



Fast

FACTS

CANADIAN CENTRE FOR POLICY ALTERNATIVES – MANITOBA

January 12, 2022

Manitoba's Silica Sand: Use for Fracking Natural Gas

The Manitoba government is poised to approve two silica sand mines, one near Vivian in Southeastern Manitoba proposed by CanWhite Sands (CWS), the other on a community-designated trapline adjacent to the Hollow Water First Nations reserve boundary, on the eastern shores of Lake Winnipeg, proposed by Canadian Premium Sand (CPS).

Each of these proposed silica sand mines is looking to extract roughly 1.3 million tonnes of silica sand per year, for a combined total of 2.6 million tonnes a year over the next 25 to 30 years minimum.

These two Alberta-based companies are run by former oil and gas executives, who, it appears, have no real hands-on experience running a silica sand mining business.

These companies appear to be greenwashing the intended use of the silica sand that they are proposing to mine here in Manitoba in order to obtain the necessary social licence from Manitobans.

For instance, CPS announced, in mid-October of 2021, that they wanted to produce pattern solar glass and build a float glass plant to be located in Selkirk, Manitoba.

However, their technical report (NI 43-101), prepared in October of 2021, stated that... "based on the silica, iron, and other elemental contents of the mechanically and chemically treated sand in these beneficiation tests – and depending on market and manufacturing conditions – the

Wanipigow LBI sand can be used to manufacture standard glass products such as flat glass, coloured container glass, and insulating fibers".

Their technical report did note that it was "theoretically possible" for CPS to produce patterned solar glass, but "that the batch calculation result is preliminary and additional test sets are required on a bulk sand sample (e.g., 500 kg) with the actual raw materials." CPS has yet to undertake these additional batch tests to prove they can get the iron content in the silica sand down low enough to make patterned solar glass.

Their technical report also went on to note "while the emphasis in this report is on the definition of a sand resource intended for glass manufacturing (7.2

million tonnes total), the 2020-defined frac sand resource/reserve (25 million tonnes total), which pertains to hydraulic fracturing in the energy industry is still material to CPS. Hence a summary of the frac sand resource, reserve, and economics is reiterated in this report, which represents CPS's current Technical Report."

The company's own technical report identifies fracking for natural gas as a use for the silica sand.

It remains unclear if Manitoba silica sand is appropriate for solar glass, and if it was, it would only be a fraction of the silica sand these companies are proposing to extract.

In a November 2021 Carillon newspaper article, a former employee of CanWhite Sands was interviewed;

Wowchuk said during his time with the company, the sand was intended for use

there is an alternative.

CCPA-MB
301 - 583 Ellice Ave.
Winnipeg, MB
R3B 1Z7

phone

(204) 927-3200

email

ccpamb@policyalternatives.ca

website

www.policyalternatives.ca/
manitoba

blog

www.policyfix.ca

twitter

@ccpamb

continued..

in the North Dakota fracking industry. Fracking, or hydraulic fracturing, involves injecting water, sand and chemicals underground to recover gas and oil trapped in shale rock.

While preparing for public presentations in the spring of 2019, Wowchuk said he was coached to divert attention away from fracking and play up greener uses of silica sand.

He now accuses CanWhite of misleading the public by “portraying themselves as green” while pursuing oil and gas companies behind closed doors.

Initially, both these companies saw an opportunity to cash in on their proposed Manitoba silica sand mines by selling their product to the fracking boom taking place in the Bakken oil field, located a very short distance from Manitoba in North Dakota. However, this fracking bonanza in North Dakota has now fizzled for the most part. The newest market for selling Manitoba’s silica sand to the fracking industry is in the Montney Formation, which straddles Northern British Columbia and Alberta, where fracking for natural gas is about to explode once Coastal GasLink completes its natural gas pipeline to the LNG Canada facility located in Kitimat in northern B.C. The natural gas will be turned into Liquefied Natural Gas (LNG) and exported by shipping tankers to the Asian market.

Currently, the Montney formation represents more than 50 percent of the fracking (silica) sand demand in Canada and 70 percent of that frack sand comes from the USA, mostly from Wisconsin. Canada Energy Regulator estimates that some 42,734 new fracking wells will need to be drilled in the Montney Formation over the next 20 to 40 years if all three proposed B.C. LNG facilities come online.

In the Montney Formation, fracking operations in 2013 used an average of 227 kilos of sand per foot of horizontal drilling. In 2017 that number was closer to 454 kilos per foot of a horizontal well drilled, according to research by RS Energy Group. Wells are getting longer: horizontal wells in 2017 were averaging around 9,000 feet (2743 metres), compared to 5,000 feet (1524 metres) in 2013. On average, one fracking

well required about 5000 tonnes of silica sand per well in 2017, and some estimates for 2020 go as high as 9000 tonnes of silica sand used per well.

So, if an estimated 42,734 new wells - each well requiring a minimum of 5,000 tonnes of silica sand - are needed to meet the anticipated demand for the planned expansion of natural gas that these new BC LNG facilities require, this means approximately 213.6 million tonnes of silica sand will be consumed by all these new fracking wells.

These two silica sand mines proposed for Manitoba are well positioned to meet this huge demand for use in fracking in the Montney Formation.

Even if these three new B.C. LNG facilities do not materialize for some reason, the Canada Energy Regulator projects conservatively that an additional 11,518 new wells will need to be drilled in the Montney Formation, over the next 20 years, just to keep pace with the current demand for natural gas, which means that some 57.6 million tonnes of silica sand would be required to feed these new wells.

Silica sand from these two proposed silica sand mines in Manitoba would be sold to fracking operators in Montney Formation in Canadian dollars, which means a substantial saving right off the hop compared to the current American sources. The transportation cost would also be another big reduction in costs for fracking players operating the Montney Formation.

Providing silica sand to the fracking industry in the Montney Formation is where the big money is to be made.

Whatever profits these companies derive from these proposed silica sand mining operations will come at a great social and environmental cost to Manitobans, putting Southeastern Manitoba’s clean potable drinking water at risk, and creating environmental and cultural damage on the east shores of Lake Winnipeg.

To take action please see the Manitoba *Don Sullivana is a Research Associate for the Canadian Centre for Policy Alternatives – Manitoba.*

References available upon request.

CCPA-MB
301-583 Ellice Ave.
Winnipeg, MB
R3B 1Z7

phone
(204) 927-3200

email
ccpamb@policyalternatives.ca

website
www.policyalternatives.ca/
manitoba

blog
www.policyfix.ca

twitter
@ccpamb