

FRACKING POSES THREAT

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Dams in danger of failing in the face of powerful quakes, *Ben Parfitt* says.

Some time after construction began on the Peace Canyon Dam in the 1970s, engineers at B.C. Hydro discovered that the 50-metre-high structure was being built on top of weak rock.

The rock could “shear” far more easily than the dam’s designers originally thought, forcing dam-safety officials and engineers at the hydroelectric utility to grapple with the uncomfortable reality that they had a dam with “foundational problems” on their hands.

Civil works are never immune to damage. But what dramatically ups the ante at the Peace Canyon Dam is that more and more earthquakes are occurring in the region where the dam is situated. The quakes are increasing in strength. And making matters worse, many of them aren’t natural but “induced” by fossil-fuel-industry fracking operations.

And it’s the lives of unsuspecting residents and workers downstream that are being placed at risk.

In hundreds of documents obtained through a freedom-of-information (FOI) request by the Canadian Centre for Policy Alternatives, it’s clear that over the past decade B.C. Hydro officials have warned numerous people in the provincial government, including senior bureaucrats and unidentified cabinet ministers, that fracking near its dams could have grave consequences, including the worst possible outcome: an outright dam failure.

Remote as that possibility may be, it could happen. And the most effective way to limit that risk is to simply say that no fossil-fuel company will drill or frack for fossil fuels anywhere near B.C. Hydro’s Peace River dams, including the massive W.A.C. Bennett Dam, the Peace Canyon Dam, a short distance downstream, and Site C, now under construction near Fort St. John.

In January 2018, B.C. Hydro legal counsel Jeff Christian stated this precautionary approach as plainly as possible in a letter to Mayka Kennedy, the provin-

cial Oil and Gas Commission’s vice-president and chief engineer:

“B.C. Hydro remains opposed to any waste-water injection and fracking in proximity to the Peace Canyon Dam and any such critical infrastructure, due to the large uncertainties in the hazard, the likelihood of occurrence and the potential consequences.”

Christian’s letter was the culmination of a dispute between B.C. Hydro and the commission that began the previous spring, when hydro officials discovered to their horror that a company was pumping large volumes of fluids down a disposal well just 3.3 kilometres from its troubled Peace Canyon facility.

By then, B.C. Hydro and commission personnel knew that even quakes in the 4 to 4.5-magnitude range could damage the dam and that a 5.5 event right at the dam could have “significant” consequences.

They also knew by then that a 5.7-magnitude quake had been triggered at a disposal well in Oklahoma in 2011, an event that released more than 50 times the energy of a magnitude-4.5 temblor and was strong enough to be felt in 17 U.S. states, buckle a local highway in three places, damage a house and injure two people.

But the commission, which originally suspended the disposal-well permit, later told the company that the suspension could be lifted, provided the firm met a new set of conditions, conditions that B.C. Hydro warned wouldn’t prevent quakes from being triggered at the site.

Then, in November 2018, hundreds of construction workers were evacuated from Site C after a 4.5-magnitude quake caused a “strong jolt” at the dam site. It took little time for the commission to link the quake to a fracking operation 20 kilometres away.

It was the second brutal wake-up call underscoring just how unstable things were in the immediate environs of the dam. Only two months earlier, a massive landslide had wiped out a road, cutting off access to Old Fort, just downstream of Site C.

But once again the commission refused to cancel the permit that led to the quake. In fact, just this past October the commission told the company that triggered the quake that it could go back to precisely the same area and start fracking all over again.

The commission did so despite being warned by two independent geological experts that portions of the Montney Basin, which straddles the Peace River, are riddled with faults that could become “critically stressed” with only small increases in the pressure at which immense amounts of water, sand and chemicals are injected below ground by the region’s fracking companies.

The commission also did so after Minister of Energy, Mines and Petroleum Resources Michelle Mungall received a report in February warning that no scientist anywhere can predict how strong a quake may one day be triggered by brute-force fracking operations.

Such decisions effectively mean that the commission — with the B.C. government’s blessing — is playing a game of Russian roulette. Except the pistol is pointed at dams that could fail in the face of powerful enough quakes with tremendous consequences for people living and working downstream.

The responsible thing to do is to say an outright “no” to fracking anywhere near such dams, pending a full and expedited public inquiry to determine whether fracking in any form can be safely conducted in the region.

B.C. Hydro should also be compelled to immediately make all necessary seismic upgrades to its existing Peace River dams so that any possibility of significant damage by natural or induced quakes is reduced as much as humanly possible.

In one FOI document, a B.C. Hydro official likens intensifying fracking activities to “carpet bombing.”

It’s time the provincial government sided with the would-be victims on the ground, not the people dropping the bombs. *Ben Parfitt is a resource policy analyst with the Canadian Centre for Policy Alternatives, B.C. office, and requested the freedom of information documents from B.C. Hydro.*