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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 letter of clarification – Appendix C

This document is a supplement to the previous letter sent October 15, 2021 “**CanWhite Sands Corp response to IAAC letter received September 21, 2021**”. This document represents a written version of **Appendix C** – a copy of the Virtual Open House from August 24, 2021, which for privacy reasons cannot be shared publicly. Appendix C is in response to the question from September 21, 2021 letter which stated, “3.a) 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 following are summaries of the questions asked and answers provided during the Open House on August 24th, 2021 regarding CanWhite’s Vivian Sand Extraction and Sand Facility Projects. Questions are listed in the order that they were responded to.

Question 1:

Can you please provide more information about some of the jobs that you anticipate being created either directly or indirectly because of this project?

Response:

CanWhite intends to employ 50 -80 people total for the facility and extraction operations. Job types will range from site staff, operational staff, administration, mechanics, maintenance, equipment operators, field equipment operators, electricians, and millwrights. Indirect employment will be based on supplies and services that will be needed such as trucking services (e.g. flat beds) for moving equipment, safety supplies, safety materials, lighting, and equipment rentals. There will also be a need for the purchase of

locally available consumables like fuel, cement and tubulars for well construction, services for temporary access trails to operational wells, and clearing required for the permanent access road for the sand facility.

To date, CanWhite has already invested \$10 million in the province for local equipment, services and expertise.

Question 2:

Are you planning on meeting with the community face-to-face in the near future?

Response:

Due to the ongoing COVID-19 pandemic, CanWhite has been unable to host in-person meetings with public and stakeholders since 2019. CanWhite will continue to adhere to the evolving Manitoba Public Health Orders, and we hope to hold smaller in-person meetings with local neighbours when and where possible. We have already met with the local Rural Municipalities and provincial levels of government regarding the proposed development of our projects.

Question 3:

Can you please advise if the sand you're extracting is going to wind up in fracking operations? Given the significant damage caused by burning fossil fuels?

Response:

No sand is planned to be supplied to the fracking industry. The silica sand we are planning to extract is of a rare purity which is in the top 1% of silica sand available worldwide. This sand purity level is required to produce products such as solar panels, batteries, fibre optics, cell phone smart glass, computer chips and specialty medical glass that is used for vaccines and more. CanWhite strives to be the most environmentally responsible sand processing facility and extraction operation in the world.

Question 4:

What is the expected timeline for the review process?

Response:

Once the Environment Act Licence (EAL) application is submitted to the province, the timeline is largely in the hands of the Province as to when a licence is or isn't approved. As you may recall, CanWhite submitted the Environment Act Proposal (EAL application) for the facility in July 2020 and the Extraction in July 2021, and a licence or decision regarding licence for either has yet to be issued from the province. Therefore, for this particular project the timeline has been one year, at times, it can take between six to 18 months for a typical timeframe. The reason for the timeframe is due to the rigorous review from the Provincial Technical Advisory Committee (TAC). The TAC is made up of specialists, scientists and

engineers who review all submitted documents and provide questions for the proponent to respond to or requirements the proponent will need to adhere to. In addition, there's a public review process for the EAL application whereby any questions that are submitted by the public will need to be formally addressed as well. The overall timeline is dependant on the timeframe for these processes to occur and the Province to reach a final decision.

Question 5:

How are you going to transfer the slurry from Queens Valley Road to the site south of Vivian?

Response:

CanWhite will be using simple, temporary road crossings and will coordinate with the RM of Springfield and Manitoba Infrastructure for permissions and access. These crossings will mostly go below the road.

Question 6:

Does your research sampling (methods slide, Ryan Mills) consider different weather variables that have been in significant flux due to climate change? What about drought, flooding etc. Can you provide models considering how environmental risks such as these could impact water quality?

Response:

The work done by AECOM for the hydrogeological and geochemistry assessment was focused on looking at the impacts of the project extraction process on existing domestic, commercial, municipal and industrial water supply wells in the area. The aquifer has been well characterized and is fairly well understood already. Precipitation (rainfall and snowmelt) recharges the carbonate and sandstone aquifers in the Sandilands Area, and groundwater then flows westward eventually discharging to the Red River floodway and Lake Winnipeg. The impacts of climate change will occur regardless of whether the project is here or not. Our basis for the groundwater quality assessment was the existing groundwater conditions because the groundwater is quite old. Much of the groundwater within the carbonate and sandstone aquifers present within the study area recharged during the last period of glaciation and has been slowly moving westward. Some of the water that was in the sea when the sediments were deposited is still present in the shale aquitard and in the western portion of the sandstone aquifer, while much of the saline water in the carbonate aquifer has been replaced with relatively fresh groundwater recharge. Groundwater moves slowly and changes in response to climate change would likely take an extended period of time to be realized in the sandstone or the carbonate aquifer. This is further muted because it is somewhat isolated from surface by glacial sediments. The aquifer may experience positive or negative changes in response to climate change. Because the project does not consume large volumes of water (most water is reinjected after treatment) and the aquifer is relatively thick, water availability is not likely to be induced by the project. The local scale drawdown resulting from operations is temporary and fully reversible following cessation of operations each year.

Question 7:

Is CanWhite considering subsidence risk in the area? Would CanWhite plan to extract in the Aly area? (For those unfamiliar, Aly is another claim area of CanWhite's just to the south-east of Winnipeg and further south west from the Vivian area)

Response:

CanWhite is working with Stantec to study the thickness of the limestone and operations with thinner limestone at our project site. The minimum thickness defined with the statements accompanying this question is for a lower rock quality compared to the limestone found in SE MB. The volume of sand that would be extracted was defined as 25,000 tonnes by Stantec. CanWhite is planning for 21,000 per cluster and in areas where the limestone is thinner, can be reduced. There has been 1000s of professional hours put into the studies, the engineering and the designing behind what we do. These volumes are based on factors of safety with zero tolerance for subsidence of any kind by experts. The focus area remains to be the 24-year mine life area following along PR 302 south, just beyond the RM of Springfield limits and does not extend into the Den, or Aly areas (claim areas further south and west). Please note that the Aly claim area is not only in very popular farming land, but the water is saline.

Please also refer to question 13 for further information.

Question 8:

Can someone speak about potential air quality impacts on nearby homes?

Response:

The primary concerns with air quality in a project like this would be emissions that are coming from equipment, dust from temporary equipment trails to the extraction well sites or the sand extracted. The primary source of emissions would be from the small number of vehicles that would be operating during the time that extraction is occurring. Anyone who has had a water well drilled in their yard will have seen the type of equipment used to do so.

There will not be exposed, dry sand stockpiled at the extraction site. The material extracted from the wells is wet. Therefore, there is no potential for dispersal of silica dust at the extraction project site because the sand is wet and remains wet.

Water will be used for dust suppression on project-related access roads and temporary access trails as needed.

Finally, for the development of extraction well sites, this will be primarily done using areas that have been previously disturbed. In addition, when there's any clearing that occurs that has potential for dust generation, there will be an erosion and sediment control plan in place that will have dust control mitigation measures such as water application and minimizing operations during windy periods. Therefore, with these aspects in mind, and the mitigation measures considered, there would be negligible impacts to residents as a result of air quality.

Please also refer to question 14 for more information.

Question 9:

How big are the wells in terms of surface area? If vegetation is needed to be cut back, how large an area is needed?

Response:

Up to seven wells will be clustered on 60 m diameter sites called “clusters”. The approximate locations for the clusters first four years have been illustrated in Figure 1-2 on page 6 of the Extraction EAP. Cluster locations were specifically selected in areas where the land has already been disturbed or there are limited to no trees. This will reduce the overall impact for access and operations. The wells themselves are 12-16” in diameter on ground surface. A water well is drilled using a water well rig, similar to what you have seen when a domestic well is drilled, then sand is extracted, the well is sealed, and the site is restored to its former state. The intention is for operations to be as least intrusive as possible. Additionally, it is important to note that all activities are on private land with landowner agreements set up with the owner of the property and the owner is aware of operations and timing.

Question 10:

Who did you acquire the subsurface mineral rights from and what was the cost?

Response:

The majority of the subsurface rights are issued by the province and are granted under mineral claims from the Province. The cost for the rights is a small fee to obtain the rights, and in order to maintain them a yearly expected spend for exploration, and analysis must be demonstrated. Any private mineral rights are negotiated separately with the owner of those rights and those costs are between the company and the owners.

Question 11:

Why were the trees already cleared at the Vivian site prior to the Facility approval and where did the trees go?

Response:

Much of the facility project site was already previously cleared. The land is private land and CanWhite has the right to clear and remove trees as anybody else does on their land. CanWhite wanted to have the remaining land cleared needed for the facility and components in advance of the migratory bird season (Mid April to mid August) so as not to not damage or affect any nests.

Unfortunately, we had a high rate of theft of cut trees that our contractor had arranged within the site. The wood that was not stolen, was taken to a mill. Waste from the facility area was taken away to be used as biofuel at another location. In the railway loop area mulching was used.

CanWhite did inform the RM Springfield, Mines and Mineral Branch and Conservation and Climate, Forestry and Wildlife Branch before and after tree clearing was done.

CanWhite was criticized online for not giving away free lumber. However, those who did ask for access were granted permission to harvest firewood from a designated area. Unfortunately, we kept having our gates cut down and people taking wood for the mill, so we had to allow the contractor to remove it in an expedited fashion as this lumber was already committed to alternate uses.

Question 12:

On your Facility site, the one area had trees pushed into the live trees, and wells were left unsealed and open. Silica piles were left open for ATVs to recreate in and there are no warning signs or securing of the sites. Why would that be?

Response:

The original clearing that is referred to in this question was cleared by the previous owner and then CanWhite did do some work on the property as is referred to. CanWhite has on multiple occasions put up warning signs, and even gates, all of which have been cut, damaged or outright stolen, gate included. CanWhite reminds the public, that the property being referred to is in fact private property and you are trespassing when on the site. When the site is active no one should be on the site without proper PPE, and even so, we have had individuals crossing our active work sites, or hiding in bushes nearby, which puts you and our team at risk. Regardless, CanWhite did cover the sand pile on the site, and once the well data and evaluation was complete, the wells were sealed according to the provincial requirements.

Question 13:

How much volume of sand will be removed? And what will replace that volume? Will the ground not be lower or depressed? How can you remove a certain volume of sand and not replace it 100% with something else?

Response:

The method for mining the sand is called a room and pillar extraction. This is what is also used in borehole mining. The method is to mine out a room underneath the caprock based on the caprock strength and it's load bearing capabilities. The sand removed from the room leaves behind water that infills this space. The pillar is a section of sand that is not extracted as it stays in place around the outside of the room and between one room and another, similar to a Greek column structure. The pillars provide additional stability to the cap rock, which in our case is the limestone.

The allowable size of the room and pillar has been modeled and assessed over 1000's of professional hours by Stantec and their team of geotechnical engineers. Safety factors have been put in place and a zero tolerance is established for any subsidence. Of note, subsidence is when the surface depresses, or a collapse occurs of the surface.

Please also refer to question 7 for further information.

Question 14:

Silica dust has been proven to cause cancer. So how can you make sure that the dust doesn't spread around?

Response:

The sand comes to the surface with water and sand as a slurry. It is then moved as a slurry in an enclosed tube to the facility where it is screened and 98% of the sand is retained and stockpiled wet. The sand particle sizes that remain in the wet stockpiled sand are much larger than the particle size of health risk concern. The smaller particles that could be small enough, are immediately removed in the screening process and kept contained as waste.

In addition, it should be noted that the facility is all contained once the sand is dry. Once the sand is picked up from the wet stockpiles it remains in covered conveyance or storage at all times. Dust is monitored at the facility, and any personnel that will need to enter any area where there is potential dust, will be trained and supplied appropriate PPE (Personal Protective Equipment)

Please also refer to question 8 for more information.

Question 15:

How and when were private wells assessed for the hydrogeology study and what sort of communication was delivered to the homeowners or property owners?

Response:

For the 2020 hydrogeology and geochemistry field investigation program, AECOM selected a location for the pumping test that was intentionally near existing domestic wells installed both in the sandstone and the carbonate aquifer. The wells were located up to approximately 1 km radial distance from the field investigation site. A pre-condition survey was conducted for each well. AECOM contacted the homeowners and conducted a survey to understand the well construction and operational history of the well. Data was collected using standardized forms that included: depth to water, water quality, the history of the well, the pumping system, the type of use, etc. An in-person well census was also conducted that included collection of water quality samples, measurement of groundwater levels, and instrumentation of the wells to continuously monitor water levels during and following the field investigation and pumping test. After the test was complete, AECOM representatives returned to sample the same wells. Samples were submitted to the analytical laboratory for testing and a summary of those results was provided to the homeowners after the results were available.

The field investigation and pumping test did not negatively impact the wells or availability of water for the homeowners. Water quality was not affected, and there were no reports of diminished water supply, or changes in the quality, odour or taste of the water

Question 16:

Is the full hydrogeological study available to review somewhere?

Response:

Yes, it is available for public review on the Manitoba Conservation and Climate, Environmental Approvals Public Registry website.

Question 17:

AECOM notes that the water levels would fluctuate over a small time period during the project, and in some cases this could require some water pumps to be lowered. If this is required of neighbouring community members, is CanWhite going to pay homeowners for this cost? Would work stop in the context of a significant drought?

Response:

CanWhite will have a stringent mitigation and monitoring program for its operations and the operating wells. Water levels within the aquifer are known to naturally fluctuate by approximately 2.5 metres (~8 feet), but fluctuations may be greater in times of drought or water surplus. With the recent dry conditions reported in the study area, there have been reports of well owners experiencing reduced well yield. There are many possible causes of well decline, but those responsible for the issues experienced in Manitoba were recently presented by Jeff Bell in an article in Steinbach Online, which concluded that many of the difficulties with local water wells are due to installation of pumps at depths that are not sufficiently below the water table.

CanWhite plans to monitor aquifer conditions before, during and after their work activities. A pre-development assessment similar to that which was done for the hydrogeological and geochemical field investigation will be completed for wells near the proposed work activities in the area. Should project activities impact the availability of water CanWhite will immediately take actions to ensure that they have access to water. CanWhite will conduct an evaluation to determine if the issues are related to well construction, pump installation depth or a result of CanWhite's work activities. If the issues are the result of CanWhite's work activities, CanWhite will rectify the issue.

CanWhite has responded to previous complaints received from homeowners at CanWhite's cost. The complaints are taken very seriously. For instance, we received feedback from a homeowner that had concerns with their well located 2.86 km away from our work activity area. CanWhite engaged Friesen Drillers to conduct an assessment of the well and determined the issues to be the result of conditions that pre-dated CanWhite's arrival in the area. Friesen provided recommendations as to what they could do from monitoring and maintenance of their well going forward.

CanWhite intends to be a trustworthy member of the community and establish reliable protocols that can be implemented to resolve any issues that may arise. This will require active monitoring and a robust response framework, with results regularly and transparently communicated to the community during operations. The work completed to date has identified approaches that can be implemented to allow for avoidance of impacts to wells and mitigation of those issues that cannot be avoided altogether.

Because the project will not consume significant quantities of water, impacts and the need for mitigation measures are anticipated to be minimal.

Please refer to response 28 further information.

Question 18:

Returning excess materials to the aquifer sounds dangerous, what other than UV treatment is being done to address this?

Response:

The reason we chose UV light as a form of water treatment prior to the water being returned to the aquifer is that UV provides a form of sterilization of the water. It's proven highly effective in killing bacteria, Cryptosporidium, Giardia, and viruses. In Europe, there's over 2,000 UV light municipal treatment systems and it is the prevalent choice for the sterilization of water. UV treatment is also usually the last step for treating effluent which is the discharge of our sewage into rivers for water use. Therefore, it's highly proven to be effective.

UV light does have factors to consider to ensure highest effectiveness and those are turbidity, the total suspended solids, the intensity of the light and exposure time.

Alternatively, the water can be treated with chlorine. However, CanWhite has made a commitment not to put any chemicals in the aquifer and although chlorine is actually an acceptable sterilization product, it's not something that we are considering.

Question 19:

In the event of a breach of the slurry line, what measures are in place in terms of an emergency plan to mitigate any damages to the aquifer?

Response:

The slurry lines run along the surface of the ground, not below in the aquifer. Should a leak be detected the line can be shut down and the zone isolated. Both visual and pressure transducer leak detection will be installed for which will signal a leak and the lines are segmented into sections so that if there is a repair or a reason to isolate one section this can be done easily and quickly. There are access points throughout the line for ease of this.

It is important to note that the slurry line only contains water and sand, so any breach of the line would result in water and sand only on surface. Additionally, the line is approximately 15% sand and 85% water so that should the line be stopped, it can be restarted without the need to open any of the lines.

An Emergency Response Plan will also outline the procedures and steps in the event of any environmental emergency both reactionary or protective measures needed. This would include a leak, spill, fire or other. An Emergency Response Plan will be fully prepared in accordance with a license should it be issued and be posted on site.

Question 20:

The sand recovery operation is mostly within two days, but how many days is the operation itself?

Response:

Each year, operations will run from April until November weather permitting. Each individual well will operate for approximately seven days each when you include the time to drill, extract the sand move equipment and then seal the well. We will cycle through each well in the field this way as was shown in the presentation with the seven wells per cluster.

Question 21:

Will CanWhite record and report noise levels of such quarry operations and take adequate measures to avoid exposure to silica dust in operations?

Response:

CanWhite operations are not a quarry operation. We have completed noise and air quality modelling for the facility site. We also expect to have to operate within a regulatory standard for a safe operation within limits. CanWhite will put in place sound and dust control monitoring to ensure we are within compliance of regulations.

Question 22:

Friesen Drillers stated in “The Clipper Weekly” in the issue August 10, 2021 concerns about mixing of the aquifers and “criticized the methods used to assess possible domestic impact on nearby private wells”. Without stating that Friesen Drillers is wrong, can you please provide scientific evidence describing how water will not seep through between the two aquifers and how local wells will not be affected? During the drought this year, many residents in the area have had “dry spells” in their wells. Extracting the amount of water for your production that you are proposing, is concerning as to whether those wells will “dry up” – either temporary or permanently.

Response:

CanWhite would like to note that Friesen Drillers provided a full peer review of the hydrogeological and geochemistry assessment and in the interest of full transparency, all the comments were published. Unfortunately, the way the article was written it reads like criticism for the Extraction EAP which is confusing, however it was peer feedback that is now incorporated into the overall filing. In other words, the comments received from Friesen on the draft report were addressed prior to issuance of the final report. The comments surrounding the methods used to assess possible impacts to water supply wells are the comments received from Friesen Drillers and feedback given for the report. AECOM is preparing further documentation as to the specifics of the pre-development well assessments that will be completed and the monitoring program that will be initiated. This will be a part of the Groundwater Monitoring and Impact Mitigation Plan what will be implemented prior to commencing operations.

Additionally, the majority of the existing domestic water supply wells installed in the sandstone aquifer have screen intervals that extend across both the limestone and the sandstone aquifers. While this can be an issue in the western part of the study area (near the Red River Floodway) where groundwater in the sandstone aquifer remains saline, it is not an issue in the eastern part of the study area where groundwater in both aquifers is fresh. Despite the interconnection of the two aquifers, a widespread issue has not been reported to CanWhite's knowledge. Much of the drilling conducted to date has identified the presence of a continuous shale aquitard between the limestone and sandstone aquifers. When boreholes are drilled, drill cuttings are collected and logged by a geologist to confirm the depths and presence of limestone, shale and sandstone. Therefore, the presence of the shale aquitard has been confirmed across the study area which provides the separation and isolation between the limestone and sandstone aquifer. CanWhite will be grouting all boreholes through the shale and lower part of the limestone aquifer in an effort to maintain separation between the two aquifers.

Question 23:

Regarding the economics of using a UV system. We had a UV system on our private residence and found that it was quite finicky and expensive to maintain. So are there systems that can be economically used in this operation? Without having to resort to some other system for purifying the water?'

Response:

The commercial cost for a UV system is dependant on the size, level of purification and overall volumes. CanWhite has found that these systems are quite attractive in costs for our operations based on the size of the system needed. For example, there is a large facility in Edmonton with a capital cost of approximately \$244,000 to put the UV system in. CanWhite's system will also contain redundancies to avoid flow disruption and will supply our own power to run the system.

Question 24:

Will CanWhite engage an independent expert to gather core samples, and samples from representative locations in the Bru area that will be protected against oxidation and have the samples re analyzed, will CanWhite have properly protected samples of lower shale concretions and light nodules analyzed?

Response:

CanWhite has already conducted many rounds of sampling of core, drill cuttings and sandstone. These samples have been collected by independent experts, and independently reviewed. The results are displayed and analyzed for the public to see in the Hydrogeological and Geochemistry Assessment which was also reviewed by two additional independent experts in the fields of hydrogeology and geochemistry.

The materials referenced in this question are all materials that have been brought to surface and deposited on the ground during regular water supply well drilling operations in the study area over a period in excess of 100 years. The drill cuttings have been deposited on the ground surface and there are no reports of water quality or geochemical issues reported.

While it is acknowledged that the core and chip samples were collected and exposed to oxygen, this is standard practice and the reaction rates between pyrite and oxygen are very slow. It may be more important to preclude exposure of samples to oxygen when other minerals such as pyrrhotite are present. All sampling activities were conducted following industry standard practice that are used in mining and other types of projects across the country and internationally. This is a mature field of science and there are many guidance documents available (e.g. MEND, GARD, etc.).

Please also refer to response 33 for more information.

Question 25:

At the beginning of the presentation Feisal provided an estimate of dollars put into the local economy, would those dollars be on an annual basis?

Response:

The comment made was about the \$1.2 billion dollars expected in revenue for the province over the 24 year mine life of the project. This revenue is made up of taxes into the local municipality, payroll taxes that go into the province, royalties on the actual sand itself that go to the province and taxation that goes to the provincial and the federal level.

CanWhite's contribution to the GDP of Canada is a lot larger than that once you factor in the spend of doing business locally. To date, CanWhite has spent over \$10 million in the area and on an annual basis, right now, we usually deploy anywhere from \$3 to \$5 million a year. CanWhite works with local companies in the area wherever possible and CanWhite is proud of the fact that it's a Manitoba first company, and that the money is spent in Manitoba.

Question 26:

Will CanWhite in the interest of transparency and proper independent technical review of any future project alterations, apply for a license for the full period of 24 years and include all anticipated future alterations in the current EAP?

Response:

The first four years of sand extraction activities are expected to result in improvements and efficiencies to this proposed new sand extraction method. Therefore, the site layout and ancillary infrastructure for the subsequent four-year blocks of sand extraction areas (after the first four years of Project operation) up to the 24-year life of the Project will be submitted to MBCC as Notices of Alteration to an Environment Act Licence for the Project. It is not common business practice to lay out a 24 year, planned life, when we know there's going to be efficiencies that are going to be achieved.

Question 27:

Expected noise impacts on nearby homes.

Response:

Noise is a topic that does come up quite regularly whether it be an industrial project, a drilling project or construction project. CanWhite recognizes that no one would want noisy equipment nearby. Noise is one impact that can be controlled quite simply compared to other impacts which has been considered in the design of the project and layout of equipment. Where noisy equipment is present, physical barriers and controls will be implemented such as minimizing tree clearing, and artificial barriers like sound blankets. Drilling activities would be conducted in accordance with local noise bylaws, and setback distances have been established to promote a buffer between residences and equipment. Equipment where possible, will be electric rather than diesel and mufflers installed when possible.

Question 28:

If CanWhite extraction operations, cause a homeowner with a normally functioning well to suddenly lose water? What can we do to fix this?

Response:

Offset distances are used between an existing well and the extraction activities as well as the placement of monitoring wells to continuously observe water levels in the aquifer. Should any issue arise where a homeowner's well is impacted operations will cease until the issue can be resolved. If a homeowner lost water, part of the mitigation plan is to have portable potable water available for an immediate supply. However, the intention of the monitoring program is to place monitoring locations between the operations and domestic or commercial wells, or other groundwater users. This would act like an advanced warning system where you would see the water level declines in those wells first which would allow for mitigation measures to be employed before those impacts to domestic wells were observed.

It is important to note that CanWhite's activities are in the sandstone aquifer, and most wells in the area are actually in the limestone, therefore adverse effects on the limestone wells are not expected and will also be monitored.

Please refer to response 17 further information.

Question 29:

Where are the sand extraction locations, and proximity to the facility and storage?

Response:

The extraction locations for the first four years are planned for within 0.5 km to 3 km south, west and southwest away from the facility where the processing occurs, storage and shipping by rail. Sand is moved by slurry to the facility in a 14" diameter line, and the first initial operations will be on the same side of the PTH 302, so no road crossing is necessary.

The movement of sand slurry can be found all over the world and predominantly in North America over vast distances. Other types of materials are also moved by slurry such as manure right in Manitoba.

Question 30:

Risk of well contamination resulting from this project.

Response:

No chemicals are used in the extraction process. Only air, water and sand are involved in the process of extraction. The hydrogeology and geochemistry assessment reviewed the risk of any form of contamination resulting from air or the re-injection process and found that the water quality if impacted, would be positive due to reduction of concentrations of iron and manganese when oxygen is introduced into the aquifer or allowed to mix with water containing lower concentrations of those elements.

CanWhite does not foresee any instance where contamination would occur, however, the issuance of an environment act licence is a very detailed document that's developed by the province. That includes a number of requirements that a company needs to go through as far as monitoring and reporting. As with any other industrial facility or mining development, the licence will include stipulations for things like groundwater monitoring, therefore, CanWhite will be held accountable and to a defined standard that will require monitoring and reporting to the province to ensure the groundwater is protected.

Question 31:

Question about site access where there are no established roads and where the access would be?

Response:

Included in the EAP for the Extraction, on page 22, Figure 2-5 Section 2.4 a map can be seen showing proposed temporary accesses. CanWhite will construct temporary access trails where access does not already exist. In many places there are already small access trails that are not formally listed on maps. CanWhite has intentionally selected areas that were previously disturbed and largely have no trees to drastically reduce the footprint and need to disturb the land. To access the facility, CanWhite would construct a permanent access road along the municipal right of way as was illustrated in the Facility EAP.

Question 32:

How long does CanWhite expect to operate in the area?

Response:

CanWhite has determined a 24 year mine life for the project. However, the Extraction EAP filing has been filed for extraction years up to and including 2025 because advancements in extraction methods and operations are expected to increase efficiency and reduce overall footprint after 2025. This will be explained in subsequent Notices of Alteration for the future potential extraction years, with the information and review process for Notices of Alteration of an Environment Act Licence for the Project being as required under Section 14 of *The Environment Act*. The project could continue after 24 years, however at this time, 24 years is the determined life of the mine and encompassed by the mine closure and reclamation requirements as required by the province.

Question 33:

Concern about oxidation, pyrite and marcasite as is seen in the Wanipigow area. Speaker states that he took samples from a stockpiled sand site. Concern about samples taken from this sand stockpile that contained shale that was exposed to air for a long period of time. Speaker further expresses concern about CanWhite's core sampling and sampling methods exposed to air.

Response:

It should be noted that the samples taken by the individual making the statement were taken off private property, from a site where sand was stockpiled. The sampling protocols for those samples were not provided and there is no ability to evaluate their representativeness, or the quality assurance and quality control measures that were followed. As stated previously, AECOM's sampling protocols follow the industry accepted guidelines and practices. When samples are collected, they are tracked following chain of custody procedures.

In reference to concerns about pyrite and marcasite in the Wanipigow sands, these sands are the Black Island member and are a completely different geological member from the Carman Sand Member, which will be mined as part of CanWhite's project. The materials are quite different, and there is no history of water quality impacts associated with the Winnipeg Sandstone. CanWhite's operations are not within any area containing the Black Island Member.

Please also refer to response 24 for more information.

Best Regards,

<Original signed by>

Brent Bullen, MBA
Chief Operating Officer
CanWhite Sands Corp.

cc:

Jennifer Winsor P. Eng. (Manitoba Conservation and Climate, Environmental Approvals)