

Dear Manitoba Minister of Conservation and Climate.

November 15, 2020

In accordance with Section 27(1) of the Manitoba Environment Act, we wish to make a third formal appeal to designate the Vivian Sand Project – file # 6057.00

This appeal is in respect to the decision of the Director of Environmental Approval to recommend to you that Clean Environment Commission hearings not be held for the CanWhite Sands Corp.(the proponent) silica sand development project file # 5067.00 and that a public meeting be held to respond to the concerns raised.

We also feel it is necessary to make the appeal to address new information submitted to the public review process on November 5, 2020 in the form of Mr. Somji's letter to the IAAC that reviewers and the TAC had no opportunity to comment on.

Also In a November 9, 2020 letter to the Federal Impact Assessment Agency of Canada (IAAC), Brent Bullen, Chief Operating Officer for CanWhite Sands Corp. stated that *"CanWhite Sands has no intention of moving forward with the Manitoba operation until the required independent science is available for elected leaders and stakeholders to review."*

In the letter, CanWhite Sands Corp announced it is conducting a hydrogeological study, including but not limited to testing and monitoring of the carbonate and sandstone aquifers and associated aquitards.

The hydrogeological study is not expected to be completed until mid-late March of 2021.

CanWhite Sands notes in its November 9, 2020 letter to the IAAC that.., *"(o)nce all stakeholders have had an opportunity to review the independent facts of the proposed operation, multiple public engagement sessions will be held to provide further clarification, direct questioning of independent experts and a complete overview of the operation."*

What the Frack Manitoba strongly opposes any CanWhite Sands Corp. (proponent) led public meeting process, as it in no way meets the formal requirement to have the company submit third party technical information and data on their mine and mining method and submit said information for a formal review under the Manitoba Environment Act, so that both the public and government experts can review and assess the entirety of CanWhite Sands Corp. proposed development as one project.

More importantly, any proponent led public meeting process, as outlined in the CanWhite Sands Corp letter to the IAAC on November 9, 2020, does not meet the legal standard of a Section 35 Consultation process that must be undertaken by the Crown when there may be an infringement on Aboriginal and Métis rights.

We have documented in submission number 60 to the IAAC the reasons why the new information submitted in the form of Mr. Somji's letter necessitates that Project must be class 3 under regulations of the Manitoba Environment Act.

We feel that the planned hydrogeological study to be undertaken by AECOM is an attempt to avoid a proper thorough review of the entire Vivian Sand process and to control the agenda. CanWhite has not specified the parameters of the study. It is the regulators taking into consideration public comments that should take the lead in determining the required parameters of the hydrogeological study.

The hydrogeological study is meaningless without a clear definition of the water demand for the Project. The water demand and water quality cannot be determined without a thorough understanding of the Wash Plant and slurry loop design, the method and quantity of water returned to the aquifer including the fate of snowmelt and rain runoff directed to the slurry loop and the extraction methodology. Collected snowmelt and run off diverted to the closed water loop with potential return to the aquifer is new information in Mr. Somji's letter to the IAAC. Potential contaminants in run off snow melt and wash water and acrylamide from the clarifier tank that will be in the recycled water loop and potentially enter the aquifer through returned water as documented in references 58 and 60 in the IAAC. One of the parameters of the hydrogeological study should be baseline water sampling for both aquifers throughout the CanWhite lease area.

Of particular importance is an independent gathering of fresh core logs of sand from the project area. An independent acid base test and trace metal analysis must be done on the fresh sand to determine the sulphide (marcasite) and trace metal content and the acid generating potential of the sand. We submitted a sample of sand extracted at Vivian that had been weathered for more than a year to an accredited lab for an acid base accounting test and trace metal test. Results of the analysis are documented in submission reference numbers 24 and 26 to the IAAC. The lab results showed sulphide and trace metals were still present in the sand despite the weathering. Sulphide when exposed to air in the slurry loop and in the returned water to the aquifer will oxidize to form acid. The acid will mobilize trace heavy metals in the aquifers and in the slurry loop.

The acid base accounting test and trace metal analysis must be done totally independent of CanWhite. CanWhite has demonstrated that they will falsely report information. Information given to the Eastern Region of Health Authority by CWS claimed that extracted sand had no particulates below 100 microns as reported by Emily Brass of the CBC in an interview with Mr. LeNeveu on June 26, 2020 <https://share.getcloudapp.com/2Nu5zIO2>

In response to questions from the Eastern Regional Health Authority TAC Table 1 of the Proponent response posted Nov. 5 2020, states

"Two samples of raw sand slurry material were analysed by a third-party laboratory. Results showed 0.67% and 0.45% of particulates less than 11 micrometers in size."

0.67% of 1.36 million tonnes of sand processed per year is 9112 tonnes of particulate less than 11 microns. The limit of PM10 (10 microns or less) is 50 micrograms per cubic meter.

The amount between 11 microns in size and 100 microns would be greater than 0.67%. This entry by AECOM in Table 1 contradicts the assertion that there is no particulate in the sand below 100 microns. The lab results are from slurry sand not a fresh core sample. Much of the fine sand would be suspended in the slurry water. Some of this suspended fine particulate would get carried into the sand piles and collected in the dry plant in the sand drying process.

Mr. Bullen made statements on June 11, 2020 in articles in Steinbach online that the Vivian sand posed the same threat as sand along Grand beach. <https://steinbachonline.com/local/springfield-residents-protest-potentially-hazardous-mine>. In Table 2 of the response to the public comments the Proponent states;
“Regarding the waste sand collected in the Dry Plant baghouse air filter system, the handling of fine silica dust collected will be conducted by trained personnel in accordance with The Workplace Safety and Health Act which includes provisions for safely working with potential airborne contaminants. Appropriate personal protective equipment will be supplied to employees and workers.”

Special training and protective equipment would not be required to handle beach sand.

In his letter to the IAAC Mr. Somji states regarding figure 27 in Mr. LeNeveu’s submission to the IAAC (reference number 3) and the public review;

“Figure 27 is not representative of the Vivian sands and a sieve analysis of the sand from Vivian was processed and results given to Manitoba Mines Branch where the size distribution did not pose a health risk.”

Figure 27 is a reproduction of a slide presented by Mr. Somji at the Noble conference of 2019. The slide in Figure 27 shows 0.2% of particulate below 63 microns which is a lower fraction than reported in Table 1 of the proponent response to the TAC comments. If the size distribution does not pose a health risk why would specialize training and protective clothing be required for those handling fine dust from the baghouse as reported in the proponent response to the public review comments?

For the third time we have CanWhite senior personnel misreporting their own data. The full report of the sieve analysis has not been disclosed in the EAP or in the proponent responses to comments. The proponent response to the Eastern Region Public health authority was written by AECOM. We have an untenable situation of AECOM contradicting statements from senior CanWhite personnel.

Mr. Somji attempts to address the issue of pyritic shale in the extracted sand by stating,

“CWS will not, and never has, harvested sand from the Black Island Member where pyrite could exist.”

Core log information from drilling reports obtained from Manitoba Groundwater submitted to the IAAC in reference numbers 48 and 49 shows pyritic shale in the aquitard overlaying the sand layer and pyritic shale in layers underlying the sand layer to be extracted by CanWhite.

The sand layer where extraction is to occur varies in thickness from about 5 feet to 100 feet as documented in the core logs. It is hard to conceive of how a well extraction process can be controlled to avoid extracting shale not visible from the surface above and below the sand layer of varying thickness. We have presented irrefutable evidence of physical shale samples and pictures of shale in extracted Vivian sand. This evidence has not been addressed in the proponent response. To determine the viability of water recycling and thus water demand on the aquifer for a hydrogeological study, the extraction methodology must necessarily be thoroughly documented and assessed by independent experts.

Without recycling the water demand on the aquifer is enormous - up to 7.7 million cubic meters per year. In the proponent response to public comments the minimum water draw on the aquifer of 200 thousand cubic meters for the 15% water entrained in the sand stockpiles as documented in Mr. LeNeveu's submissions to the public review and the IAAC is ignored. A proper hydrogeological study necessarily must evaluate aquifer water demand. Rather than transparency the purpose of the proposed hydrogeological study is to avoid proper consideration of the pyrite issue and other critical issues such as a subsidence and improper borehole sealing associated with the mining process. Both subsidence and improper sealing of the hundreds of boreholes drilled per year will affect hydrogeology. An attempt to hive off a separate hydrogeological study without a full analysis of all the processes is a form of deliberate non disclosure.

To fully consider the sustainability of the water draw on the aquifer a full basin modelling study must be done as reported in the CEC hearings of the Pembina Valley Water Pipeline Proposal documented in IAAC reference number 25. Progress has been made on a full basin model by government and other specialists. Basin scale modelling and determination of project impact on aquifer sustainability is beyond the scope of a hydrogeological study conducted by AECOM. Such a complex large scale study would necessarily involve Manitoba Water Stewardship and hydrogeological experts from the federal government especially those who have already worked on the development of a basin scale model for the eastern Manitoba aquifers or similar projects. A basin scale evaluation of the effect of the Project on aquifer sustainability would necessarily require a full IAAC and CEC impact assessment using both provincial and federal government expertise.

The province cannot continue to proceed with the approvals process as currently constituted because of the misclassification of the Project as class 2 rather than class 3. The Director of Environmental Approval, Shannon Kohler, in the letter disallowing hearings states;

"The potential environmental effects and potential mitigation strategies are well understood; therefore, a hearing would not add any new information in that regard."

From the lack of proper testing and quantification of the marcasite and trace metal content in the sand, the other uncertainties discussed above, and an admission by CanWhite of a need for a hydrogeological study it is clear potential environmental effects and potential mitigation strategies are not well understood. The Director's above statement prejudices a process not yet complete and is extremely improper. The Manitoba Approvals Branch has forfeited their right to hold a credible review and licensing of the Project.

The IAAC and CEC must step in to restore the right of the public, Métis and First Nations to a thorough impact assessment for the protection their environment, traditional lands, health and drinking water.

Therefore, in our third formal appeal, we requests that as the Minister responsible for the Manitoba Environment Act., that you immediately suspend the current Manitoba environmental review process with respect to CanWhite Sands Corp. proposed silica sand processing facility and request that CanWhite Sands Corp, now submit a full Environmental Impact Statement (EIS) with not only this new hydrogeological study, but also the third party technical information and data on its unconventional mining method as a Class 3 Development project, as per the regulation under the Manitoba Environment Act., to be reviewed by a joint federal/provincial public panel review process.

Respectfully,

Don Sullivan
What The Frack Manitoba