

November 7, 2016

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Sent via email

Brett Maracle, Panel Manager
Canadian Environmental Assessment Agency
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Dear Sir:

**Re: Pacific Future Energy Refinery Project, Ref. No. 80127
Comments on Draft Guidelines for the Preparation of an Environmental Impact Statement**

I write to you on behalf of our client, Douglas Channel Watch, with respect to the *Draft Guidelines for the Preparation of an Environmental Impact Statement pursuant to the Canadian Environmental Assessment Act, 2012: Pacific Future Energy Refinery Project* (“*Draft EIS Guidelines*”).¹ Douglas Channel Watch provides the following comments on the *Draft EIS Guidelines*:

1. Spatial Boundaries

Douglas Channel Watch understands that spatial and temporal boundaries in the environmental assessment will vary depending on the Valued Component (“VC”) and will be considered separately for each VC.² However, Douglas Channel Watch submits that the *Draft EIS Guidelines* should provide a more explicit statement of the spatial boundaries for certain components of the environmental assessment.

(a) Rail Transportation

With respect to rail transportation, the *Draft EIS Guidelines* specify that the project components include the railyard at the refinery and the railroad connection to the nearby existing CN Rail

¹ Canadian Environmental Assessment Agency, *Draft Guidelines for the Preparation of an Environmental Impact Statement pursuant to the Canadian Environmental Assessment Act, 2012: Pacific Future Energy Refinery Project*, (7 October 2016) [*Draft EIS Guidelines*].

² *Ibid*, at 7.

line.³ The *Draft EIS Guidelines* also explicitly require that the rail transportation of bitumen from source to the refinery be included within the estimate of the greenhouse gas emissions associated with the facility's bitumen supply.⁴

The *Draft EIS Guidelines* also require, pursuant to paragraph 19(1)(j) of the *Canadian Environmental Assessment Act, 2012* (“*CEAA 2012*”), consideration of:

the environmental effects of any incidental activities associated with the Project, such as receiving raw product and transporting all final and by-products from the refinery, including the environmental effects of malfunctions or accidents and any cumulative environmental effects, the significance of those effects, suggested mitigation measures and follow-up program requirements.⁵

The *Draft EIS Guidelines* also require that the Environmental Impact Statement (“EIS”) include:

- (i) the technically and economically feasible alternative means for receiving raw product and transporting final products, including rail line upgrades and predicted volumes of traffic resulting from the Project and any associated works;⁶
- (ii) the alternative means of transportation of pure bitumen, including necessary infrastructure requirements or upgrades, with means and routing considered;⁷
- (iii) the potential effects to the environment caused by accidents and malfunctions resulting from rail transportation that is incidental to the Project;⁸ and
- (iv) existing emergency preparedness and response systems in the rail transportation spatial boundaries associated with the Project.⁹

While the context of these requirements indicates that these effects must be considered for the entire route of rail transportation of bitumen from the point of loading to delivery to the refinery, the spatial boundaries of rail transportation “incidental to the Project” and “associated with the Project” are unclear. Douglas Channel Watch submits that rail transportation of bitumen from the point of loading to delivery to the refinery is a physical activity incidental to the construction and operation of the refinery and therefore is included within the definition of the “designated project” as defined in paragraph 2(1) of the *CEAA 2012*.

The transportation of bitumen by rail is an integral part of the Project. The proponent, Pacific Future Energy Corporation (“PFEC”) is proposing to receive bitumen at the refinery on three to four dedicated unit trains per day.¹⁰ Without the Project, there would be no need or purpose for

³ *Ibid*, at 5.

⁴ *Ibid*, at 30.

⁵ *Ibid*, at 5.

⁶ *Ibid*, at 16.

⁷ *Ibid*, at 15.

⁸ *Ibid*, at 37.

⁹ *Ibid*.

¹⁰ SNC-Lavalin Inc., *Project Description: Pacific Future Energy Refinery*, (June 2016), at 8 [*Project Description*].

the proposed rail transportation of bitumen to the refinery site. The proposed rail transportation is meaningfully related and linked to the designated aspects of the Project proposal and therefore meets the legal test for being an incidental activity.

The rail transportation of bitumen to the Project also meets the Agency's own criteria as set out in the *Guide to Preparing a Description of a Designated Project under the Canadian Environmental Assessment Act, 2012*, in that it is both subordinate and complementary to the designated project.¹¹ PFEC proposes to work with CN to ensure the safe transport of the bitumen feedstock to the refinery and to minimize the incidence of spills from rail transportation into sensitive areas.¹² This appears to refer to the transport of bitumen and the incidence of spills along the existing CN rail lines from point of loading to the refinery. Therefore, the rail transportation of bitumen from point of loading to the refinery will be at PFEC's direction and PFEC will influence the carrying out of that rail transportation. The rail transportation of bitumen along the CN Rail lines is proposed solely for the benefit of the Project.

Further, PFEC identifies that rail transportation safety and the increase in rail traffic associated with the Project is a key concern raised by First Nations in their preliminary conversations and that increased rail traffic on the CN Rail line is a potential socioeconomic impact on First Nations and Aboriginal groups.¹³ The transport of bitumen by rail entails derailment risks. Derailments of trains carrying bitumen can cause significant adverse environmental effects to human life and the environment. Therefore, it is important that the potential for accidents and malfunctions related to rail transportation and emergency preparedness and response be considered for the entire length of rail transportation of bitumen from point of loading to delivery at the refinery.

In order to provide clarity of the scope of the environmental assessment of the rail transportation incidental to or associated with the Project, Douglas Channel Watch submits that the final EIS Guideline should be explicit, as it is for the assessment of greenhouse gas emissions, that the EIS must consider alternative means for the transportation of bitumen, the potential effects to the environment caused by accidents and malfunctions resulting from rail transportation, and the emergency preparedness and response systems, for the entire length of the rail transportation of bitumen from point of loading to delivery at the refinery.

Further, Douglas Channel Watch submits that the above-referenced paragraph pursuant to paragraph 19(1)(j) of *CEAA 2012*, be amended as follows:

the environmental effects of any incidental activities associated with the Project, ~~such as including the transporting of raw materials from point of loading to receipt at the refinery receiving raw product~~ and the transporting of all final and by-products from the refinery, including the environmental effects of malfunctions or accidents and any cumulative environmental effects, the significance of those effects, suggested mitigation measures and follow-up program requirements.

¹¹ Canadian Environmental Assessment Agency, *Guide to Preparing a Description of a Designated Project under the Canadian Environmental Assessment Act, 2012*, (March 2015) at 6.

¹² *Project Description*, *supra* note 10, at 60, 110.

¹³ *Ibid*, at 101-102, 117.

Further, details of the planned rail transportation of raw materials from the point of loading to delivery to the refinery should be included in the list of Project activities found at Section 3.2.2 of Part 2 of the *Draft EIS Guidelines*.

(b) Marine transportation

Similar to rail transportation, the references to “marine...transportation that is incidental to the Project”¹⁴, “marine transportation associated with the Project”¹⁵, and “incidental activities...such as...transporting all final and by-products from the refinery”¹⁶, are all ambiguous as to the intended spatial boundaries.

Douglas Channel Watch understands that spatial boundaries in the environmental assessment will vary depending on the VC under consideration. However, it is also important to clarify the actual geographic scope of the activities that may contribute to the environmental effects. For example, the Terms of Reference for the environmental assessment of the Enbridge Northern Gateway Pipeline Project clearly stated that the scope of the project included the proposed marine shipping routes to be used for products from the project within the Kitimat Arm, Douglas Channel, Principe Channel, Hecate Strait and within the 12 nautical mile limit of the Territorial Sea of Canada.¹⁷

In order to provide clarity of the geographic scope of the environmental assessment of the marine transportation incidental to or associated with the Project, Douglas Channel Watch submits that the final EIS Guideline should explicitly require that the effects of atmospheric emissions from the marine transportation of products from the Project, the potential effects to the environment caused by accidents and malfunctions resulting from that marine transportation, the emergency preparedness and response systems for marine spills, and the assessment of the potential environmental effects of the marine transport of products on fish, fish habitat, marine plants and migratory birds, be considered for all marine shipping routes to be used for products from the Project from the marine terminal to the 12 nautical mile limit of the Territorial Sea of Canada.

Douglas Channel Watch submits that, for greater clarity, the above referenced paragraph should further amended to:

the environmental effects of any incidental activities associated with the Project, ~~such as including the transporting of raw materials from point of loading to receipt at the refinery receiving raw product and the transporting of~~ all final and by-products from the refinery to the 12 nautical mile limit of the Territorial Sea of Canada, including the environmental effects of malfunctions or accidents and any cumulative environmental effects, the significance of those effects, suggested mitigation measures and follow-up program requirements.

¹⁴ *Draft EIS Guidelines*, supra note 1, at 37.

¹⁵ *Ibid.*

¹⁶ *Ibid.*, at 5.

¹⁷ Joint Review Panel for the Enbridge Northern Gateway Project, *Hearing Order OH-4-2011 for the Northern Gateway Pipelines Inc. Enbridge Northern Gateway Project*, (5 May 2011), at 24.

Further, details of the planned transportation of products from the refinery to the 12 nautical mile limit of the Territorial Sea of Canada should be included in the list of Project activities found at Section 3.2.2 of Part 2 of the *Draft EIS Guidelines*.

(c) Other impacts

Douglas Channel watch submits that the *Draft EIS Guidelines* should be more explicit with respect to the expected minimum spatial boundaries for other impacts, particularly for cumulative impacts. For example, the spatial boundaries for cumulative fisheries impacts and cumulative spill impacts should be the entire watershed. The spatial boundaries for cumulative air emission impacts should be the study area as identified in the *Kitimat Airshed Emissions Effects Assessment*.¹⁸

The *Draft EIS Guidelines* specify that the EIS must identify movement corridors for species at risk.¹⁹ However, the EIS should identify movement corridors for all species, in addition to species at risk, and should assess the impact of the Project on those movement corridors. Douglas Channel Watch notes in particular that the proposed Project site is in an area with a high concentration of grizzly bears and sits on a movement corridor for grizzly bears.

2. Carbon Capture and Use

The Project proposal relies in part on the capture and subsequent use of carbon dioxide emissions in the manufacturing of various products in order to achieve its goal of “Near Zero Net Carbon” emissions.²⁰ If the Project intends to rely on the capture and subsequent downstream use of carbon dioxide as a mitigation measure for greenhouse gas emissions, the EIS must provide details of that proposed use including the availability and location of markets, the method of transporting the carbon dioxide to those markets, the greenhouse gas emissions associated with transporting the carbon dioxide to those markets, and the proposed manufacturing processes and products and their related greenhouse gas emissions, in order that the net effect of the proposed capture and downstream use can be properly evaluated.

3. Public Consultation

The *Draft EIS Guidelines* confirm that subsection 19(3) of the *CEAA 2012* requires that the environmental assessment of the Project must take into account community knowledge and Aboriginal traditional knowledge.²¹ Further, the *Draft EIS Guidelines* encourage the proponent to consult with the public in identifying VCs and in identifying the spatial and temporal boundaries for VCs.²² Given the importance of local knowledge in both defining VCs and in identifying the spatial and temporal boundaries in which to assess the environmental impacts on

¹⁸ ESSA Technologies Ltd., *Kitimat Airshed Emissions Effects Assessment*, (25 April 2014), Vancouver, at 1.

¹⁹ *Draft EIS Guidelines*, *supra* note 1, at 26.

²⁰ *Project Description*, *supra* note 10, at 25-26.

²¹ *Draft EIS Guidelines*, *supra* note 1, at 8.

²² *Ibid*, at 6-7.

those VCs, Douglas Channel Watch submits that public consultation in defining those features should be mandatory rather than optional.

The *Draft EIS Guidelines* state that:

The proponent will integrate Aboriginal traditional knowledge into all aspects of its assessment including both methodology (e.g., establishing spatial and temporal boundaries, defining significance criteria) and analysis (e.g., baseline characterization, effects prediction, development of mitigation measures).²³

The *Draft EIS Guidelines* do not contain a similar statement with respect to integrating non-Aboriginal community knowledge. Community groups such as Douglas Channel Watch have local knowledge that can inform, in addition to the identification of VCs and their spatial and temporal boundaries, the identification of environmentally sensitive areas, the identification of socially important areas, the characterization of baseline conditions, the determination of the significance of adverse effects and the identification of mitigation measures. Therefore, Douglas Channel Watch submits that the EIS should include both Aboriginal and non-Aboriginal community knowledge in these areas.

More generally, Douglas Channel Watch submits that the *Draft EIS Guidelines* should provide more explicit direction to PFEC on identifying and responding to public concerns. The *Draft EIS Guidelines* requires only that PFEC provide a summary of the engagement with the public and Indigenous groups, including a summary of the issues raised and the proponent's responses.²⁴ Douglas Channel Watch notes that, to the best of their knowledge, PFEC has conducted only targeted public surveys but has not held any open houses or other opportunities for general public engagement. PFEC should be required to identify and engage interested parties in two-way discussion and should communicate directly to those parties about how their concerns have been taken into account in the design of the Project prior to completing the EIS.

4. Baseline Conditions and Cumulative Effects

The *Draft EIS Guidelines* refer to baseline conditions for several components of the EIS. However, "baseline" conditions are not well defined in the *Draft EIS Guidelines*. Douglas Channel Watch notes that the Project area has been affected by previous development, including existing rail transportation, forestry and other industrial developments, that have already impacted ecosystems and species in the area. Douglas Channel Watch submits that pre-disturbance or pre-industrial condition should be included as a baseline condition in order to avoid the problem of a shifting baseline due to prior disturbance. Further, the EIS must consider the cumulative effects of this previous development, particularly on wildlife species.

²³ *Ibid*, at 8.

²⁴ *Ibid*, at 12.

5. Spill Modelling

The *Draft EIS Guidelines* require that PFEC describe and evaluate the potential effects to the environment caused by accidents and malfunctions resulting from marine and rail transportation that is incidental to the Project, and assess the potential of minor and major accidental releases of fuel, or loss of dangerous goods.²⁵ However, the *Draft EIS Guidelines* do not describe the procedure or level of details for identifying and describing these effects. Douglas Channel Watch submits that PFEC must be required to use state-of-the-art stochastic models to predict the spatial distribution of the spilled materials over time. The models should model both summer and winter conditions and a variety of weather and hydrological conditions. The EIS should include maps showing the movement of spilled materials over time under the various scenarios.

6. Human Health Risk Assessment

The *Draft EIS Guidelines* refer to the need for a Human Health Risk Assessment (“HHRA”) examining all exposure pathways for pollutants of concern to adequately characterize the potential risks to human health of Aboriginal peoples.²⁶ The *Draft EIS Guidelines* do not contain a similar statement with respect to non-Aboriginal peoples. Given the existing concerns with respect to air emissions in the Kitimat area, the potential for spills, and the cumulative effects of industrial development within the Kitimat area, Douglas Channel Watch submits that the Proponent must complete a HHRA for all people in the region.

7. Impacts of Climate Change

Douglas Channel Watch has concerns with respect to the potential impact of climate change on surface water flows and groundwater recharge. The Proponent intends to withdraw 48,000 m³/day from the local groundwater aquifer, with surface water from the Kitimat River as a potential alternate source.²⁷

Douglas Channel Watch notes recent low flows in the Kitimat River and increased glacial melting in the headwaters of the Kitimat River. Douglas Channel Watch is concerned about the long-term impacts of climate change on the flow of the Kitimat River and the recharge of the groundwater aquifer. The EIS should address the potential impact of climate change on the sources of water for the Project and the impact on the water supply for fisheries and human use.

8. Impact of Air Emissions on Water Quality

While the *Draft EIS Guidelines* require that the Proponent carry out air dispersion modelling and consider the impact of air emissions from the Project, Douglas Channel Watch is particularly concerned about the impact of air emissions from the Project on water quality in nearby surface waters. Douglas Channel Watch is particularly concerned about the impact of air emissions on water quality and fisheries in Lakelse Lake. The final EIS Guidelines should explicitly require

²⁵ *Ibid*, at 37.

²⁶ *Ibid*, at 33.

²⁷ *Project Description*, *supra* note 10, at 9.

the Proponent to model the impacts of air emissions from the Project on water quality and fisheries in nearby surface waters, including Lakelse Lake.

Summary

Subject to the comments above, Douglas Channel Watch finds the *Draft EIS Guidelines* to be fairly comprehensive and commends the Agency for its work in preparing the *Guidelines*. We trust that the Agency will give careful consideration to the deficiencies identified above.

Sincerely,

<Original signed by>

Barry Robinson
Staff Lawyer

CC: Cheryl Brown, Douglas Channel Watch