

The Honourable Jonathan Wilkinson Minister of Environment and Climate Change House of Commons Ottawa, Ontario, K1A 0A6

Barbara Pullishy Director, Prairie and Northern Region, Impact Assessment Agency of Canada 1145-9700 Jasper Avenue Edmonton, Alberta, T5J 4C3

Dear Minster Wilkinson and Ms. Pullishy:

I am contacting you on Behalf of What the Frack Manitoba to provide new information pertaining to our request of Sept.8, 2021 for the designation of the Vivian Sand Extraction Project.

It has come to my attention that the CanWhite Sands (CWS) slurry lines and return recycling water lines would cross two Manitoba Hydro transmission lines one of which is an international 500 kV transmission line falling under the federal jurisdiction of the Canada Energy Regulator Act (S.C. 2019, c. 28, s. 10). CWS well clusters would be drilled on either side of the transmission lines. The well clusters may cause ground disturbance of the transmission lines. CWS vehicles, equipment and slurry lines would cross the transmission lines. Section 273 of the Act states:

"Prohibition — construction or ground disturbance

273 (1) It is prohibited for any person to construct a facility across, on, along or under an international or interprovincial power line or engage in an activity that causes a ground disturbance within the prescribed area unless the construction or activity is authorized by the orders or regulations made under section 275 and done in accordance with them.

Marginal note: Prohibition — vehicles and mobile equipment

(2) It is prohibited for any person to operate a vehicle or mobile equipment across an international or interprovincial power line unless
(a) that operation is authorized by orders or regulations made under section 275 and done in accordance with them;

Orders

275 (1) The Commission may, by order, give directions
(a) governing the design, construction, operation and abandonment of facilities constructed across, on, along or under an international or interprovincial power line;
(b) prescribing the area for the purposes of subsection 273(1);

(c) authorizing the construction of facilities across, on, along or under an international or interprovincial power line;

(d) authorizing ground disturbances within the prescribed area;

(e) governing the measures to be taken in relation to

(*i*) the construction of facilities across, on, along or under an international or interprovincial power line, (*ii*) the construction of an international or interprovincial power line across, on, along or under facilities, other than railways, and

(iii) ground disturbances within the prescribed area;

(f) authorizing the operation of vehicles or mobile equipment across an international or interprovincial power line and governing the measures to be taken in relation to that operation;"

The location of the MB Hydro Pointe du Bois power line and the 500 kV International Transmission Line to Minnesota as well as the Winnipeg aqueduct and the CN mainline railway are shown in figure 1.



Figure 1. Location of MB Hydro Pointe du Bois power line, the MB Hydro 500kV international transmission line, Winnipeg aqueduct and CN mainline from https://www.gov.mb.ca/sd/eal/registries/5716mbhydropointedubois/eap/chapt1.intro.pdf

The planned location of CWS well clusters for the first five years is shown Figure 2 taken from the CWS Hydrogelogical Report



Figure 2. Planned location of CWS well clusters up to 2025 from the CWS Hydrogelogical Report

Fourteen and six inch diameter HDPE slurry lines that would carry the extracted sand to the Vivian Sand Processing Plant and recycled return water lines would cross the Hydro lines multiple times. The six inch sand slurry HDPE lines would be emptied into vacuum trucks and moved every five to seven days each time crossing the hydro lines anew when extraction is in that vicinity. The fourteen inch main slurry line and the return recycle water lines would have to be moved, crossing the hydro lines repeatedly in different locations.

Figure 3 illustrates the land disturbance that would affect the international 500kV transmission line and the Pointe du Bois power line due to land subsidence. The unconsolidated sand around the cavities would slump into the cavities gradually enlarging the area of the unsupported shale and limestone above. Evidence submitted previously demonstrates the limestone is not thick enough to support the cavities that would increase in size as the sand slumps. The land subsidence could cause the formation of swamps or wetlands around and crossing the hydro corridors. The subsidence would cause land depression and instability within and adjacent to the corridors and transmission lines.





Sand slumps into extraction cavities exposing more unsupported limestone.



Limestone and till collapse filling the cavities causing subsidence.



Figure 3. Land Subsidence from CWS well clusters and subsequent aquifer damage and contamination from surface runoff and drainage.

The multiple crossings of the hydro lines by CWS slurry lines and equipment, and potential slurry line spillage could detrimentally impact the integrity of the corridors and the hydro pole towers.

The federal International and Interprovincial Power Line Damage Prevention Regulations — Authorizations (SOR/2019-347) require permission from Manitoba Hydro to conduct any activity that would cause a ground disturbance within a prescribed area of the international transmission line. The regulations require permission from Manitoba Hydro to cross the international transmission line with equipment or vehicles. To our knowledge CWS has not notified Manitoba Hydro and the Energy Regulator Commission of the planned silica sand extraction operations or obtained permission for the operations that would result in vehicle and equipment crossing and would assuredly cause detrimental ground disturbance to the prescribed area of the transmission lines.

Figure 1 and figure 3 illustrate the CWS activities would encroach upon the Winnipeg aqueduct and the federally regulated CN mainline with the 24 year projected period of operation. Given the risk of land subsidence the IAAC should place restrictions on the distance of approach of the CWS operations to the Winnipeg aqueduct and the CN mainline. The IAAC should prevent the CWS slurry lines from crossing the Winnipeg aqueduct to eliminate the risk of contamination of or damage to the aqueduct.

The IAAC is required to take into account the federal requirements and regulations of the Canada Energy Regulator Act. The substantial risk to the operation of the 500kV international transmission line should require prevention of CWS slurry lines from crossing the line and prevention of the drilling of well clusters within any distance that could reasonably disturb the prescribed area for the transmission line. A similar restriction should be applied to the Pointe du Bois power line. Restrictions that must be placed upon CWS operations with respect to distance of approach or crossing of the Hydro transmission lines, the Winnipeg aqueduct and the CN mainline compromise the viability of the entire project. Given the cumulative substantial risk of damage to and contamination of the two regional carbonate and sandstone aquifers, extensive land disturbance from subsidence, potential detriment to Winnipeg aqueduct, the 500 kV Hydro international transmission line, the Pointe du Bois transmission lines and the CN mainline and other potential project detriment to nearby residents such as excessive noise, property devaluations, and light disturbance, the IAAC should deny approval of the CWS projects.

Sincerely On Behalf of What the Frack Manitoba, Dennis LeNeveu