

DATE: December 4, 2013

TO: Tania Steele

FROM: Eshetu Beshada, Ph.D., P.Eng.
Environmental Engineer
Mines and Wastewater Section
123 Main Street
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SUBJECT: **Barkman Concrete Ltd. – Information for Public Registries**

Tania,

Please find attached the response to address TAC comments related to the Barkman Concrete Ltd file (5679.00) for distribution to the public registries. The documents included are:

- December 3, 2013 letter from Stephen Biswanger, 6 pages

6 pages total

Thank you.

Eshetu Beshada, Ph.D., P. Eng.

December 3, 2013

Mr. Eshetu Beshada, PhD, P.Eng
Environmental Approvals Branch
Manitoba Conservation & Water Stewardship
160-123 Main Street (Box 80)
Winnipeg, Manitoba
R3C 1A5

Dear Mr. Beshada:

Project No: 60302883 (404)

**Regarding: Environment Act Proposal for the Existing Barkman Concrete Ltd. Operations & Proposed Paver Plant, Steinbach, Manitoba
Manitoba Conservation and Water Stewardship File Number: 5679.00**

Thank you for forwarding the comments provided by the Technical Advisory Committee (TAC) concerning the *Environment Act Proposal* (EAP) for the existing Barkman Concrete operations and proposed paver plant. On behalf of Barkman Concrete Ltd., AECOM provides the following additional information and clarifications in response to the TAC comments:

Letter from Office of the Fire Commissioner – Cheryl Kubish, November 8, 2013

Comments:

The Office of the Fire Commissioner (OFC) recommends that with respect to the expansion of this concrete products manufacturing facility, a building permit and an occupancy permit for the addition be obtained from the authority having jurisdiction, that being the City of Steinbach Building Permit Office .

The OFC also recommends that an updated Fire Safety /Emergency Response Plan be filed with the local fire authority, the Steinbach Fire Department.

Response:

Barkman Concrete Ltd. will obtain the required building and occupancy permits from the City of Steinbach. A Fire Safety Plan and Emergency Response Plan will be filed with the Steinbach Fire Department.

Letter from Community Planning Services – Krysti Horton, November 13, 2013**Comments:**

There are a number of residential properties as well as a church use in close proximity to the proposed application sites. There are 2 duplexes residences approximately 190 feet from the proposed aggregate dumping area. There are 2 duplexes residences approximately 130 feet from the proposed receiving Silos. Furthermore there are 3 four-plex residential dwellings within approximately 30 feet, directly adjacent, to the proposed retention pond. This raises concerns about separation distances and the impact of noise, aesthetics, odour and dust on adjacent dwellings.

Response:

Barkman has been in operation at the Steinbach location since 1948 and is located on a site zoned M1 Light Industrial under the City of Steinbach Zoning By-Law (By-Law No. 1882). Over the years, the existing development surrounding the Barkman facility including residential development has encroached on the operating Barkman site.

All construction works that have been completed or had permits applied for, including site grading, foundation building permit, retention pond construction, and the lease agreement for the retention pond have been approved by the City of Steinbach with public input as deemed appropriate by the City of Steinbach. As outlined in EAP **Section 2.8**, a public variance hearing was held at the Steinbach City Hall (Variation V-13-16) to address a height variance of approximately 0.4 m for the new paver plant. The City of Steinbach approved the Variation (V-13-16) on July 12, 2013, the variation process included public comment and notice.

The land leased from the City of Steinbach for the proposed new retention pond is currently a green space. This retention pond area will be grassed with regular maintenance (such as mowing) conducted by Barkman, as needed. The approximately 50 m space between the three four-plex residential dwellings to the north of the Site and the proposed new retention pond presently includes a parking lot and trees/shrubs which would remain. Aside from construction of the retention pond and drainage connection, normal activities in this area would be limited to vegetation maintenance.

The proposed paver plant will be a metal clad structure and will be visually similar to existing buildings at the Barkman site. Along Giesbrecht Street on the west side of the Barkman property boundary, newer smaller willow trees have been planted and Barkman has also planted shrubs along their property boundary on Giesbrecht Street. Barkman employs full time yard maintenance staff who regularly inspect and maintain the site including collection of loose waste and debris into bins for periodic removal from the site.

As indicated in EAP **Section 5.3.1.1**, sources of noise at the Barkman site during operation will include trucks, silo overfilling alarms (rare) and daily operations within the main plant and proposed paver plant. It is anticipated that the number of trucks travelling to and from the site for material deliveries (between 7:00 am and 6:00 pm) will not substantially change once the proposed paver plant is operational. This includes aggregate deliveries to the three in-ground aggregate hoppers at the proposed paver plant and the four existing outdoor aggregate hoppers at the existing plant. It also includes cement/fly ash deliveries to the existing three silos at the main plant and cement

deliveries to the three storage silos at the proposed paver plant. The three new cement storage silos at the proposed paver plant will be sized so that material deliveries will occur between 7:00 am and 6:00 pm and no overfilling alarms will be required. There is no proposed traffic access to the Barkman site via Giesbrecht Street.

The majority of noise-generating activities at the Barkman site occur indoors. The proposed paver press machine will be in an enclosed sound protection cabin on its own isolated foundation providing a reduction in noise to approximately 78 to 81 dB outside of the press machine enclosure. This sound enclosure will be enclosed within the proposed paver plant building that will further reduce related operational noise emissions. The doors located on the west side of the proposed paver plant will also typically remain closed during operation, which will mitigate exposure of the operational noise to the neighbours. It should be noted that a similar process occurs within the existing main plant building and no noise complaints have resulted. If noise complaints are received during operation, Barkman will address these concerns as they arise on an individual basis.

As is currently the case, no substantial odours will be generated from the concrete production processes at the Barkman site.

As indicated in EAP **Section 5.3.1.2**, dust within the main plant and the proposed paver plant will continue to be mitigated with the use of filters (baghouse, socks, and cartridges) as described in EAP **Sections 2.1** and **2.2**. Cyclone filtration systems within the main plant will also continue to be used along with the other dust collection systems as described in EAP **Section 2.1**. Any dust collected within the main plant or the proposed paver plant will continue to be transported to the yard bunker for storage and collection by Diamond Construction and Gravel. Yard dust generated from vehicle and equipment movement at the site will be managed through the application of dust control agents (magnesium hydroxide or similar product) and the preferential use of paved areas.

Any fugitive dust generated during the disconnection of the feed lines from the truck hoses during cement delivery is anticipated to be very small and will continue to be managed through good housekeeping practices.

As described in the EAP and above, Barkman has enacted a number of measures and committed to operating in a manner that addresses noise, air quality, and aesthetic effects of its operations at the site.

Letter from Manitoba Conservation and Water Stewardship (Environmental Compliance & Enforcement, Eastern Region) – November 15, 2013

Comments:

1. While it is true that, as indicated numerous times throughout the proposal, Environmental Compliance and Enforcement Branch – Eastern Region does not have record of any formal complaints regarding daily operation at the Barkman facility, it is important to note that the subject site has residential development on all four sides that may be affected by an increase in traffic, dust and noise associated with the proposed expansion.
2. Floor drains within the main plant are directed to settling pits, which release into the City of Steinbach's storm water collection system, which eventually flows to the Manning Canal. This is an issue because:
 - a. The proposal indicates that approximately 1,658 m³ of washwater from pressure washing hopper buckets, work stations and some machinery, etc., is directed to these floor drains annually. The proposal also indicates that washwater from the main plant has the potential to increase pH and may contain a number of other contaminants, some of which may contain ingredients considered harmful to aquatic organisms. The only solution presented to address pH and other potential contaminants is dilution from additional inputs to the storm water system, such as precipitation. There is no data presented that quantifies pH or harmful constituents of the wastewater prior to release to the City's storm water system.
 - b. 23 forklifts on site reportedly use approximately 72,470 L of diesel annually (and this is projected to increase by 15% with the proposed expansion). Accidental releases of diesel in the main plant from this equipment may result in diesel entering the floor drains, and eventually the storm water system.
 - c. Appendix C lists materials used during production, some of which may contain ingredients considered harmful to aquatic organisms. While the proposal indicates that these materials will be stored away from surface water drains, there remains potential for accidental release of any of these materials during handling or production activities in the main plant, where floor drains, and eventually surface water, could be threatened.
 - d. Hydraulic and other fluids accidentally released from process equipment in the main plant also threaten floor drains and the storm water system.

Response:

1. Please see the response to the comments provided by the Community Planning Services.
- 2.a. To date, the City of Steinbach has not instructed Barkman to monitor its discharge or alter the discharge to convey its washwater to the City's sanitary system. If required by the City of Steinbach and/or Manitoba Conservation and Water Stewardship, Barkman will cooperate with regulators and develop a monitoring program to further characterize the wastewater so that the method of handling wastewater will comply with license requirements. It is assumed that such a monitoring program would include determination of pH levels in the washwater in the settling pits and the concentrations of other relevant wastewater constituents.
- 2.b. There is no storage of fuels inside the main plant or in the proposed paver plant. As indicated in **Section 2.1.6** of the EAP, there are two existing doubled-walled aboveground storage tanks (one diesel and one gasoline tank) located near the clearance section of the yard with concrete barriers protecting them as shown in **Figure 3** of the EAP. There is no intention to relocate these tanks or add additional fuel storage tanks at this time. In terms of refuelling, all forklift operators at Barkman are certified and refueling training is provided as part of the certification. Barkman currently is in the process of creating a spill response team/policy in the event of a spill that will include the use of spill kits.

Equipment is regularly inspected by the operators and/or mechanics on either a daily, weekly or monthly basis, depending on the type of equipment. Barkman employs 16 experienced mechanics with two dedicated to forklift repairs and four dedicated to production equipment preventative maintenance and inspections/repairs to ensure that all equipment is properly maintained.

A total of 23 forklifts operate at the Site and 16 of them are diesel-fuelled. Of the 16 diesel-fuelled units, only two are operated within the main plant building. As the fuel is appropriately stored and dispensed outside at the existing AST, the equipment is well maintained, and only 2 diesel-fuelled units are used in the main plant, the risk of a spill within the plant is relatively low. The current development of a spill response plan will further reduce the potential risk of a diesel fuel release to the floor drains within the main plant building.

2.c. While materials are typically stored away from surface water drains in the plant, barrels that are in active use are stored on spill containment pallets to further minimize the potential for operational spillage, as shown in the photos below.



Barkman is also in the process of developing a spill response team/policy for the facility incorporating the use of spill kits.

Admixtures are stored inside the facility in small quantities during winter months on open racking storage. Most of the materials used in concrete production are dry and any potential spills are noticeable and cleaned up immediately.

As indicated in 2.b., Barkman is committed to working with Manitoba Conservation and Water Stewardship to develop a monitoring program to determine any relevant potential contaminants that may be present in the wash water of the settling pits prior to discharge to the City of Steinbach's storm water collection system if required.

2.d. As indicated in 2.b., process equipment is inspected by the operators and/or mechanics on either a daily, weekly or monthly basis, depending on the type of equipment. Barkman also employs 16 experienced mechanics with two dedicated to forklift repairs and four dedicated to production

equipment preventative maintenance and inspections/repairs so that any potential leaks are addressed quickly and the equipment down-time and the potential risk of a release to the floor drains is minimized. Barkman's spill response team/policy for the facility (presently under development) will incorporate spill kit usage as well. With the preventative maintenance measures in place as well as the spill response system currently being developed, Barkman will have a system in place to minimize the risk of a release of hydraulic or other process equipment fluids to the floor drains in the main plant.

We trust that the information provided has addressed the concerns raised by the TAC. Should you have any questions regarding this response or require more details, we would be pleased to provide any other information that you may require. Thank you for your attention to this application.

Sincerely,
AECOM Canada Ltd.



Stephen Biswanger, P.Eng.
Senior Project Manager and Technical Lead,
Impact Analysis & Approvals, Environment

KC:dc
Encl.

cc: Barkman Concrete Ltd., Dan Bartel, CPMM