

From: [REDACTED]
To: [+WPG725 - Clean Environment Commission](#)
Subject: Spam: STOP SIO SILICA
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Over ten thousand industrial sized boreholes will be drilled by Sio Silica through the till, Carbonate Aquifer, protective shale aquitard, and into the Sandstone Aquifer. "Drilling and decommissioning activities will occur year-round." Boreholes are spaced approx. 18m apart, will be in clusters (60m diameter), each cluster will contain up to 5 boreholes. 7 boreholes will mine simultaneously for 5-7 days, then sealed and abandoned.

These boreholes will occur throughout the mineral claim area (85,000 hectares/210,039 acres) and potentially throughout the Winnipeg Formation where the silica is found. The mineral claims are on private property. Land parcels will have several clusters and could see operations occur over years as "wells are permitted to be left unsealed for up to one year after they are drilled."(Sio response to public comment #222)

Casings and sealing material degrade overtime. These wells will be perpetual sources of contamination to the groundwater from surface sources. These pathways for contamination were highlighted by Matrix Solutions, consultant to MBEN/OLS. It is known that the shale aquitard will collapse from mining operations making proper sealing of boreholes highly unlikely. Sio Silica offered no solution on how to remediate the collapse of the aquitard and for sealing abandoned wells as per Regulations during the hearing. CEC consultant, Arcadis acknowledged there are no remediation measures that can be applied to restore the aquitard or the isolation between aquifers. This should STOP the project - NOW.

These abandoned wells are perpetual sources of groundwater contamination and will impact our property values, land use, insurance, liabilities, and future development. Chemical agriculture, manure spreading, other land uses, and septic systems will pose a grave risk to the drinking water for residents in south east MB. Groundwater flows may take the contaminate plumes outside of the area and impact other well users. We have no confidence that our water supply will be safe.

Well sealing materials may contaminate groundwater. "According to Remenda and van der Kamp (1997), "materials used to seal monitoring wells in aquitards can have a significant and long-lasting impact on the chemistry of the water in the wells." These workers found that solute contamination from sand-bentonite seals contributed measurable levels of contaminants for at least several years. According to Smith et al. (2014), "results show that cured cements in monitoring or water wells can contaminate groundwater samples with glycols and phenol." If used, grouts and cements containing polyacrylamide may also leach acrylamide (see section on Polyacrylamide)."(p. 245, Dr. Pip, CEC submission).

Thousands and thousands of wells will be drilled, mined, and abandoned.

Furthermore, negative surface impacts will occur from these boreholes and operations. Land will need to be cleared for the mine sites(60m) and access roads(4m width, 8m width at turn points) to accommodate drill rigs, extraction rigs, trucks, trailers, personnel, delivery of materials, industrial lighting banks, generators, pre filtration, drying beds/filter press and UV sterilization system, waste product management and transport, heavy machinery, porta-potties, etc.

Slurry and water return lines will transport the extracted sand to a sand processing facility. Approximately 2 m wide road ways will be cleared for the lines and components (pumps, generators, fuel storage, trucks, tractors, personnel, surveillance of slurry and water return lines, lighting, etc.) Continual noise, degraded air quality, light pollution from 24-hour operations will impact residents, wildlife, nocturnal species, and livestock. Our ability to enjoy our property will be severely hampered. Many properties contain old growth forest and undisturbed ecosystems. Their destruction is untenable. Old growth will be lost forever and forests will take decades to grow back, impacting wildlife. Our rural landscape will change forever.