

Dear Chair and Commissioners,

The Aquifers and Land are too important to allow this proposed project to proceed.

Thousands and thousands of industrial sized boreholes and a few hundred monitoring wells will pincushion the land. Rural private properties are turned into industrial zones. Private property will be cleared for mine sites, components, heavy equipment access and operations. Our homes will no longer be private, tranquil, enjoyable.

Many landowners will have 24/7/365 mining operations present for years as operations move from cluster to cluster in succession. Portions of mining operations may be present for the life of the proposed 24 year project (slurry lines, water lines, pumps, generators, dewatering stations, truck transport of waste materials, monitoring). This will be extended as the other mineral claims (DEN, ALY, RWM) are started up. Thousands of abandoned wells will impact property values, insurance, liability. Certain land uses will be curtailed to prevent contamination to the groundwater: chemical agriculture, manure spreading, livestock, septic systems.

The Draft Progressive Well Abandonment Plan estimates groundwater monitoring “to be five years or more following the end of sand extraction.” This suggests spraying/clearing will continue to occur for 5 or more years to allow access to these sites. When exactly does reforestation take place? Will not the land be compacted? Oaks, Poplars are known to die back from nearby development. Many properties such as ours, have rare old growth forests, that provide habitat. How exactly are these brought back to “equivalent or better condition than prior to extracting.”? (Corporate Ad, Clipper Jan 19, 2023) Once old growth is cleared it is destroyed.

CEC IR 005 “clearing will be scheduled during seasons (e.g., winter, later summer/fall) when plant surveys are not feasible, or when plant species of conservation concern may not be detectable should they be present.” Clearing land at times when on-site surveys are not feasible and/or species are not detectable shows a complete and vile lack of respect for the environment and the people who live there.

Clearing land before and after breeding season doesn't amount to much. Habitat loss is habitat loss. Mature trees and understory that provide shelter and food will take years to grow back. Our extreme weather puts pressure on growth. Many species return to the same nesting site. There is also territorial behaviours to consider. Disturbance from the 24/7 noise will adversely impact species as will industrial lighting. Same is true for human health and livestock. This devastation and disturbance will be with us for decades. I am having a hard time understanding why this project is even being considered.

The environment and wetlands in the area are not accounted for. Commission consultant Arcadis states “Information on the existing biological environment in the Project Proposal is very limited. For example, the baseline aquatic environment (Section 4.3) is described in only three pages. This level of detail would typically be insufficient for a mining project, including developments that are anticipated to have minimal interactions with the aquatic environment. We anticipate that biological experts assisting the CEC will require more baseline information prior to reaching

conclusions on potential project impacts.” I am not aware that biological experts were hired to assist the CEC. Who are they?

Contents of the slurry and water return lines have not been analyzed other than a quip reported in the Sio Silica 2020 Sustainability Report about flocculent levels being “virtually undetectable”. This residual amount is never disclosed/measured leaving it impossible to evaluate if mitigations prescribed will be effective in event of a release/accident.

The filtration and disinfection system are still at a conceptual stage. This is a major component and safety feature pivotal to the proposed project that must be made available for the EA. Mining has been ongoing since 2017. Injection permits were issued in 2019, 2020, and 2021. Injected excess mine water was treated with chlorine. How was this action permitted? If the concept of disinfection does not work, will chlorine continue to be dumped into the aquifer rather than shutting down the whole unethical absurd project? Further, Supplement 3, Process Wastewater Treatment Options shows water treatment objectives for the injected excess mine water into the aquifer use effluent treatment standards not drinking water standards. The Proposal does not contain the level of safety, integrity, and detail expected from purported competent firms and a “good neighbor”(Sio Silica ad nauseam).

Deep freshwater aquifers, like the Sandstone are extremely important, they are less susceptible to impacts from drought and contamination from flood events or from agricultural and industrial activities. The protective Shale Aquitard “...separates the two main aquifers and helps to preserve water quality and separate hydraulic pressures and chemistry.” (CEC consultant PorousTec p.4) The Aquitard is a valued environmental component. However, mining operations permanently removes the Aquitard and the fractured limestone in the Carbonate Aquifer. How will the aquifers be preserved and protected for this and future generations? The Sandstone and the Aquitard require preservation not exploitation.

Since there are voids around the well casing there is nothing for sealing material to adhere to, how will the outside of the casing be sealed to prevent pathways for surface contaminants? The casings will be hanging unsupported, how is this problem solved? Thousands and thousands of extraction wells and sealing material will degrade over time. How is this solved and who will cover the costs?

Matrix Solutions Inc. identified “Two distinct water types based on isotopes.”(slide 23) Sio Silica does not offer any remediation to restore the permanently lost material and prevent intermixing of different water types as per regulatory requirements. The proposed project does not comply with Manitoba law.

For the degree of irreversible, permanent, significant impact that this project will bring, the assessment is weak and incomplete. No cumulative impacts assessment was done. “Project splitting” underestimates impacts and prevents full comprehension of environmental, social and economic risks and impacts. Reviewing a small portion of the entire project underestimates impact and misleads the public. There are concerns with the hydrogeological model - see Matrix Solutions and PorousTec. The mining method remains untested at an industrial level and many components are still at conceptual stages and/or unproven creating more data gaps. “It is

not acceptable to use an environmental license to obtain baseline data.” (MBEN OLS Closing slide 70)

The impact of losing this aquifer system is beyond any corporation’s financial assurance. Putting at risk the water source for southeast Manitoba is inexcusable, it’s a disaster waiting to happen.

I request the Manitoba Clean Environment Commission to strongly recommend that the Sio Silica project be stopped and denied an Environment Act License.

Sincerely,

Tim Bell