



Minnesota Pollution Control Agency

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January 30, 2013

Ms. Penny Corcoran
Petitioners' Representative
Harris Citizens Action Committee
6510 446th Street
Harris, MN 55032

Mr. Larry Nelson
Petitioners' Representative
Harris Citizens Action Committee
42290 Ginger Avenue
Harris, MN 55032

Mr. Mike Caron
Tiller Corporation
PO Box 1480
7200 Hemlock Lane, Suite 200
Maple Grove, MN 55311-6840

RE: Citizens Petition for Preparation of an Environmental Assessment Worksheet for the Tiller Corporation Industrial Sand Processing Facility
North Branch, Chisago County, Minnesota

Dear Ms. Corcoran, Mr. Nelson, and Mr. Caron:

Enclosed please find the Findings of Fact, Conclusions of Law, and Order for the Minnesota Pollution Control Agency's decision to deny the petition to prepare an Environmental Assessment Worksheet for the proposed Tiller Corporation Industrial Sand Processing Facility in North Branch. The finding of fact is also available on the MPCA website at: <http://www.pca.state.mn.us/news/eaw/index.html>.

Please contact Karen Kromar of my staff with questions about this project at 651-757-2508 or toll free at 800-657-3864.

Sincerely,

A handwritten signature in blue ink, reading "Craig Affeldt".

Craig Affeldt
Supervisor
Environmental Review Unit
Resource Management and Assistance Division

CA:bt

Enclosure

p-ear2-49b

**STATE OF MINNESOTA
MINNESOTA POLLUTION CONTROL AGENCY**

**IN THE MATTER OF THE DECISION ON THE
PETITION TO PREPARE AN ENVIRONMENTAL
ASSESSMENT WORKSHEET FOR THE PROPOSED
TILLER CORPORATION INDUSTRIAL SAND PROCESSING FACILITY
NORTH BRANCH, CHISAGO COUNTY, MINNESOTA**

**FINDINGS OF FACT
CONCLUSIONS OF LAW
AND ORDER**

Pursuant to Minn. R. ch. 4410.1100, the Minnesota Pollution Control Agency (MPCA) received a petition, transmitted through the Minnesota Environmental Quality Board (EQB), requesting the preparation of an Environmental Assessment Worksheet (EAW) for the proposed Tiller Corporation Industrial Sand Processing Facility (Project) on December 17, 2012. The MPCA has reviewed the evidence submitted by the petitioners and the Project proposer, and information contained in agency files pursuant to Minn. R. 4410.1100 to determine whether the Project may have the potential for significant environmental effects. Based on this record, the MPCA hereby makes the following Findings of Fact, Conclusions of Law, and Order.

FINDINGS OF FACT

Project Description

1. Tiller Corporation (Tiller), through an air emission permit application submitted to the MPCA on April 4, 2012, proposes to operate an industrial sand processing facility located at 6384 415th Street, in the city of North Branch.
2. The processing facility will conduct sand drying, screening, and loading activities to produce industrial sand for use in various industries. Washed sand will be brought on site by truck, unloaded and conveyed to onsite storage piles. One storage pile will have a 0.25 acre footprint and be located in a three-sided building. If needed, two additional storage piles will be located outside and will have a combined footprint of 1.0 acre. The total footprint of all three piles is 1.25 acres. Material will be transported by conveying system and/or front end loader from the onsite piles to the sand dryer to remove the excess moisture. Once the sand is dried, it will be screened and separated into various sizes for end use applications. The sorted sand will then be transferred through the conveying system to storage silos before it is loaded onto trucks or rail cars for shipment off site. The majority of the product will be shipped via rail.
3. The facility will operate year round and typical operations are expected to be twenty hours per day, seven days per week, with the exception of trucking operations which are expected to be twelve hours per day, six days per week with occasional overnight operation if needed.
4. The operational plan for the facility consists of two phases, Phase 1 and Phase 2. Phase 1, the currently proposed operation, will obtain sand from a mining operation located in Wisconsin. Phase 1 will have an average production capacity of 150 tons of processed sand per hour.

5. Phase 2 operations are the same as Phase 1 and will provide an additional 150 tons per hour of capacity, requiring the installation of additional sand processing equipment and construction of additional storage silos. Tiller has stated that commencement of Phase 2 operations is dependent on product demand; therefore, there is no known start date. The Wisconsin mine does not have sufficient quantities of silica sand to support construction or operation of Phase 2. To date, Tiller has not identified other sources of silica sand necessary to support construction or operation of Phase 2. The proposed air emissions permit for the Project includes all equipment necessary to operate both Phase 1 and 2; however, Tiller will be required to provide the MPCA with at least 180 days notice prior to commencement of construction activities for Phase 2.
6. Tiller has stated that there are no existing or future mining sites in Minnesota currently proposed for permitting to supply sand to the Tiller North Branch facility; therefore, the MPCA has not identified any phased or connected actions related to the proposed Project.
7. Approximately 224,000 tons of sand from Wisconsin is currently being stored at the Tiller pit located in Sunrise Township, Minnesota. Tiller has stated that this is a temporary, one-time situation. This sand will be transported to the Tiller North Branch facility for processing once it is operational. Tiller has no future plans to import silica sand to the Sunrise pit.

Permit History

8. The city of North Branch issued a conditional use permit (CUP) for the Project to Tiller on September 24, 2011.
9. Tiller submitted a Registration Permit Option D air permit application for the North Branch facility to the MPCA on February 6, 2012. The MPCA denied the application on February 28, 2012, because the facility was proposing to operate a sand dryer that is subject to New Source Performance Standards Subpart UUU which requires the Project proposer to obtain an individual air emission permit.
10. On April 4, 2012, the MPCA received an individual air emission facility permit application for the proposed Project. The MPCA received supplemental permit application information up until November 8, 2012.
11. On May 24, 2012, MPCA compliance and enforcement staff conducted a site visit of the Tiller North Branch facility. MPCA staff discovered that the facility was fully constructed but had not yet commenced operation.
12. On May 31, 2012, MPCA informed Tiller that due to the fact that Tiller had constructed the facility prior to obtaining the necessary air emissions permit, the facility would need to conduct a Best Available Control Technology (BACT) equivalent analysis for all criteria pollutants.
13. On August 13, 2012, Tiller submitted the required BACT-equivalent analysis.
14. The MPCA and Tiller entered into a stipulation agreement on January 17, 2013, to resolve violations at the facility, which included the construction of the facility prior to permit issuance, and the failure of the facility to submit an annual air emission inventory. The stipulation agreement included a monetary penalty and corrective actions to address the violations. In addition to completing the

corrective actions, Tiller volunteered, and the MPCA agreed, that Tiller would conduct two years of air monitoring as a Supplemental Environmental Project. The agreement for monitoring has been incorporated as a requirement of the draft air emissions permit.

15. MPCA staff prepared a draft air emission permit and placed it on public notice on November 8, 2012. MPCA staff also held a public informational meeting on December 4, 2012, in North Branch, Minnesota. The public comment period on the permit ended on December 14, 2012.

Petition for Environmental Assessment Worksheet

16. On December 10, 2012, the EQB received a petition for the preparation of an EAW on the proposed Project, pursuant to Minn. R. 4410.1100.
17. The EQB determined the MPCA was the responsible government unit (RGU). The petition was forwarded to the MPCA on December 17, 2012.
18. On December 18, 2012, the MPCA notified the petitioners' representatives and the Project proposer that a petition for an EAW had been received. The parties were further informed that the decision to grant or deny the petition would be made by the MPCA Commissioner unless a member of the MPCA Citizens' Board (Board) requested that the decision be made by the Board. Pursuant to the time frame established by the MPCA Commissioner, such a request was to be made within 10 working days after the date of the letter. Interested parties had the option of contacting members of the Board to request that the decision be made by the Board.
19. No Board members requested to have the petition brought to the Board for a decision.

Criteria for Decision to Grant or Deny the Petition for an EAW

20. Thresholds for mandatory environmental review are contained in Minn. R. 4410.4300 for EAWs and 4410.4400 for Environmental Impact Statements (EISs). EQB rules do not contain thresholds for the mandatory review of industrial sand processing facilities. In addition, air emissions from the proposed Project would not exceed the thresholds for review specified in Minn. R. 4410.4300, subp. 15. The MPCA finds that the proposed Project does not meet the threshold for a mandatory EAW for any category in Minn. R. 4410.4300 or a mandatory EIS for any category in Minn. R. 4410.4400.
21. The proposed Project is subject to discretionary environmental review pursuant to Minn. R. 4410.4500. The proposed Project is not exempt from environmental review under any portion of Minn. R. 4410.4600.
22. The criteria for ordering the preparation of an EAW in response to a petition are specified in Minn. R. 4410.1100, subp. 6, which states, in part:

The RGU shall order the preparation of an EAW if the evidence presented by the petitioners, proposers, and other persons or otherwise known to the RGU demonstrates that, because of the nature or location of the proposed project, the project may have the potential for significant environmental effects. The RGU shall deny the petition if the evidence presented fails to

demonstrate the project may have the potential for significant environmental effects. In considering the evidence, the RGU must take into account the factors listed in part 4410.1700, subpart 7.

23. Minn. R. 4410.1700, subp. 7 states the following:

In deciding whether a project has the potential for significant environmental effects, the following factors shall be considered:

- A. Type, extent, and reversibility of environmental effects;
- B. Cumulative potential effects. The RGU shall consider the following factors: whether the cumulative potential effect is significant; whether the contribution from the project is significant when viewed in connection with other contributions to the cumulative potential effect; the degree to which the project complies with approved mitigation measures specifically designed to address the cumulative potential effect; and the efforts of the proposer to minimize the contributions from the project;
- C. The extent to which the environmental effects are subject to mitigation by ongoing public regulatory authority. The RGU may rely only on mitigation measures that are specific and that can be reasonably expected to effectively mitigate the identified environmental impacts of the project; and
- D. The extent to which environmental effects can be anticipated and controlled as a result of other available environmental studies undertaken by public agencies or the project proposer, including other EISs.

24. The MPCA evaluated the issues raised by the petitioners and the evidence submitted with the petition. The MPCA also reviewed other available information in the record of the MPCA including the permit application, draft permit and technical support documents, and communications with members of the staff of the Chisago County Public Works and Environmental Services and Zoning Departments. The MPCA then applied the four criteria to determine whether the proposed Project may have the potential for significant environmental effects, and whether an EAW should be ordered as requested by the petition.

Factor #1: Type, Extent, and Reversibility of Environmental Effects

25. The primary environmental impact areas of concern expressed in the petition are as follows.

- Truck and train traffic (volume and safety)
- Air quality, and
- General concerns related to groundwater quantity and quality, and noise.

Truck and Train Traffic

26. The petitioners presented information and described concerns about the proposed volume of truck and train traffic from the facility. These concerns related to the safety and adequacy of roadways to handle the additional truck traffic, the safety of railroad crossings, and vibrations from train traffic.

27. Chisago County Public Works also raised concerns about possible effects of an increase in heavy commercial traffic on the operation of the County road system in the area, including the roads in the city of Harris which is located about two miles north of the Project site. The Chisago County engineer expressed concerns about the safety of the railroad crossing near the intersection of County State Aid Highway (CSAH) 30 and CSAH 10 near the Project site, as well as the physical effects of heavy truck traffic on the County road system. The Fire Chief at the Harris Fire Department also expressed concerns about the safety of the railroad crossing.
28. In response to concerns about traffic, the CUP approved by the city of North Branch requires improvements to 415th Street located at the southern boundary of the Project and improvements to CSAH 30 (turn and bypass lanes) to meet Chisago County standards. Tiller must also follow the applicable state and local requirements for hauling, including weight restrictions, spill prevention, mitigation, and cleanup. In addition, Chisago County Public Works has obtained a proposal for professional services to prepare a traffic impact study of CSAH 10 and CSAH 30 in the cities of North Branch and Harris, between Interstate Highway 35 and the Tiller facility.
29. The traffic impact study will assess the effects of truck hauling operations related to the Tiller facility on traffic flow, operations, safety, and pavement stress, and make both near-term and long-term recommendations for further improvements to the County transportation systems as needed to mitigate potential adverse impacts. The traffic study will be conducted with County oversight. Tiller has provided payment for the study.
30. With respect to train traffic, the proposed Project will result in one train every two-three days for Phase 1 and one-two trains per day with Phase 2. A representative of the St. Croix Valley Railroad has indicated that all public railroad crossings will be reviewed after the spring thaw and upgrades will be made where necessary. New gates and flashing lights have been approved and will be installed on CSAH 9 and 10 in the city of Harris in 2013.
31. The increase in the volume of rail traffic is believed to be within the capacity of the existing system and it is expected that the rail cars hauling sand for the North Branch facility will be operated in a manner similar to the rail cars currently using the track. According to a representative of the St. Croix Valley Railroad, the maximum train speed for this set of tracks is 12 miles per hour. Therefore, it is not expected that foundation damage will occur due to the additional train traffic.
32. The MPCA finds that the evidence provided by petitioners or obtained by MPCA staff adequately identifies anticipated impacts related to truck or train traffic from the proposed Project. The MPCA also finds that the roadway improvements recommended by the city of North Branch and Chisago County will mitigate traffic-related impacts expected to occur in the area of the Project. The preparation of the traffic impact study, which the County has requested and will oversee, is an appropriate means for the County to further address the ongoing needs related to the transportation systems within its jurisdiction. Chisago County will determine the manner in which the recommendations of the traffic study are implemented in order to mitigate impacts that are expected to occur in relation to the proposed Project. With the mitigation measures provided by the North Branch CUP and with the opportunity afforded Chisago County to identify and require additional mitigation as recommended by the traffic impact study, the MPCA finds that the evidence regarding effects related to truck or train traffic from the proposed Project does not demonstrate that the proposed Project may have the potential for significant environmental effects.

Air Quality

33. The petitioners expressed concern regarding the health effects of silica dust emissions from the facility due to the proximity of homes, businesses, and recreational areas located near the facility or along the roadways.
34. The facility is subject to an air emissions permit that contains air emissions limits, requirements to operate air pollution control equipment, requirements for monitoring and testing of air emissions, and recordkeeping and reporting on those emissions.
35. In order to minimize airborne particulate matter, the draft air permit includes: emission limits based on a BACT-equivalent analysis, a Fugitive Dust Control Plan, storage of processed sand in enclosed silos, and a requirement to maintain the moisture content of the sand at two percent or greater. In addition, because the sand will be washed prior to delivery to the facility, it is estimated that less than one percent of the material delivered will be respirable.
36. The established BACT-equivalent emission and operation limits are proposed to reduce facility emissions of criteria pollutants including total suspended particulates or total particulate matter (TPM), PM₁₀ and PM_{2.5}. These air pollutants are size fractions of particulate matter that have promulgated federal standards which are developed to be protective of human health and the environment.
37. Respirable material (PM₄) is a particle size fraction without a federal standard, but that does have a California Environmental Protection Agency (Cal EPA) risk-based guideline value. Cal EPA is one of the Minnesota Department of Health/MPCA approved sources of risk-based guidelines used in MPCA analyses. PM₄ is included in the PM₁₀ size fraction. Because PM₄ does not have a federal standard, the MPCA's air emissions permit was not developed in direct consideration of this size fraction. Nonetheless, the air emissions permit requirements are very likely to control this size fraction as well.
38. As noted previously, MPCA required Tiller to conduct a BACT-equivalent analysis for all criteria pollutants, including TPM, as part of the air emissions permit development process. The MPCA reviewed the BACT-equivalent analysis and confirmed that the facility will be using the best available control technology for the control of air emissions from the facility processes.
39. As part of the air emissions permit, Tiller prepared a Fugitive Dust Control Plan to reduce particulate emissions and prevent potential impacts to air quality and human health resulting from fugitive dust emissions. The plan identifies several mitigation measures that will be implemented to eliminate or reduce fugitive dust emissions associated with the storage and handling of industrial sand.
40. As outlined in the Fugitive Dust Control Plan, washed sand will be brought to the site by truck and stored in one indoor storage area and, if needed, two outdoor piles for a combined storage area of 1.25 acres. Once the sand has been dried, screened and separated, it will be stored in enclosed silos.

41. The air emissions permit requires Tiller to maintain the moisture content of the sand at two percent or greater as described in the Fugitive Dust Control Plan. This level of moisture content will help to control fugitive dust emissions associated with unloading activities, wind erosion of storage pile surfaces and load out from the storage piles.
42. As outlined in the Fugitive Dust Control Plan, finished product will be loaded onto trucks and trains by loading material from overhead silos with retractable spouts which will be under negative air pressure. The sides of the loading areas will be skirted to prevent fugitive dust from escaping. All trucks and rail cars containing sand will be covered.
43. As described in the Fugitive Dust Control Plan, berms located along the west perimeter of the facility will help to control fugitive dust emissions to migrate offsite. In addition, Chisago Soil and Water Conservation District staff will prepare a plan and recommendations for the establishment of vegetative wind breaks at the facility to provide additional mitigation. Tiller will be required to implement this plan.
44. The mechanical aspects of a facility such as the dryer, rotary screens, and conveyors are all enclosed and fugitive dust emissions generated by these mechanical processes will be captured via vacuum systems and fabric filters.
45. The MPCA finds that the emission limits in the air emissions permit developed in conjunction with the BACT-equivalent analysis, and the operational procedures as outlined in the air emissions permit and Fugitive Dust Control Plan will mitigate the potential air quality impacts from the facility. With these mitigation measures, the MPCA finds that the evidence regarding effects related to air quality from the proposed Project does not demonstrate that the proposed Project may have the potential for significant environmental effects.

General concerns related to groundwater quantity and quality, and noise

46. The petitioners are concerned about water usage at the facility and that chemicals will be added to the water.
47. All sand to be processed at the facility will be washed prior to arriving at the facility. Tiller has indicated that they do not anticipate using more than 10,000 gallons of water per day. If water needs were to exceed 10,000 gallons per day, Tiller will have to obtain a Water Appropriations Permit from the Minnesota Department of Natural Resources (DNR). The 10,000 gallon threshold is a longstanding statutory threshold below which the DNR does not have jurisdiction.
48. Flocculants and other chemicals are used as part of the sand washing process. Because the sand is washed prior to delivery to the facility, flocculants and similar chemicals will not be used at the North Branch facility.
49. The MPCA finds that the evidence regarding the impacts to groundwater quantity and quality from the proposed Project does not demonstrate that the proposed Project may have the potential for significant environmental effects.

50. The petitioners expressed concern related to truck and operational noise from the facility when operating at Phase 2: 20 hours a day, 7 days a week.
51. Regarding noise from the engine (jake) braking of trucks, Tiller has indicated that they forbid the use of jake brakes when hauling Tiller products and raw materials.
52. The facility is located in an area zoned for commercial/industrial use. The noise level of the facility will be compatible to the area it is located. Tiller has indicated that they have selected and installed equipment that operates at a reduced noise level. In addition, the gyratory sand sifter system is located inside a building.
53. The air emissions permit requires Tiller to conduct ambient noise monitoring in accordance with the Minn. R. 7030.0060. Noise measurements will be taken at two intervals, once prior to facility start up and once within 180 days after facility start up. The proposed Project must comply with the state noise standards under Minn. R. ch. 7030. The noise standards apply only to the noise source being monitored. They do not apply to background sources of noise such as existing truck or train traffic, machinery or other sounds.
54. The MPCA finds that the evidence regarding the potential for noise impacts from the proposed Project does not demonstrate that the proposed Project may have the potential for significant environmental effects.

Factor #2: Cumulative Potential Effects

55. MPCA staff considered the potential for cumulative effects related to air quality and determined that there are no significant cumulative air quality effects in the Project area. MPCA staff further determined that there are no past, present, or anticipated future projects with similar air emissions in the Project area which would contribute to significant cumulative air quality effects when viewed in connection with the proposed Project.
56. MPCA staff also considered the potential for cumulative effects related to increased truck traffic in the Project area. The MPCA believes that the petitioners raised valid concerns about traffic impacts and that these concerns are corroborated by Chisago County Public Works Department. Tiller has committed to funding the preparation of a traffic impact study to assess impacts related to system operability, safety and the durability of the pavement, and to make recommendations to the County that will mitigate adverse impacts to infrastructure and infrastructure safety that may occur as a result of the Project. Preparation of the study has already begun.
57. Chisago County staff has determined, and MPCA concurs, that the preparation of a traffic impact study with recommendations for mitigation of adverse impacts is the appropriate means to mitigate any cumulative adverse effects related to traffic from both the project-specific perspective and an area-wide perspective. Chisago County will be responsible for the implementation of the recommendations of the traffic study through the normal processes and resources available to the County.

Factor #3: Ongoing Public Regulatory Authority

58. As noted, the facility conducted a BACT-equivalent analysis to determine limits for the control of air emissions. In addition to permitted emission limits, the permit and the associate Fugitive Dust Control Plan will establish additional operational and performance requirements which are needed to prevent adverse impacts on human health and the environment. The permit requires testing of all emission controls to verify compliance with emission limits. The air permit also requires visual inspection of stockpiles to ensure there are minimal to no visible emissions. In addition, Tiller will conduct two years of air monitoring as required by the air emissions permit. Tiller will also be required to provide the MPCA with at least 180 days notice prior to commencement of construction activities for Phase 2. This will allow sufficient time for the MPCA to re-open the permit, if necessary, based on new information or a change in the Project's circumstances.
59. To the extent that existing or future sand mining projects may be proposed within Chisago County or nearby counties, such projects could be considered to be phased or connected actions with respect to the North Branch facility. MPCA staff further considered the existing and future role of the County or other local governmental units with jurisdiction and possible environmental review responsibilities for such projects. Tiller has stated that it has no current mining proposals that would provide material for the North Branch facility and for which it would seek permits or approvals from local units of government in Minnesota. However, the MPCA believes that such proposals could be made in the future. If such projects or proposals are made in the future, the MPCA finds that it is appropriate to rely on the ongoing regulatory authority of local units of government, including environmental review, to assess associated impacts and require mitigation measures which are determined to be necessary to address environmental effects.

Factor #4: Other Environmental Studies

60. MPCA staff has reviewed other available environmental studies undertaken by public agencies in Minnesota regarding projects that include sand processing facilities or operations similar to the Tiller project in North Branch. The MPCA finds that the environmental effects related to the Project can be anticipated and controlled as a result of the information so obtained, including a permit recently developed for, and issued to, a project in Scott County that included a sand processing facility.

CONCLUSIONS OF LAW

61. Pursuant to Minn. R. 4410.1100, subp. 5, the MPCA was designated the RGU to act on the petition requesting the preparation of an EAW on the proposed Project.
62. The MPCA has followed all necessary procedures with regard to the petition.
63. The proposed Project does not meet any threshold levels for a mandatory EAW or EIS.
64. Minn. R. 4410.1100, subp. 6 requires the RGU to order the preparation of an EAW if the evidence presented by petitioners, proposers, and other persons demonstrates that, because of the nature or location of the proposed project, it may have the potential for significant environmental effects.

65. The evidence presented by the petitioners, proposer, and other persons, or otherwise known to the MPCA, does not demonstrate that the proposed Project may have the potential for significant environmental effects due of the nature and location of the proposed Project. Therefore, the criteria for ordering the preparation of an EAW pursuant to Minn. R. 4410.1100, subp. 6 are not met.
66. Based on the above findings, the MPCA concludes that the petition requesting the preparation of an EAW on the Tiller Corporation Industrial Sand Processing Facility, in North Branch, Minnesota should be denied.
67. Any findings that might properly be termed conclusions and any conclusions that might properly be termed findings are hereby adopted as such.

ORDER

The Minnesota Pollution Control Agency (MPCA) has determined that the evidence of the potential environmental effects that could be reasonably expected from the Tiller Corporation Industrial Sand Processing Facility does not demonstrate that the proposed Project may have the potential for significant environmental effects. The petition requesting the preparation of an Environmental Assessment Worksheet is denied.

IT IS SO ORDERED



John Linc Stine, Commissioner
Minnesota Pollution Control Agency



Date