To: Livestock Technical Review Committee
Re: Concerns expressed – Streamline Dairy expansion, R.M. of Dufferin
July 12, 2018

I would like to acknowledge the concerns raised by the two area residents regarding our proposed Streamline Dairy expansion project in the RM of Dufferin. We want to assure them that we respect their opinions. I would also like to respond to issues raised in their letters.

Environmental issues that were raised are addressed in detail through a very rigorous approval process in Manitoba. Livestock producers are required to go through a provincial government approval process for developing or expanding operations. The process includes the preparation of a detailed site assessment, public review and a municipal conditional use hearing prior to receiving a permit to construct the facility. All aspects of the site assessment proposal including municipal siting requirements, manure management and potential environmental impacts are reviewed by the Provincial Government Technical Review Committee.

Manure Storage
An existing HDPE lined earthen manure storage (EMS) built in 2007 is proposed to contain the liquid manure from this operation.

Earthen manure storages have been regulated by the Province of Manitoba since 1995. A permit to construct an EMS requires a detailed geotechnical assessment of soils; a design prepared by a professional engineer; review of the design and all relevant information by Manitoba Sustainable Development prior to issuing the permit; site supervision of the construction by the responsible engineer; and finally certification of the storage by the engineer when the work is completed. This manure storage was built and certified as required in 2007.
Since this program originated, the Province annually conducts audits of manure storages. Any storages found to have experienced damage or deterioration are required to implement remedial repairs to ensure environmental safety. To date, no permitted storage in Manitoba has experienced an incident that has resulted in any significant environmental impact.

The above process is required for all manure storages constructed in Manitoba. Since the legislation was enacted in 1995 many hundreds of hog, poultry and dairy storages have been constructed. This program is among the strongest legislation in North America and has an excellent record of providing safe containment of livestock manures.

Water Quality
Surface and groundwater protection is provided through environmental regulations and through monitoring and enforcement. Manure storages must be designed by a professional engineer and approved by Manitoba Sustainable Development. Manure application is controlled by requiring manure management plans and soil, manure and source water testing. Monitoring wells located adjacent to the manure storages are sampled annually to determine if leakage from the storage is occurring**.** If an operation is over 300 animal units a manure management plan must be filed annually and approved by Manitoba Sustainable Development prior to manure application.

Streamline Dairy will have sufficient land (acres) to inject/spread the manure for the proposed expansion. Solid manure generated by this facility will be stored on site and applied to the land during the summer/fall. All fields used for solid manure application will be part of the manure management plan. Of the 902 acres submitted by Streamline Dairy for this technical review, 224 acres do not have any tile drainage and the remaining 678 acres do. Of these 678 acres that are tiled, 242 acres are in organic crop production, meaning that no conventional fertilizers are used on these acres, thus these acres would greatly benefit from the application of organic forms of nutrients. With this site assessment Streamline Dairy has provided more than 2 times the required land base for Nitrogen

and 2x crop removal of Phosphorus. As well, Kroeker Farms, the local producer who has offered the spread agreements, has a long history of experience in managing nutrient application on tiled land. They do not want to see any of these nutrients required for crop production leave the soil profile.

The management of potential release and drainage of nutrients can be accomplished in several ways with best management practices for manure application.

- Ensuring crop rotation matches nutrient application (aggressive, high nutrient usage and deep-rooted crops following manure application)
- Nutrient application rates that are targeted for specific crops (rate of applied manure nutrients to match crop uptake requirements)
- Timing of nutrient application (best season) that meets highest or peak nutrient demand in crop utilization.
- Using good manure application technology with appropriate rate and placement of the nutrients.
- Implementation of annual 0”-24” soil testing to monitor residual nutrient levels
- Rotation of manure application fields (using non-tiled fields during excessively wet seasons)

Streamline Dairy is committed to sustainable farming practices.

Martin Hamming
Streamline Dairy