 2012*. The EIS Guidelines further specify that a cumulative effect on an environmental component may be important even if the assessment of the Project's effects on this component reveals that the effects of the Project are minor. The EIS Guidelines require that Husky Energy identify and provide a rationale for the VCs that constitute the focus of the cumulative effects assessment, focusing the cumulative effects assessment on the VCs most likely to be affected by the Project and other projects and activities.

In the EIS, Table 5.1 of section 5.2.2, Husky Energy determined that there could be effects to the atmospheric environment, but that they did not warrant a focused assessment. Potential changes to the atmospheric environment are assessed, where applicable, in the context of other VCs. Section 9.0 of the EIS (Cumulative Effects) includes six VCs for which project-related environmental effects were assessed; however, it is not clear why cumulative effects assessment on air quality was not assessed.

Specific Conformity Information Requirement

- a) Update the EIS and EIS Summary, as appropriate, to include an assessment of the cumulative effects on air quality, or a rationale as to why a cumulative effects assessment would not be required for this environmental component.