1 October 2019

Canadian Environmental Assessment Agency
Att: Webequie Supply Road Project
600-55 York Street
Toronto, Ontario M5J 1R7

Via email: CEAA.Webequie.ACEE@canada.ca

Re: Webequie Supply Road Project: relevant issues given the transition of the Project to IAA

To whom it may concern:

Please accept these comments on the proposal by Webequie First Nation (WFN) to the Canadian Environmental Assessment Agency (CEAA) regarding relevant issues given the transition of the designated project (Webequie Supply Road Project; WSRP) to the new federal Impact Assessment Act.

We are commenting in our capacity as scientists working in the far north region since 1992. Dr. Gretchen Lescord is a post doctoral scientist with Laurentian University and Wildlife Conservation Society with expertise in aquatic contaminant cycling and boreal limnology. Dr. John Gunn is a Canada Research Chair (CRC) in Stressed Aquatic Ecosystems at Laurentian University with expertise in a broad range of environmental fields including fisheries ecology, limnology, and carbon modeling. We are offering the following comments to augment those of our colleagues at WCS Canada submitted last month.

The proposed plan for the Webequie Supply Road (WSR) is for a permanent 2-lane gravel road intended for all-season use. The proposed road will be a total 107 kms long, with a corridor stretching 2 kms wide with approximately a 35-meter-wide zone of construction. The road will be planned for infrequent use by heavy trucks (carrying ore products from the future mines). The route that is being proposed appears to avoid several large water bodies (i.e., lakes and major rivers), with a few exceptions.

In reviewing the proposal, several questions arose related to various aspects of the environmental management during construction, as well as long-term maintenance. The below points should be discussed and considered during future assessment processes:

1. The proposal discusses using locally sourced gravel as construction material for road building, specifically mentioning eskers or other glacial deposits as potential sources. Such materials are suspected to be a source of chromium and, potentially, other metals naturally abundant in the region to northern rivers and lakes (Dyer and Handley 2013). The extensive geological and metal surveys of the Ontario Ministry of Northern Development and Mines should be reviewed when choosing source materials to avoid tills with potentially high chromium or other elements of concern. Chromium, arsenic, and mercury are already elevated in fish across the Ring of Fire region (Lescord et al. In Review), a concerning fact for local Indigenous communities who rely on these animals as a subsistence food source.

2. Road access may increase angling pressure in this remote region, altering the community dynamics by selectively removing some species and, potentially, introducing invasive aquatic life through recreational activities. Previous work by Dr. Gunn has shown that road development lead to overexploitation of lake trout populations in the Sudbury region of Ontario (Gunn and Sein 2000). Across northwestern Ontario, roads were associated with the introduction of invasive aquatic species such as small mouth bass, reducing spot fish populations by nearly 50% (Kaufman et al. 2009). This is particularly concerning given the reliance of local communities on fish populations as part of their cultural and nutritional subsistence practices.

3. Road crossings must be adequate to allow for the movement of fish populations to ensure migratory patterns maintained and reproductive behaviours are unaltered. Poorly designed or perched culverts can limit fish mobility and alter the genetics of fish populations due to habitat fragmentation (Wood et al. 2018).

4. The Attawapiskat/Winisk/Albany watersheds are in the sporadic discontinuous permafrost, yet the proposal makes few mentions of permafrost considerations for road construction or long-term maintenance. Climate models predict considerable warming of permafrost which may result in destabilization of road infrastructure in northern regions (Doré et al., 2016). Indeed, roads in the western Canadian and Nordic Arctic and sub-Arctic have already experienced issues due to permafrost thawing (e.g., Oldenborger et al. 2015; Calmels et al. 2016). How will this issue be dealt with? Roads have also been shown to exacerbate warming effects on permafrost, due in part of the collection of snow along the roadside having an insulating effect (Fortier et al. 2011). How will these effects be mitigated? Many potential mitigation measures exist and should be considered (Nordiskt vägforum 2014).

5. Sedimentation due to road construction can have considerable effects on water quality and aquatic life (Richards and Bacon 1994). This is also possibly exacerbated due to vegetation stripping (Gill et al. 2014). How will the effects of sedimentation be monitored and mitigated? In our option, total suspended solids (TSS) should be measured in any waterbody near a proposed cross, along side

the suit of other water chemistry parameters. Proper sedimentation controls and barriers need to be in place during road construction and carefully monitored for washout routinely.

Thank you for your attention. Pease contact us directly with any questions.

Sincerely,

<Original signed by>

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