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September 11, 2020

Impact Assessment Agency of Canada
Prairie and Northern Region/Région des Prairies et du Nord
Canada Place
Suite 1145, 9700 Jasper Avenue
Edmonton, Alberta T5J 4C3

RE: CanWhite Sands Corp response to IAAC letters received August 17th and 28th, 2020

CanWhite Sands Corporation (CWS) respectfully submits the following response to the two letters received from IAAC on August 17th and 28th, 2020. This response is broken down into 4 sections:

1. Based upon a discussion between Feisal Somji and Ayesha Sohail on September 4th, 2020 we would like to give you a general overview of the Project as a whole. We believe there are many misconceptions about our Project and we understand from this conversation that there is a misunderstanding of the Project scope.
2. CWS has reviewed the submissions received by IAAC from the Brokenhead Ojibway Nation, which is largely relying on submission made by Mr. LeNeveu and Mr. Sullivan. There are many statements made that are simply untrue and these submissions show a real lack of understanding of our Project. We also believe that many of the items stated in their letters are purposefully exaggerated for effect and we will under this section outline these errors and correct them for the benefit of IAAC review.
3. A response to letter received August 17th, 2020.
4. A response to letter received August 28th, 2020.

Firstly, I would like to clarify that the Environment Act Proposal (EAP) application made by CWS to Manitoba Conservation and Climate, Environmental Approvals Branch (MBCC, EAB) thus far is only for the Processing Facility and associated rail loop. The EAP application does not include the mining (harvesting) and extraction of the sand, and one does not depend on the other. The associated facility would be able to process other sand from various sources in addition to other agriculture products.

The Facility will be reviewed by MBCC under The Environment Act as a “manufacturing and industrial plant” which is a Class 2 development in section 3 of the Classes of Development Regulation under

group 4 “Manufacturing”. The extraction (harvesting) of the sand resource will constitute “mining” which must be licensed under *The Environment Act* as a Class 2 development and which is subject to the closure planning and financial assurance provisions of *The Mines and Minerals Act* and to the specific regulation applicable to drilling and closing boreholes. CanWhite’s intention is to propose an extraction project for licensing later this year while construction of the Processing Facility is underway.

CanWhite is proposing the Processing Facility separately and in advance of extraction because:

- The Processing Facility consists of a permanent building and related infrastructure similar to other manufacturing operations located in urban or semi-urban settings;
- By contrast, CanWhite anticipates that special license conditions will have to be contemplated for extraction which will involve changing of extraction sites on a relatively frequent basis, which is not typical for Environment Act Licenses and which will not be relevant to the Processing Facility;
- In the future, the Processing Facility could be operated on a commercial basis to process and transfer sand that is not mined by the same owner provided that the sand is of the same nature and quality as the resource to which CanWhite’s subsidiary has rights; and
- Construction of the Processing Facility will take time to achieve, whereas extraction involves portable drills which will move frequently and for which no construction season is required.

CWS is currently completing a extensive hydrogeological study of the aquifer and the potential impacts (if any) from the extraction process with Golder Associates Ltd. Again, this is not part of the current EAP application. Once this study is completed, we will commence public engagement and then CWS will prepare and submit an EAP for mining (harvesting) and extraction. At the time of the public engagement phase the Company can answer all the concerns about the extraction process and the impact on the aquifer. CWS cannot answer these questions as of today as the study is not yet completed. This report is not part of the current Processing Facility EAP as this application does not involve extraction of the sand.

Section 1

Overview of the CanWhite Process

CWS is positioned to become the world’s most environmentally friendly silica sand producer. CWS will harvest the sand through 25 cm sized vertical wells. No open pits, no use of chemicals within the aquifer, no acid rock drainage, no surface discharge, no truck traffic, and no production or transportation dust.

The CWS methodology prioritizes land preservation and environmental stewardship.

Three key components of the CWS process include;

1- Temporary, portable harvest sites with immediate ongoing reclamation;
2- Dustless sand transport by slurry line to the Vivian Facility;
3- Fully enclosed, negative pressure sand drying and screening facility.

Component 1 - Harvest site and Methodology

Water well drillers around the world, and more specifically in Manitoba, utilize air to clean out sand from newly drilled and producing water wells. This method has been used for over 50 years and is proven to not harm the formation or water quality. Building upon this process CWS has developed a patented sand

lift system where sand is brought to surface with air and associate aquifer water is left in the aquifer. A net zero solution, CWS has proven the ability to not remove aquifer water while harvesting the sand, therefore there is no anticipated water draw from the aquifer or need for water disposal or discharge at surface.

On private lands under access agreement, a standard 25 cm well is drilled to formation and cemented in place to preserve the existing aquitard. A second 15 cm extraction tube is placed inside the wellbore to the formation. Inside the 15 cm extraction tube an air introduction tube is placed. The air introduction tube is shorter than the extraction tube so the air stays within the extraction tube. As air is introduced into the extraction tube it immediately rises to surface. This movement creates momentum to the surface bringing up the associated fluid and solids. The movement creates a suction effect at the bottom of the extraction tube due to a natural lower pressure inside the extraction tube versus the natural pressure of the geologic formation. This pressure differential allows the formation to "push" the sand into the extraction tube. The end result is very similar to drinking a slush drink with a straw. As the sand is removed the associated water returns to the formation through the annular space between the 25 cm and 15cm tubing. At no time is the formation subject to overpressure and as the sand is delivered wet no dust is generated.

The Harvest process takes an estimated 5 days per well after which the wells are abandoned under the standards defined by the Manitoba's *Mines and Minerals Act,* Drilling Regulation, 1992, and the surface is immediately remediated. As the harvest sites are temporary and portable, the site returns to its natural state within weeks of CWS harvest completion. No traditional mining activities take place and therefore there are no open pits and no underground operations.

Of note, under 5% of the total resource will be extracted using an engineered room and pillar methodology, therefore there are no risks or concerns for subsidence

Component 2 – Dustless temporary transport by slurry

When the sand is available at surface it is placed into a temporary, movable water transportation loop. The continuous water loop accepts the sand up to 15% by volume and transports the sand to the facility where the sand is removed from the loop and the water recycled and returned to transport more sand. As the sand is wet and contained within equipment and introduced into a water loop, no dust is present or generated.

At the facility the sand is deposited wet into a Work In Process (WIP) pile on an engineered surface which contains the equivalent of French Drains allowing full containment of any water discharge. The water, rain and snow melt are captured and recycled for WIP pile wetting and continuous water loop

The continuous water loop is comprised of high-density poly pipe (equivalent to the pipe used by municipalities for water distribution) and portable pumps. This allows the movement of slurry transport to match operational sites and minimizes surface disturbance. Surface crossing will be over private lands under surface use agreements.

The use of the continuous loop eliminates the need for any trucking and allows complete equipment removal from the harvest site allowing full remediation of the lands. CWS will eliminate legacy reclamations as all sites are immediately reclaimed through borehole abandonment and equipment removal.

Component 3 – Negative Pressure Process Facility

The CWS facility is comprised of a dryer, screeners and baghouse. Once sand enters the facility it remains enclosed within a negative air environment within all aspects of the equipment handling and is no longer subject to standard atmospheric pressures. The negative air environment is created by the baghouse which acts as a large multipurpose vacuum system throughout the sand handling process. The processed sand is moved from the facility to loadout silos over the railway loop and transfer to railcars are done under a dustless negative pressure loading facility.

The dryer is dual fuel and will originally operate on propane and later converted to natural gas. CWS as part of the facility development will work with Manitoba Hydro to bring in a high-pressure natural gas line. As the cost of the High Pressure Natural Gas transmission line will be borne CWS the community opportunity for residents east of Dugald to Vivian will be the opportunity to gasify their residences with a more environmentally friendly heating fuel option without the capital costs of the mainline installation.

Section 2

Incorrect assumptions made and relied upon within the contents of the Brokenhead Ojibway Nation (BON) letter to you on August 24, 2020.

On July 16, 2020, CWS submitted an Environmental Act Proposal for the development of a sand Processing Facility located near Vivian, Manitoba. Within the application a discussion of how the sand is transported at 15% by volume is presented. This is not how the sand is extracted from the formation and the BON letter incorrectly calculates extracted water based on this 15% volume. As noted above, CWS has developed a net zero water balance during extraction (harvesting).

When the sand itself is produced at the extraction point, the sand is placed into a water transportation loop system at 15% sand by volume, the water in the loop already exists as we recycle the water. Think if it like a water park ride, the slide always has water flowing through it and the rider merely enters the slide, rides the water and exits when the trip is over. The closed loop acts like a water ride for the sand from the extraction site to the facility, then the water is returned to pick up and transport more sand.

The wet plant does not require any additional water for washing the sand as the source water in the plant is from the continuous loop and recycled. There is no requirement for discharge of produced water. The water within the loop is fully recycled.

For clarity;

- The extraction is not part of the current EAP and no discussion on the extraction process or methodology was included in the Processing Facility EAP;
- The calculation by Mr. LeNeveu and Mr. Sullivan of amount of water produced is erroneous and incorrect and not from CWS;
- No water is discharged to surface at anytime;
- The Facility in the EAP is clearly stated to consume 200-300 USG per day only;
- The wet plant does not require additional water and acts as a sand depositor and water filtration system for recycling the water in the loop;
- The transportation loop is a continuous loop and uses recycled water;

- The sand piles at the facility are placed on engineered surfaces to capture any water run off should it exist, including rain and snow melt and recycle the water;
- The sand minerology has been provided to Manitoba Mines Branch for review.

With the greatest respect to the letters submitted by CanWhite's opponents the statements made are materially and factually incorrect. It would not be possible for one individual to be an expert or be familiar with the materials and studies being worked on or completed by the hundreds of people involved on this Project who are all third party from Internationally recognized firms specializing in the fields required to bring this Project to fruition.

The following are responses outlining incorrect information within the submitted letters found in the Canadian Impact Assessment's Registry relating to the Vivian Sand Processing Project. The Response Items discuss each letter on the registry and refer to the contents and figures within the associated documents.

Response Item #1
Title: Comments on Vivian Sand Facility Project Public Registry no. 6057
Author: D.M. LeNeveu
Date: August 24, 2020

Introduction Comments

- CWS is not solution mining
- Sustainable yield is not affected as produced water is net zero at formation
- Acid will not be produced. Minerology has been presented to the Manitoba Mines Branch and the claims of acid generation are false. Air has been used for water well drilling and water well cleanout for over 50 years in Manitoba with no adverse effects
- The air from compressors are used daily in water well drilling throughout Manitoba with no leaking of oil. The air is scrubbed of all particles and materials and oil less dry screw compressors are available.
- CWS wells are properly sealed and inspected with sealing reports filed on each well. CWS retained Friesen Drilling in addition to their own site inspections and found no irregularities with abandoned sites other than vandalism which has been addressed.
- Surface subsidence does not exist. Our sites are in fields where perfectly flat surfaces do not exist and farm equipment travel over these surfaces is common. Natural land depressions exist as well as mechanical from farm equipment working the soil. To conclude a subsidence occurred using a three foot level is not an accurate measurement. All former sites of CWS have been inspected in 2020 with no subsidence present. Stantec have verified the borehole design.
- The continuous loop water is recycled through a filtering plant and no water is discharged to surface. Should a flocculant be needed, it would be food grade, biodegradable flocculant will be used which has been proven to be environmentally inert and in current use for the production of domestic drinking water in plants throughout North America.
- No water is being discharged from any part of the CWS process and excess slurry water does not exist
- No surface discharge occurs, and the Brokenhead River is not at risk
- CWS is located within an industrial zoned area bordered by two provincial highways and one of CN rails main lines across Canada. CWS studies indicate property values will increase with the plant development.

- Mr. LeNeveu's opinion of markets are just that, an opinion. CWS is willing to make its investment within the current market conditions as CWS is a high purity industrial sand project and not a fracking supply company. No environmental legacies exist as borehole mining require active closure plans and all wells will be immediately abandoned upon completion of sand harvesting.
- Sand Sieve analysis has been provided to Manitoba Mines Branch and Manitoba Health and the sand size had been proven to not be a health threat. As the sand is produce wet, transported wet and processed in a negative pressure environment CWS air quality studies show no risk to adjacent properties.
- CWS have entered discussions with a couple of Indigenous groups and Mr. LeNevue has not been a party to these discussions so has no knowledge or facts to comment on CWS consultations
- CWS use several independent qualified experts to review the project including but not limited to; Stantec/AECOM/Golder/Process Engineers and Equipment/Industrial Accessory Company/Friesen Drillers. These reports and studies have been and will be shared with the appropriate stakeholders as they are completed.

Figure 1, the resource claim although extensive will never be developed to it full extent. A 24 year mine life, under a separate and yet to be filed EAP would only encompass approximately 10% of these mineral claims.

Water Draw on the Sandstone Aquifer

- Slurry sand content is not 15%. As noted above this is the sand to water ratio within the closed loop slurry line system. The sand extraction process is a net zero water consumption process. The water calculation and comparison for river dredging in Japan is not accurate or relevant;
- Sand is harvested at ratios as high as 90% sand and the associated water is left in the formation;
- A complete study on the harvesting and extraction process will be presented to public when available, then the EAP submission will be prepared and submitted;
- CWS has no knowledge of how the water calculation was made by Mr. LeNevue. Regardless these numbers are incorrect;
- The current EAP does not discuss the closed loop slurry line as the continuous loop slurry line is part of the Extraction Project;
- CWS has spent 3 years and over 5 million dollars designing the now patented extraction process. It is not possible for Mr. LeNevue to comment on its effectiveness and ability to produce a high density slurry;
- Figure 3a is a sampling tank and not a piece of equipment that would be used in permanent sand harvesting;
- Figure 3b is a clearing for Seismic and not a drainage path;
- 2019 had excessive rains with severe weather and flash flooding. The surface water from picture taken while trespassing on private land are from annual precipitation. In addition, this area is an exploration site and not a permanent facility;
- Numerous references are taken from unrelated industry, businesses and practices which are not applicable.

Pyrite and Aquifer Contamination

- CWS will not, and never has, harvested sand from the Black Island Member where pyrite could exist. Figure 5 is not a complete detail of the Winnipeg Formation. The upper member is called the Carmen member and is comprised of white silica sandstone. This is the member CWS harvests sand from. The lower members containing Pyrite are the Black Island members, these are layers CWS do not harvest sand from;
- CWS does not excavate or take sand from the Black Island members so Figure 6 and claims of Acid drainage are incorrect and not relevant;
- Any comparison to Black Island is not relevant as it is an entirely different minerology;
- Figure 8, Figure 9 are from an entirely different company, project and sand layer and has no relevance to CWS;
- Figure 10 CWS have extensive minerology tests conducted on the Vivian Sands which have been shared with relevant authorities. The results in Figure 10 are not representative of the sand minerology, nor can the sampling authenticity be verified;
- pH of the CWS sand was taken at 7.4 to 7.6 and comparing it to the Black Island sand is not scientifically correct;
- Figure 11a,b have nothing to do with CWS;
- Using the NI 43 101 report from another company, in another area, in another deposit has no relevancy to CWS;
- Figure 12 is not consistent with the material recovered by CW;
- Comparing Manitoba to California is not relevant and CWS is not pumping the Winnipeg Formation.

Improperly Sealed Boreholes

- CWS is working with the Manitoba Mine Branch and work has been properly documented and filed by Friesen Drillers.
- Figure 17 these wells are grouted and cemented as per the well reports filed with Manitoba regulatory bodies. Again, these wells are on private lands.
- CWS utilizes cement in the abandonment process preserving existing aquitards, formation separation, and impermeable barriers in accordance with Manitoba's *Groundwater and Water Well Act* the *Mines and Minerals Act,* Drilling Regulation, 1992 and the Mine Closure Regulation, 1999.
- Figure 21 a,b is not a borehole but a domestic small diameter water well. The picture clearly shows manual manipulation by shovel by non CWS representatives and standing groundwater.

Additional items within submission

- Figure 15 is not representative as the shale is not brought up by solution mining and the natural placement of shale is within a wet environment where it remains strong and intact.
- Figure 16 is from Arizona and is not relevant
- Figure 17 shows monitoring wells and a test well which are drilled to Manitoba guidelines using cement and proper grouting techniques. These wells have been abandoned to regulations.
- Figure 22 is not from sand within the Vivian area and is not representative of the minerology which has been proven repeatedly and shared with the Manitoba Mines Branch.
- Figure 23 is for sand in Michigan and not CWS sand.
- Figure 24 CWS is not a provider of sand to the Permian market and slide 24 is for in basin sand which is a different sand. CWS is a High Purity Industrial Silica deposit.
- Figure 25 is not an accurate representation of the high Purity Silica sand market.

- CWS has a High Purity deposit and defined uptake markets outside the fracking industry and is business modelled on the High Purity Industrial uses.
- Figure 26 is a centrifugal water pump used on a jet pump test. This piece of equipment was used for a short period of time during an exploration program. This piece is incorrectly identified as a compressor and is not used in the CWS process.
- 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.
- CWS sites received two safety inspections in the Spring of 2020 and the site was deemed to not pose any health risk, including silicosis. Despite the favorable result CWS removed the surface piles of sand.

Response Item #2
Title: Environmental Impact Alert- Risk Assessment of CanWhite Sands (CWS) Project – Our Line in the Sand, Citizens Group
Author: Janine G. Gibson
Date: September 5, 2020

Critical Risk #1

- Nowhere in the EAP does it state 7.7 million cubic meters of water will be withdrawn. This is an errant and incorrect calculation by a non-qualified individual who has disseminated false and fake information on social media. CWS is unaware of how this calculation was completed;
- The plant uses 200-300 gallons per day of water.

Critical Risk #2

- High Pressure air is not use and the formation is vented to atmosphere making it impossible to overpressure the formation. The same technique and air supply used by water well drillers to drill water wells and clean out sand for over 50 years is used in lifting the sand to surface;
- CWS has many minerology studies showing no sulfides in the sand. Again, comparison to different formation members, different projects, different companies by non-experts on social media have provided false and incorrect information which is being regurgitated in this letter.

Critical Risk #3

- CWS, if required will use a food grade proven environmentally friendly flocculant which is used in the production of drinking water at facilities across North America;
- The study referred look at oilfield application, sludge and dewatering and agricultural issues with a flocculant. The application is not representative of a CWS process.

Critical Risk #4

- CWS has no surface discharge;
- CWS is not an open pit and does not have tailings ponds;
- CWS does not generate any leaching;
- CWS does not have the minerology in the sand to produce the claims made.

Critical Risk #5

- The water calculation is wrong;
- CWS process will not collapse the sandstone aquifer;
- CWS has a patent pending net zero process leaving the water in the formation;
- All of this information along with independent reports will be shared during the public engagement phase prior to a mining (harvesting) EAP submission.

Critical Risk #6

- The shale and sands are quite stable;
- The Shale Aquitard is preserved, and sink holes will not form;
- CWS will take less than 5% of the sand in place through a properly independent engineered methodology;
- All of this information along with independent reports will be shared during the public engagement phase prior to a mining (harvesting) EAP submission.

Critical Risk #7

- Freshly mined silica is cleaner than beach sand as it has been washed for hundreds of millions of years;
- Slurry extraction removes fines and wet sand cannot produce dust;
- There is a greater risk for health issues from the surface sands at beaches and parks throughout Manitoba.

Response Item #3
Title: Letter to Minister of the Environment and Climate Change, The Hon, Jonathan Wilkinson
Author: Don Sullivan
Date: August 18, 2020

The contents of Mr. Sullivan's letter are incorporated in the letters responded to above. To reiterate, the calculation of water is materially incorrect and assumed. No surface discharge is within the CWS methodology; therefore, the Brokenhead River cannot be impacted.

Response Item #4
Title: The Project is a physical activity based on the potential for the diversion of more than 10 million cubic meters of water from a natural water body to another natural water body
Author: Dennis LeNeveu
Date: September 6, 2020

- The CWS extraction process is designed to be net zero;
- The calculation of water is incorrect and from incorrect assumptions made by the author.

Response Item #5
Title: The species at risk Chestnut Lamprey Eel extant in the Brokenhead River will be endangered by this Project
Author: Dennis LeNeveu
Date: September 6, 2020

- The CWS methodology and process has no surface discharge;
- The minerology of the Vivian Sand does not generate toxic acid or heavy metal runoff.

Response Item #6
Title: Air injection into the sandstone aquifer of the Winnipeg Formation
Author: Dennis LeNeveu
Date: September 6, 2020

- Improper comparison to gas storage caverns;
- The air used in the CWS process is not high pressure air;
- The air injection is designed to stay within the extraction tube and not openly injected into the formation.

Response Item #6
Title: Comments on Manitoba Public Registry 6057 - Vivian Sand Facility Project by D.M. LeNeveu for the Manitoba public Review Process
Author: Dennis LeNeveu
Date: September 3, 2020

- Mr. LeNevue is not aware of CWS initiatives or discussions with key Stakeholders;
- The Vivian Sand Processing Facility is located on private lands;
- Acid drainage is not possible from the minerology and more importantly the fact that CWS will not have surface discharge;
- The mineral rights of CWS are extensive but only a small percentage of the claims will be brought to market through the Vivian Sand Processing Facility.

In conclusion, CWS **r**espectfully asks that the facts, science and independent works of the 3rd party experts be considered over the exaggerated, unrelated and incorrect assumptions and calculations.

Section 3

Response to August 17th, 2020 letter questions:

1. *Proposed water withdrawal, use, discharge and final disposal;*
The processing facility is proposed to use 200 – 300 US gallons/day (757 – 1,136 L/day), which is the approximate daily usage of a household of four to six people based on local water usage data. Water usage at the facility is limited to sinks, toilets, staff kitchen and fire suppression. Water used in the facility daily (approximately 760 to 1,135 litres per day) will be directed to a septic system that will include a septic tank and drain field/leach field. The septic system will be installed, and regularly maintained and

monitored for correct functioning, in accordance with the Onsite Wastewater Management Systems Regulation made under *The Environment Act*.

2. *The proposed area of the railway yard (loop) component of the Project;*
The rail loop is proposed to be 7.4 hectares. The centre of the loop is planned to remain as is, with tree coverage and foliage, therefore the area inside the loop was not accounted for in calculations. For information purposes, when the inner area of the loop is added, the area is 47.1 hectares, which includes the spur line to the CN Rail. It should be noted that this spur line is under ownership care and control of CN and was not included in the Processing Facility EAP. For further details on the loop design please refer to the letter, 'Updated Rail Loop Design Information' filed with the Manitoba Conservation and Climate Environmental, Approvals Branch on spetember 10th 2020.

3. *Any further information that you care to provide to support the Agency's understanding of the Project as proposed.*
As outlined above in Section 1 and 2.

Section 4

Response to August 24th, 2020 letter questions:

1. *Information about key project activities, maps and layouts of the location of project components, land tenure, zoning, and estimated timelines for planning, construction, operation, decommissioning and abandonment for both the Vivian Sand Processing Facility Project and the Vivian Sand Extraction Project.*

Vivian Sand Facility Project

Key Project Activities include:

- A sand wash and dry facility that will include a 'Wet Plant', a 'Dry Plant' and the following
- associated components;
    - Two outdoor stockpiles of wet sand ready to be processed;
    - One overs sand reject pile (outdoor) associated with the Wet Plant
    - One overs/fines sand reject pile (enclosed) associated with the Dry Plant;
    - Four fully enclosed storage silos for dry sand product;
    - Ancillary structures, including permanent office, staff kitchen, washrooms, operator control centre, maintenance building and storage buildings;
    - Rail loop track (approximately 3.5 km length) connecting with a Rail Load Out for direct sand product loading to enclosed railcars, and for railcar storage; and
    - A 5 m wide single-lane gravel access road approximately 1 km in length to the Project site, with 1 m wide shoulders on either side for passing.

Maps and Layouts:

Please refer to **Appendix A** of this document as well as outlined in detail in the EAP submitted to Manitoba Conservation and Climate, Environmental Approvals Branch (MBCC, EAB) in July 2020.

Appendix A contains the following figures:

- Figure 1-2 Project Site Location and Land Ownership, with original rail loop (as seen in Vivian Sand Facility EAP)
- Figure 2-2 Processing Facility Components (as seen in Vivian Sand Facility EAP)
- Figure 4-8 Land Use within the Local Project Area (as seen in Vivian Sand Facility EAP)
- Rail Concept Option 4 – drawing: Figure 1
- Rail Concept Option 4- drawing: Figure 2

Land Tenure

The Project will be located within the Rural Municipality (RM) of Springfield on private land (no Crown land is associated to this project) as illustrated in **Figure 1-2 in Appendix A**, and within the following land parcels:

- NE-32-10-8E1
- SE-32-10-8E1
- SW-32-10-8E1
- NW-29-10-8E1
- NE-29-10-8E1

CanWhite has entered into agreements which will entitle CanWhite to purchase all privately-owned land.

Zoning

The Project site is conditionally zoned for industrial use which contemplates the proposed Project components and activities. Currently, there are agriculture and historic and active open pit aggregate/quarry operations in the local area.

Estimated Timelines

Project Phases and Activity	Proposed Schedule (subject to the results of Regulatory review)
Construction	
Site preparation (clearing vegetation, grubbing, grading, leveling) and construction of the Processing Facility and associated infrastructure	Q4 2020 to Q1 2021
Operation	
Commissioning the Wet Plant and Dry Plant; sand product production	Q1 2021 Production: Year-round; 24 hours/day, 7 days/week
Decommissioning	
Processing Facility dismantling and site reclamation	At end of Project Life (24 years): **2045**

Note: QX = year quarter (e.g. Q4 = October through December timeframe)

2. *A list of all regulatory approvals (federal, provincial, municipal, other) and any federal financial assistance that would be required for the Projects and the associated components or activities.*

- Environment Act Licence – Vivian Sand Facility Project (Provincial)
- Water rights license(s) (Provincial)
- RM of Springfield - Conditional Use application for the Facility Project (Municipal)
- RM of Springfield – Development Agreement (Municipal)
- RM of Springfield – Building Permit(s) (Municipal)

3. a) For each regulatory approval that would be required, please provide the following information:

i. Name of the licence, permit, authorization or approval, the associated legislative framework, and the responsible jurisdiction. Whether it would involve an assessment of any of the effects outlined in the paragraphs above, and if so, a general description of the assessment that you intend to undertake. Would conditions be set and if yes, what effects would those conditions address?

- Environment Act Licence - Vivian Sand Facility Project (Provincial)
  - Approval by: Manitoba Conservation and Climate, Environmental Approvals Branch
  - Assessment as "manufacturing and industrial plant" which is a class 2 development in section 3 of the Classes of Development Regulation made under *The Environment Act*.
  - Assessment by all impacted departments including but not limited to; Manitoba Health, Manitoba Infrastructure, Forestry, Wildlife and Fisheries Branch, Agriculture and Resource Development, Environmental Compliance and Enforcement, Lands Branch.
  - Assessment evaluates, description of proposed development, description of existing environment within the project area, discerption of environmental and human health effects of proposed development, mitigation measures and residual environmental effects, and follow-up plans including monitoring and reporting.
  - Further details in **Appendix B –** Environment Act Proposal Report Guidelines.

- Water rights license(s) (Provincial)
  - Approval by: Manitoba Conservation and Climate - Drainage and Water Rights Licensing Branch
  - Authorization under *The Water Rights Act* to withdraw and divert groundwater for 2 domestic wells located on the facility site for fire suppression, sinks, toilets etc.
  - Assessment includes; volume to be pumped, rate of pumping, duration, location of wells, size and depth of well, impact on local users.

- RM of Springfield - Conditional Use application for the Facility Project (Municipal)
    - Approval by: RM of Springfield Municipal Council.
    - Required under the Springfield Zoning By-law No. 08-01. Public hearing required in accordance with the Provincial *Planning Act*.
    - Assessment includes; a) relationship to and compliance with the RM of Springfield Development Plan and Council policy; b) compatibility with surrounding development in terms of land use function and scale of development; c) traffic impacts; d) relationship to, or impacts on utility services and public facilities such as recreational facilities and schools; e) relationship to Municipal land, right-of-way or easement regulations; f) effect on stability, retention and rehabilitation of desirable existing uses, buildings, or both in the area; g) relationship to the documented concerns and opinions of area residents regarding the application; h) groundwater and soil conditions; and i) topographical, physical and natural features, and others.
    - Conditions stipulated by council may include; a) additional buffering measures such as increased yard setbacks, berms and fencing; b) performance standards dealing with such potential impacts as noise, odour and vibration; c) limiting the hours of operation; d) imposing design and siting regulations including landscaping, outdoor lighting, refuse and storage areas, and building design and architectural appearance; e) the owner/applicant upgrading certain municipal services such as roads and ditches; f) a letter of credit related to municipal improvements such as road or drainage works; g) liability insurance protecting the municipality from any future legal claims, including environmental contamination to water sources; or h) the owner/applicant entering into a development agreement with the Municipality and others.
- RM of Springfield – Development Agreement/Permit (Municipal)
    - Approval by: RM of Springfield Municipal Council.
    - Required under the Springfield Development plan, in accordance with the Provincial *Planning Act*.
    - Assessment includes timing of construction of any proposed buildings or structures; the control of traffic; and the construction and maintenance of roads, fencing, landscaping, shelter belts, manure storage facility covers or site drainage works by or at the expense of the proponent
- RM of Springfield – Building Permit(s) (Municipal)
    - Approval by: RM of Springfield Municipal Council.
    - Required for applicable building codes and standards.

iii. *Whether public and/or Indigenous consultation would be required and if yes, provide information on the approach you intend to take (if any steps have been taken, please provide a summary, including issues raised as well as your responses).*

The Project Site is located within Treaty No. 1 area (Indian and Northern Affairs Canada, 2017). There are no First Nation reserve lands within the Local or Regional Project Area. The closest First Nation reserve lands to the Project Site is the Brokenhead Ojibway Nation's Na-Sha-Ke-Penais Indian Reserve (3 ha) surrounded by East St. Paul and located 40 km northwest of the Project Site.

The Regional Project Area is within an area recognized by the Manitoba Metis Federation as an area for Metis Natural Resource Harvesting (The Metis Economic Development Organization, 2018) which corresponds with the Manitoba Conservation and Climate Game Hunting Area (GHA) number 35 within which the Project Site is located (Manitoba Sustainable Development 2019).

The Project Site is comprised of land held in fee simple by private landowners and/or land used for municipal and public purposes and is currently zoned for 'aggregate' by the RM of Springfield. No aspects of the Project will involve Crown land. Therefore, the Project Site itself is not currently available for the exercise of Indigenous or Treaty rights.

CanWhite has to date met with the Manitoba Métis Federation (May 30, 2019 and August 19, 2020) and with a representative from the Southern Chief's Organization. The Company also intends to reach out and provide details on the Project to the Brokenhead Ojibway Nation and will take into account their concerns.

The following additional Public consultations are required per each provincial or municipal approval:

- Environment Act Licence – Vivian Sand Facility Project (Provincial)
    - Public Engagement required. All steps taken are outlined in Section 5 Engagement Program of the Vivian Sand Facility Project Environment Act Proposal filing. The following engagement steps have been taken:
        - Initial public meetings occurred in 2017 with general project meetings to introduce the company.
        - In April 2019, additional general meetings were held in La Broquerie, Anola and Richer to share general overview that sand was being targeted by the project.
        - A Project email (info@viviansandproject.com) launched May 11, 2020
        - A Project toll-free number: 1-888-436-5238 launched May 11, 2020
        - Information Flyers sent out May 11, 2020
        - Newspaper advertisement posted in *The Clipper* local newspaper on May 14, 2020
        - A Project website www.viviansandproject.com launched May 18th, 2020
        - Mail-out information packages sent out May 21, 2020
        - A Virtual Open House presentation held May 26, 2020, 7:00 pm
        - A briefing with the RM of Springfield Council was held prior to the formal Virtual Open House event on May 19, 2020 at 12:00 PM. During this briefing, the engagement plan, public presentation, website and information package materials were presented to Council for review.

- Water rights license(s) (Provincial)
    - None required.

- RM of Springfield - Conditional Use application for the Facility Project (Municipal)
    - Public hearing required. All formal documentation has been filed with the Municipally, awaiting a date for public hearing.

- RM of Springfield – Development Agreement (Municipal)
    - None required.

- RM of Springfield – Building Permit(s) (Municipal)
    - None required.

b) Identify whether any licence, permit, authorization or approval listed above would address any of the following matters:

i. Issues raised by the requester a. Impacts due to water withdrawal quantity

Water required for the project will be limited to sinks, toilets, and fire suppression, and this water will be obtained from two domestic wells located on site. CanWhite does not anticipate any impacts or effects on the water quality.

b. Impacts on water quality due to releases or accidents

The two wells on the facility site used for fire suppression, sinks and toilets for employees will be constructed, operated and decommissioned in accordance with the provincial regulations. They will be sealed on surface to protect from any foreign particles entering that may result from any release or accident on surface as is standard practice for domestic and other facility water wells.

c. Impacts on soil quality

An assessment of soil impacts has already been conducted and outlined in Section 6.2.2 of the Vivian Sand Facility Project Environment Act Proposal filing as the following:

Magnitude of Effect: Minor

Direction of Effect: Adverse

Duration of Effect: Long term

Frequency: Intermittent

Scope of Effect: Project Site

Reversibility: Reversible

Construction activities have the potential to cause soil erosion, including clearing, levelling, and construction of the site access road, Wet Plant and Dry Plant, rail loop and associated Project components. Soil erosion can potentially increase during high wind and precipitation events, which are expected to be most frequent during the months of May to September. Soil erosion may affect other environmental components, such as air quality (e.g. dust from soil disturbance), water quality, and vegetation.

To mitigate the effects of soil erosion, the following measures will be incorporated:

- An Erosion and Sediment Control Plan will be implemented for the construction and decommission phases of the Project.
- Areas disturbed during the construction phase that are not required for the Project operation phase (e.g. equipment laydown areas) will be revegetated as quickly as feasible to stabilize the soil and minimize soil erosion.
- During the Project decommissioning phase, after Project components have been removed, the landscape will be leveled and graded, and disturbed areas will be revegetated as quickly as feasible to stabilize the soil and minimize soil erosion.

With the application of the above measures, the potential for soil erosion and associated adverse impacts to the surrounding environment are anticipated to be minor and restricted to the Project Site.

d. Contamination of fish bearing waters

There are no lakes, rivers or streams within the Project Site. The Brokenhead River is the closest major waterbody which is located approximately 6 km east of the Project Site. Although the Local Project Area has some wetlands, artificial ponds and ephemeral drainage areas primarily associated with aggregate quarries and other developments in the area which are not directly connected with permanent natural waterways. Due to the absence of fish bearing waters, no Project related impacts on fish and fish habitat are anticipated.

There is a misconception that fish bearing waterways will be affected by discharge from the facility. As previously stated, there is no water discharge from the facility. All water is contained and recycled, therefore there is no credible potential impact to the Brokenhead River.

e. Impacts on air quality and atmospheric environment, including noise and light pollution

An extensive air quality model and study, noise model and study and overall assessment of impacts has been conducted. The facility Project is not anticipated to impact air quality, or the atmospheric environment, due to its location away from residential, and surrounding of trees, as well as a dust management plan as well as noise and dust monitoring programs in development.

Please see **Appendix C** for the full assessment completed in the Facility Project Environment Act Proposal.

f. Impacts to human health, and socioeconomic conditions

Human health and wellbeing as well as socioeconomic conditions were thoroughly assessed and detailed in Section 6.6 - Socioeconomics and 6.6.4 Human Health of the Vivian Sand Facility Project Environment Act Proposal Human health was found to be negligible due to the noise and dust monitoring, as well as the high safety standards and training to be implemented throughout the life of the project. The socioeconomic conditions were assessed to be positive or negligible for all other assessment items, such as land and resource use, infrastructure services, and labour force and employment, effects on Indigenous and Treaty Rights and heritage resources.

Please see **Appendix C** for the full assessment completed in the Facility Project Environment Act Proposal.

ii. If yes, discuss, in general, the benchmarks or standards that you intend to meet (or would be expected to meet).

iii. If the Projects are anticipated to result in permanent changes or cumulative effects, how you intend to manage those impacts

The Project is expected to last 24 years prior to decommissioning. At the Project end of life, the facility site which contains permanent structures etc. for the Project, will be returned to a natural state to the extent feasible. The decommissioning of the facility site will generally include the following activities:

- Removal of buildings, and foundations as applicable;
- Removal and disposal of miscellaneous infrastructure (e.g. power lines, generators);
- Removal of fuel and oil tanks, as applicable;
- Testing and remediation of contaminated soils, as required;
- Decommissioning (sealing) of the two on-site Processing Facility water wells;
- Re-grading and contouring of previously disturbed areas; and
- Revegetation of disturbed areas to restore the landscape to native conditions to the extent feasible.

Following revegetation through reseeding efforts at the decommissioned facility site, the establishment of shrubs and trees is expected to be evident within 5 to 10 years following closure.

4. *For all federal licences, permits, authorizations, approvals, and/or financial assistance that may be provided for the Projects, describe any anticipated adverse direct or incidental effects (including changes to health, social and economic conditions) that may occur as a result.*

   No federal licences, permits, authorizations, approvals or financial assistance will be required or sought for the Project. The Project is not anticipated to cause any negative adverse effects to the health, social or economic conditions. Steps are being taken at every stage of the Project to prevent and protect any danger to humans or the environment. Industry standards, provincial regulations and safety precautions are strictly adhered to at all work sites. These include but are not limited to a dust mitigation plan, dust and noise monitoring, personnel safety training, driving safety, wildlife awareness, waste and hazardous waste disposal and ground water monitoring and management.

5. *What steps have you taken to consult with the public? What steps do you plan to undertake during all phases of the Projects? Are you aware of any public concerns in relation to this projects? If yes, provide an overview of the key issues and the way in which (in general terms) you intend to address these matters?*

   To date, public engagement has occurred in phases and different forms. In April 2019 during the early planning phase, CanWhite held public meetings in Anola, Richer and La Broquerie, Manitoba to introduce CanWhite and provide information about the potential for a future silica sand project in their regional areas. The proposed location for the Processing Facility had not been determined at that time; therefore, formal public feedback regarding a proposed silica sand processing facility was not obtained during these early public engagement meetings.

A formal engagement process for the processing facility was initiated in 2020. As previously described above, all forms of communication were used to share information about the Project. An advertisement was published on May 14, 2020 in the local newspaper (The Clipper) informing the public about the Project, Virtual Open House, project website launch date (May 18th, 2020), Project email and toll-free CanWhite contact number. Members of the public that were interested in more information, looking to register for the Virtual Open House or to provide any comments and/or questions were directed to the Project website to send an email to info@viviansandproject.com or to call the toll-free number 1-888-436-5238.

Information packages were mailed to any local residents who requested hard copies of the information presented on the website. Additionally, 20 information packages were mailed to the RM of Springfield municipal office on May 21, 2020 for general public to pick up.

A Virtual Open House in the form of a live Project presentation by CanWhite followed by a question and answer session was held on May 26, 2020 from 7:00 PM to 9 PM. This was held online as a webinar format due to the coronavirus restrictions and previously approved by provincial regulators as acceptable. It featured a presentation on the facility Project plans followed by a question and answer period where attendees could submit questions to be answered live.

CanWhite maintained a record of correspondences throughout the engagement phase to track and respond to all emails and/or calls pertaining to the Project. Emails received were provided with an immediate autoreply informing the public that their inquiry would be responded to within two business days. Phone calls received after the Virtual Open House was held were provided with a reply within two business days. CanWhite's to respond to all inquires as received.

CanWhite is aware of some key issues and concerns of the public, including water quality, water usage, dust, noise and overall environmental impact. CanWhite has taken steps to mitigate each one of these concerns with various measures, studies and general operating procedures as outlined in the Facility Project Environment Act Proposal and above. Many of the latest concerns from the public arise from inaccurate information being presented by members of the public about the water usage and overall plans that CanWhite has not yet released. It has been communicated that once information is available CWS will engage with the public in the community including the Brokenhead Ojibway Nation, then the Extraction Project Environment Act Proposal will be prepared and submitted.

6. *What steps have you taken to consult with Indigenous communities? What steps do you plan to undertake during all phases of the Projects? Are you aware of any Indigenous community concerns in relation to these projects? If yes, provide an overview of the key issues and the way in which (in general terms) you plan to address these matters?*

The Project Site is located within Treaty No. 1 area (Indian and Northern Affairs Canada, 2017). There are no First Nation reserve lands within the Local or Regional Project Area. The closest First Nation reserve lands to the Project Site is the Brokenhead Ojibway Nation's Na-Sha-Ke-Penais Indian Reserve (3 ha) surrounded by East St. Paul and located 40 km northwest of the Project Site.

The Regional Project Area is within an area recognized by the Manitoba Metis Federation as an area for Metis Natural Resource Harvesting (The Metis Economic Development Organization, 2018) which

corresponds with the Manitoba Conservation and Climate Game Hunting Area (GHA) number 35 within which the Project Site is located (Manitoba Sustainable Development 2019).

The Project Site is comprised of land held in fee simple by private landowners and/or land used for municipal and public purposes and is currently zoned for 'aggregate' by the RM of Springfield. No aspects of the Project will involve Crown land. Therefore, the Project Site itself is not currently available for the exercise of Indigenous or Treaty rights.

CWS has to date met with the Manitoba Métis Federation (May 30, 2019 and August 19, 2020) and with a representative from the Southern Chief's Organization.

The Company also intends to reach out and provide details on the Project to the Brokenhead Ojibway Nation and will take into account their concerns. CWS was not aware of any concerns by any Indigenous Communities until the issuance of this letter, as no communication has been received.

7. *Do you have any other comments in relation to environmental effects or impacts to the public or Indigenous peoples and how you intend to address and manage those?*

At this time no environmental effect or impacts to the public or Indigenous people are expected from the Facility Project. All potential effects are mitigated as previously mentioned including but not limited to; a dust mitigation plan, dust and noise monitoring, personnel safety training, driving safety, wildlife awareness, waste and hazardous waste disposal and ground water monitoring and management.

8. *Explain your views on whether the Projects should be designated under the IAA.*

Thank you for the opportunity to state our position in this regard. The impacts to be taken into account in accordance with the *Impact Assessment Act* are those deemed in the Act to be within federal jurisdiction, as described in section 7 of the Act. Based on the information summarized above, there is no credible pathway for any of these effects to occur. The environmental baseline information described in the submission to Manitoba will apply equally to any future extraction project.

In response to the specific matters set out in section 7(1)(b), both the proposed Processing Facility Project and the Extraction Project, will be carried out in Manitoba on land held in fee simple by private owners. There will be no Crown Land usage for any aspect of the Project. We do not anticipate adverse effects outside the very limited geographic scope of the Projects, which are certainly well within Manitoba, either on or immediately adjacent to the land to be used for the processing plant project.

Neither project will require any federal permit, approval or license and there is no federal funding involved.

With respect to section 7(1) (a) (i) and (ii), there is no potential interaction between either Project and any surface water or other area that otherwise could be characterized as fish habitat as previously outlined above.

When CWS proceeds with the Extraction Project EAP, a public engagement process, including any Indigenous community interested in the Projects, will be carried out to inform and include input from potentially affected or otherwise interested communities. Specifically, with respect to the matters covered in section 7(1)(c), there is no possibility of any such impact, since both projects will be carried out on privately-owned land to which Indigenous communities would not at this time have a right of access.

Similarly, there is no credible pathway for any interaction between either project and the health, social or economic conditions of Indigenous peoples. Any conclusion to the contrary could be based only on misunderstandings, which we have outlined in Section 2 of this response and are taking steps to correct publicly.

Concerning 7(1) (a) (iii), all activities will be carried out respecting regulatory guidelines that apply to migratory birds and no impact of any nature is anticipated to occur on migratory birds.

If you require any additional information or would like further clarity on any aspect of our submission, please do not hesitate to reach out to me.

Best Regards,
<Original signed by>

Feisal Somji, B.Sc., MBA
President and CEO
CanWhite Sands Corp.

cc:
Jennifer Winsor P. Eng. (Manitoba Conservation and Climate, Environmental Approvals)
Siobhan Burland Ross (Manitoba Conservation and Climate, Environmental Approvals)

Attachments:

- Appendix A – Maps and Layouts
- Appendix B – Environment Act Proposal Report Guidelines
- Appendix C – Section 6.0 - Environmental Assessment and Mitigation Measures - of Vivian Sand Facility Project – Environment Act Proposal (EAP) Application