

MEMORANDUM

TO: Attorney Larry Konopacki and Ron Koshoshek

FROM: John Robert Behling

DATE: October 19, 2018

RE: **Questions raised at the Town of Howard Public Hearing on October 8, 2018 regarding the sand mine application submitted by Northern Sands Wisconsin**

DISCUSSION

1. *When will NSW start the mine project?*
Construction will start when all permits are obtained. Construction will take 12 to 15 months. Mining will begin when stormwater controls are installed and the processing plant and rail transload are operational.
2. *Where does the requirement for the ½ mile radius come from?*
The notification of adjoining landowners of the site is part of the Town of Howard ordinance Chapter 17. The Town Board by motion extended this notification to ½ mile radius from the site.
3. *The application refers to BMP's what are those?*
BMP refers to Best Management Practices. These operational specifications are defined by WDNR authority within various programs under their control. Air quality permit emissions and storm water capture and discharge are two examples of WDNR programs where BMP have been defined.
4. *Why is the application not complete?*
The application has been determined to be complete by the township. Further, Town of Howard Chapter 17 ordinance defines elements required within the application and states that a public hearing will be conducted following the determination that the application is complete. These questions are one outcome from this hearing conducted October 8, 2018. SCS Engineers provided their opinion on additional issues that the Town Board may consider.
5. *Why are the particles in the "medium" range from what the EPA mandates (smaller particles are healthier to breath in than larger ones; "2.5 pm is in the middle range") and not smaller?*
The NSW application commits to monitoring ambient levels of airborne particulate matter consistent with the ordinance and the WDNR Air Quality Program. The WDNR manages environmental emissions and work place safety is regulated by OSHA during construction and MSHA once the mine is operational. NSW has voluntarily agreed to double the amount of air monitors currently required by the WDNR.

6. *How loud will the project operations be and what happens when NSW goes over that decibel?* The ordinance requires that the operator control off site noise levels to the maximum extent practicable. Noise levels at the boundaries of the mining or processing site shall not exceed 60 dB. See #8 below for town remedy for violations.
7. *Are there fines associated with going over the decibel limit? If so, where do those fines go?* The Town ordinance defines remedies when actions are necessary to respond to violations. The Town has authority to issue a stop work order, issue a citation, assess penalties, suspend or revoke license or other injunctive relief. Fines would be paid to the Town.
8. *Will there be any lawsuits against NSW or the Town Board due to silicosis?* NSW will operate within the air emission limits defined by the Wisconsin Department of Natural Resources through their permitting process for industrial sand producers. There is no documented case in the United States history where a person contracted silicosis through ambient air.
9. *Is there anything to assure there are no impacts (or will be impacts) to the groundwater?* Yes, there are many levels of protection. The ordinance mandates sentinel wells as part of a groundwater monitoring network, baseline testing of groundwater chemistry and measurement of groundwater flow direction. NSW has also committed to sampling of potable wells with ¼ mile of the site to measure pre-development conditions. The raw sand processing to proppant uses water. This water source will be withdrawn from the deeper and confined Mt Simon aquifer. This aquifer has abundant yield without impacting the near surface water levels or surface water features. Additionally, the NSW operations has replaced process water settlement ponds with a mechanical filter presses in its process layout. This further reduces potential impacts to groundwater. The ordinance also requires NSW to post financial assurance for a replacement water supply should the Town determine its necessary because of NSW activities.
10. *How often do the sand plant and mine get revisited?* Annual reports are required to be submitted Chippewa County as part of the permit requirements. The Town of Howard also has an annual report requirement within the ordinance. Town officials are welcome to meet with plant's management team at any time.
11. *Would/could the waste material be used for other purposes?* No. Chippewa County has approved our reclamation plan and exporting of materials for other purposes would require a permit modification. Some plants in Wisconsin have given away reject sand to local farmers to be used for bedding material. After start up, NSW may consider this option but it would need approval of both the County and the Town.
12. *Does/will NSW use dynamite?* NSW does not anticipate blasting. However, should blasting be necessary, we will secure approval from the Town of Howard. Dynamite is not used as primary explosive but small amounts could be used as the blasting cap.
13. *What will happen to the roads that NSW uses?*

The Town will require NSW to maintain roads based on our use and this expense will be bonded by NSW. NSW product will leave the site using the CN rail system and no trucking of sand on public roads is planned. We will transport sand on our mined property using off road mine trucks.

14. *When will permits be in hand? (from Town, County, State, etc.)*

Permits will be secured prior to operations and in compliance with regulations. The Town license needs to be procured before other additional permits are sought, for example the air permit.

15. *Will NSW hire people who are local?*

Yes. We will hire local people and contractors whenever possible. We have already used local contractors in support of our real estate and development activity.

16. *Where is "our" remedy if they go bankrupt?*

Chippewa County and the Town of Howard require financial assurance in a suitable form (such as bonds, letter of credit or cash) to be accessed should NSW be unable to fulfill its commitments. This is a legal requirement under both state and county law and under the Town of Howard's ordinance.

17. *What will NSW do with the stockpiles? Are they enclosed?*

Stockpiles will be used to feed the processing facility. Three stockpiles can be anticipated as part of the plant operations. These are 1) raw sand infeed to wash plant 2) dry plant infeed and 3) reclamation material from wash and dry plant. Product storage will be enclosed in silos prior to loading to enclosed rail cars.

18. *Have there been any studies on the property values of surrounding properties of a sand mine?*

The work done specific to sand mining in Wisconsin is limited. The Heartland Institute has presented a review and summary of their findings in Policy Study #140 February 2016 Social Impacts of Industrial Silica Sand (Frac Sand) Mining: Land Use and Value. This document cites work of others regarding property values. We will provide a courtesy copy to the Town in the event the Town would like to post it to their website. This study is also the most recent study conducted in Wisconsin regarding mining and property value guarantees.

19. *What will the reclamation look like?*

Chippewa County has approved the NSW reclamation plan. This plan includes returning the mined area to a mixture of forested and prairie lands. These landscapes were chosen to allow the soil health to be restored over time. Following recognition by the County that the reclamation success criteria has been met, the land can be used by its owner as they desire, including agriculture and other recreational uses.

20. *Has there been discussions with the City of Colfax (related to the high traffic use of the rail lines)?*

The Canadian National's Wheeler extension connects near Owen Wisconsin. Trains leaving the NSW facility will connect to CN's Wheeler extension and travel toward Owen (East) to join the CN main line. Trains will not head West toward Colfax.

Follow up questions from Attorney Larry K. Oct 15, 2018

21. *Will the rail loading facilities be built prior to the commencement of mining activities?*
The rail loading facilities will be built concurrently with the construction of the wet and dry processing plant.
22. *What is the direction of groundwater flow on the site?*
The groundwater flow direction generally follows the surface topography as is expected in a sedimentary formation. Data from the onsite wells were used with the WHGS published map and interpolated to estimate the groundwater contour map. The direction of flow is perpendicular to the groundwater elevation contour lines shown on Figure 10 of the license application.
23. *What will be done with the unmarketable "fines"?*
The fines are used for reclamation as fill and consistent with answer #5, they could at some point become available to farmers to be used for cattle bedding, subject to the permission of the town and the county.
24. *When will the collection of baseline data be completed?*
The baseline report was provided to the county in December 2017 with a follow up report provided in September 2018.
25. *What effects will the project have on springs?*
Springs are not present in Phase 1 as this inventory was part of the baseline study. Wisconsin springs are defined on their ability to discharge one cubic foot per second for at least 80% of the time. Additional inventory will be completed prior to development of Phase 2 and Phase 3. Seeps are not regulated specifically but can impact wetlands. Site layout was altered to avoid the Phase 1 delineated wetlands. Minor wetland disturbance and mitigation may be anticipated as engineering layout is completed consistent with WDNR requirements.
26. *Will the conveyors be covered/enclosed?*
Conveyors (stackers, teleconveyors, portable conveyors) used around the processing area will not be covered. Overland conveyors will be covered.
27. *How frequently will air monitors be checked?*
Air quality monitoring will be conducted in accordance with the DNR's regulatory requirements. As mentioned in answer #5, NSW has voluntarily agreed to have twice the amount of required air permits on site. We anticipate 24-hour composite samples being collected once every 6 days. This matches the frequency and schedule defined in air permits of other industrial sand producers.
28. *How will people be notified if there is an exceedance in air emissions so that they can protect themselves from effects?*
Exceedances are rare. Since 2010, there have been two recorded PM10 concentrations above the 150 ug/std m3 criteria of the 4,820 samples collected from the WDNR network of air monitoring stations at industrial sand sites. This data is available at the WDNR

website and is current through 6/30/2018. Data reporting is prescribed in Chapter 17 and NR 415.

29. *Will any heavy metals be present in excavated materials and if so, how will they be managed to avoid groundwater or surface water contamination?*

Some low concentration metals occur naturally in the geologic formation. Our process does not include settlement ponds which reduces concern of catastrophic release to surface water. Reclamation material will be tested as required by the Chippewa County permit. All results will also be shared simultaneously with the township.

30. *How will NSW evaluate changing water table levels and adjust its operations as the water table depth changes?*

Groundwater elevations will be recorded over time (at least monthly) to gauge seasonal variability. Data collection started in November 2017 and will continue. Additional monitoring wells are planned to measure groundwater elevation in advance of any site disturbance for mining. NSW will have definitive groundwater elevation data, prior to the development of each mined phase. This will determine mine floor elevation. All 90+ permitted mines in Chippewa County have the same requirement to stay 10' above the water table.

31. *Will there be any toxic chemicals used in the project and if so, how will they be managed?*

No.

32. *When will the noise monitor be installed?*

The noise monitor will be installed after issuance of the Town of Howard license.

33. *When will the well water testing occur?*

The well water testing will occur after the license is issued but prior to any construction or earth moving takes place.