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December 18, 2015

Erica Hamilton
Commission Secretary
British Columbia Utilities Commission
Sixth Floor, 900 Howe Street, Box 250
Vancouver, BC V6Z 2N3

Re: Information Requests – BC Hydro W.A.C. Bennett Riprap Upgrade Project

Dear Ms. Hamilton,

On behalf of the McLeod Lake Indian Band and the Saulteau First Nation, LGL Limited environmental research associates (LGL) is pleased to submit the following information requests for the above noted project. Should you require any clarification on any items presented in this letter please feel free to contact me at your convenience.

Kind regards,



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Senior Wildlife Biologist

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1.0 Reference: Vehicle Traffic Safety Hazards**Exhibit B-1, Section 5.3.4.1, p. 5-16; Appendix E-2(a), p. 27**

On page 5-16 of Exhibit B-1, BC Hydro states:

The Sand Flat rock quarry is situated approximately 38 kilometres from the Dam site. Transport of materials from the quarry to the Dam will be via existing roads and result in up to 10,000 truckloads to site over three construction seasons. There is a risk of safety incidents between the transport vehicles and the public.

On page 27 of Appendix E-2(a) in Exhibit B-1, BC Hydro states:

There is minimal active industrial development in the area and there is no urban development. Machinery from industrial development does not contribute significant emissions to the air within the project study area. Air quality is typical of a natural non-industrial area.

Airborn sands and dusts coming from the reservoir shoreline has been identified as an environmental and health concern of the surrounding communities. Dust is particularly evident when reservoir levels are low. In 2010 a 24-hr average PM₁₀ concentrations (particulate matter under 10 µm) exceeded the 50 µg/m³ mandated by the Canada Wide Standard (Fryear, Nickling and Schillinger 2011). The elevation of particulate matter can result in the increase of respiratory and cardiovascular issues, including aggravation of asthma and respiratory symptoms. In plants, dust may effect photosynthesis, transpiration, alteration of temperature at the leaf surface and allow penetration of phytotoxic gaseous pollutants (Farmer 1993).

- 1.1 First Nations are concerned over the amount of potential fugitive dust generated from the quarry activities and the riprap hauling activities along the forestry roads that can gradually accumulate over time. Specific concerns are in regards to potential human health impacts from exposure to dust and impacts to medicinal and cultural plants.
 - 1.1.1 We request that BC Hydro confirm whether an Occupational Monitoring Plan is required for dust management as part of its Mines Act Notice of Work permit?
 - 1.1.2 We request that BC Hydro prepare a dust dispersion model to demonstrate the distance the dust will travel and expected impacts to vegetation/ food chain from the dust loading.
 - 1.1.3 We request that BC Hydro demonstrate how it will comply with the BC Ambient Air Quality Objectives for fugitive dust?

2.0 Reference:

- Riprap Quantity**
Exhibit B-1, Section 3.2.1.2, p. 3-4
- Materials Transport**
Exhibit B-1, Section 3.3.1, p. 3-15

On page 3-4 of Exhibit B-1, BC Hydro states:

The design will require approximately 73,800 cubic meters of limestone riprap for placement on the Dam.

On page 3-15 of Exhibit B-1, BC Hydro states:

Approximately 10,000 truckloads of rock material would be transported to the Dam over a three-year period.

- 2.1 The majority of riprap will be sourced from the Sand Flat Quarry and will involve blasting, sorting and transport to the dam face. There is a certain level of noise associated with these activities and members are concerned that impacts from noise could result in a reduction in

the enjoyment of traditional use activities and safety issues from exposure to noise and/or from not being able to hear other environmental components while being out on the land (e.g., bears).

- 2.1.1 We request that BC Hydro provide the expected noise levels and zone of influence from the blasting and heavy equipment operation at the quarry and also include the frequency of blasts on a daily and weekly basis during the seasonal operation of the quarry.
- 2.1.2 We request that BC Hydro provide the noise levels and zone of influence that are expected to be encountered along the haul roads from the rock trucks and also include the frequency of these occurrences based on daily and weekly hauling schedules.
- 2.1.3 We request that BC Hydro provide an assessment of these noise levels from the above two items in relation to noise exposure criteria.

3.0 Reference: Cumulative Effects
Exhibit B-1, Section 4.2.4.1, pp. 4-15, 4-16
Materials Transport
Appendix E-2(a), p. 38

On page 4-15 of Exhibit B-1, BC Hydro states:

Cumulative effects: BC Hydro is aware that cumulative effects are an ongoing concern for Treaty 8 First Nations. BC Hydro does not anticipate any cumulative effects given that no residual environmental impacts are anticipated with the implementation of appropriate environmental management plans, reclamation of the Sand Flats quarry site and deactivation of the Spur Road, and adherence to federal and provincial permitting, environmental regulations and guidelines. Further, implementation of the Project will not change the operation, output or capacity of the GMS Facility, and is not expected to change the long-term operation of Williston reservoir.

West Moberly First Nations recently informed BC Hydro that there may be potential residual impacts from the upgrades to the Table and Utah Roads belonging to Canfor. In particular, West Moberly First Nations believes that such upgrades will facilitate ongoing access and development of the territory. BC Hydro has requested a meeting with West Moberly and other First Nations to obtain further particulars about this potential impact.

On page 38 of Appendix E-2(a), in reference to species at risk, BC Hydro states:

Temporary displacement of these species may occur during the project however there is an abundance of similar habitat surrounding the project footprint so the temporary occupation of the habitat in the work zone is not anticipated to cause a significant impact to these species.

3.1 The approach BC Hydro is taking overlooks the consideration of regional cumulative effects that are occurring from the presence of multiple projects on the landscape (i.e., nibbling effect). This type of approach for assessing cumulative effects could screen out circumstances where cumulative effects are of concern despite the project's contribution not affecting the viability or sustainability of a resource or value. Over the past four decades resource development in the Peace region has resulted in a significant increase in the amount of area developed resulting in a decrease in interior habitat and an increase in edge habitat. Industrial development has had an additive and synergistic effect on the ecological integrity of the ecosystems within the Peace region as evidenced by changes in landscape structure, habitat destruction, change in forest biodiversity and species richness and composition. Further, activities from other projects in the area, such as the Peace Region Electrical Supply, Prince Rupert Gas Transmission Project, Gething Coal Bulk Sample Project and Canfor logging have the potential to affect affecting Aboriginal interests and the ability to exercise Treaty rights.

3.1.1 Can BC Hydro confirm that it assessed residual and cumulative impacts to Treaty and Aboriginal rights in its environmental assessment?

3.1.2 If yes, please explain the methods used for this assessment.