

**HyLife Foods LP Processing
Receiving Facility Expansion
Notice of Alteration**

FINAL REPORT



Prepared for:
HyLife Foods Ltd.

Prepared by:
Stantec Consulting Ltd.
500-311 Portage Avenue
Winnipeg, MB R3B 2B9

111440368

February 7, 2017

Sign-off Sheet

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Prepared by



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Approval to transmit:



(signature)

Stephen Biswanger, P.Eng.

February 1, 2017
File: 111440368

Attention: Ms. Tracey Braun, M.Sc.
Director, Environmental Approvals Branch
Manitoba Sustainable Development
160-123 Main Street
Winnipeg, MB R3C 1A5

Dear Ms. Braun,

Reference: NOA Request – License 1102R HyLife Foods, Neepawa, MB

In accordance with Section 14(1) of The Environment Act, HyLife Foods LP, by way of this letter and supporting information, provides notice to the Director of a proposed alteration to the HyLife Foods Pork Processing Plant in Neepawa, Manitoba.

HyLife Foods proposes to expand its receiving facility at the processing plant to more efficiently manage short-term transportation disruptions of daily livestock delivery. The proposed change involves increasing the size of the receiving facility to accommodate a full day's processing supply of hogs at the plant. No increase in the processing capacity at the plant is proposed.

As indicated in the attached report, the adverse effects of the proposed alteration at the plant are considered negligible to low and would be considered as a minor alteration to the licensed development. Accordingly, a \$500 application fee accompanies four hard copies and one electronic copy of the submission in accordance with the guidance in the Information Bulletin – Alterations to Development with Environment Act Licenses (http://www.gov.mb.ca/conservation/eal/pubis/alteration_guidelines.pdf). HyLife Foods understands that the application will be posted to the public registry to provide the public with the opportunity to comment on the proposed alteration.

Should you require any additional information or clarifications please do not hesitate to contact Mr. Sheldon Stott, P.Ag., Director of Environmental Affairs, HyLife Ltd., or Mr. Stephen Biswanger, P.Eng., Stantec Consulting Ltd.

Regards,



Grant Lazaruk, CEO
HyLife Ltd.

Attachment: One NOA Form and Supporting Information and application fee (\$500)
Four hard copies and one electronic copy of NOA

c. Stephen Biswanger, Stantec

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Notice of Alteration Form



Client File No. : 2754.10		Environment Act Licence No. : 1102R	
Legal name of the Licencee: HyLife Foods LP			
Name of the development: HyLife Foods LP Processing Receiving Facility Expansion			
Category and Type of development per Classes of Development Regulation: Agriculture Meat processing and slaughter plants			
Licencee Contact Person: Mr. Sheldon Stott, P.Ag., Director of Environmental Affairs			
Mailing address of the Licencee: Box 1000, 623 Main Street			
City: Neepawa		Province: Manitoba	Postal Code: R3C 1A5
Phone Number: (204) 424-2313 Fax: (204) 424-5177 Email: Sheldon.Stott@HyLife.com			
Name of proponent contact person for purposes of the environmental assessment (e.g. consultant): Mr. Stephen Biswanger, P.Eng.			
Phone: (204) 924-7061		Mailing address: 500-311 Portage Avenue, Winnipeg, MB., R2L 2G9	
Fax: (204) 453-9012			
Email address: stephen.biswanger@stantec.com			
Short Description of Alteration (max 90 characters): Hylife Foods is seeking to expand the existing receiving facility at the processing plant.			
Alteration fee attached: Yes: <input checked="" type="checkbox"/> No: <input type="checkbox"/>			
If No, please explain:			
Date: 2017-02-03		Signature: 	
Printed name: Sheldon Stott			
<p>A complete Notice of Alteration (NoA) consists of the following components:</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Cover letter <input checked="" type="checkbox"/> Notice of Alteration Form <input checked="" type="checkbox"/> 4 hard copies and 1 electronic copy of the NOA detailed report (see "Information Bulletin - Alteration to Developments with Environment Act Licences") <input checked="" type="checkbox"/> \$500 Application fee, if applicable (Cheque, payable to the Minister of Finance) 		<p>Submit the complete NOA to:</p> <p>Director Environmental Approvals Branch Manitoba Sustainable Development Suite 160, 123 Main Street Winnipeg, Manitoba R3C 1A5</p> <p>For more information:</p> <p>Phone: (204) 945-8321 Fax: (204) 945-5229 http://www.gov.mb.ca/sd/eal</p>	

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Executive Summary
February 7, 2017

Executive Summary

HyLife Foods LP (HyLife Foods) operates a pork processing plant in the Town of Neepawa, Manitoba and has plans to expand the hog receiving facility at the plant. As required under Manitoba's *The Environment Act*, an application for Notice of Alteration (NOA) to the existing facility licence (1102R) is submitted with supporting information to Manitoba Sustainable Development (MSD) for consideration.

The HyLife Foods pork processing facility is located in the southern part of SW35-14-15W (Project Development Site) in the Town of Neepawa on property that is currently owned by HyLife Foods. The processing facility has been in operation at this location since 1986, previously operating as Springhill Farms. Licence No. 1102R is the current *Environment Act* Licence, dated December 18, 2014. A previous 2016 NOA to the proposed licensed development was approved by MSD by letter dated June 15, 2016. The plant is located on a site zoned "MH – Manufacturing Heavy" under the Town of Neepawa Zoning By-law No. 2650.

HyLife Foods is seeking to expand the receiving facility at the processing plant to more efficiently manage short-term transportation disruptions of daily livestock delivery with the addition of a larger barn area to the existing receiving facility.

This NOA has been prepared by Stantec Consulting Ltd. (Stantec) on behalf of HyLife Foods in general accordance with MSD's Information Bulletin, "*Alterations to Development with Environment Act Licences*" and in accordance with Section 14(1) of *The Environment Act* (MSD 2016). This report documents the existing facility operations, the proposed barn expansion, and the potential environmental effects and proposed mitigation measures associated with the expansion.

The proposed changes involve increasing the size of the receiving facility to accommodate a full day's processing supply of hogs at the plant. No increase in processing capacity at the plant is proposed in the subject alteration. Potential environmental effects of the Project are limited in the construction phase and are considered fairly routine activities (i.e., related to traffic, construction noise, some greenhouse gas emissions, etc.). There is very little potential for new or different or lasting environmental effects that have not been previously addressed in the original licensing process and/or subsequent NOA requests at the plant.

On the basis of the desktop studies undertaken, and information available to date as presented in this report, the proposed alteration is not expected to create significant adverse environmental effects.



HYLIFE FOODS LP PROCESSING RECEIVING FACILITY EXPANSION NOTICE OF ALTERATION

Introduction
February 7, 2017

1.0 INTRODUCTION

1.1 PROJECT OVERVIEW

HyLife Foods LP (HyLife Foods) operates a pork processing plant along PTH 16 in the Town of Neepawa in southwestern Manitoba (Figure 1-1, Appendix A). HyLife Foods proposes to make modifications to the plant to better realize the current licensed processing plant capacity of 7,500 hogs per day (37,500 hogs per week – annual average). The proposed alteration involves expanding the existing receiving facility at the Neepawa plant to improve hog receiving flexibility and logistics and reduce plant shut-down due to supply disruptions. The existing pork processing facility currently holds an *Environment Act* Licence No. 1102R (Appendix B).

Section 14(1) of *The Environment Act* requires a proponent to notify the Director (for Class 1 and 2 developments) if the proponent intends to alter a licensed development so that it no longer conforms to licence conditions or has the potential to change the environmental effects (MSD 2016). The key consideration for assessing a Notice of Alteration (NOA) is the significance of the environmental effects and human health effects as a result of the alteration and whether there is sufficient detail to allow the Director to determine whether the effects of the alteration are significant, insignificant, or nonexistent (MSD 2016).

This request for the NOA has been prepared by Stantec Consulting Ltd. (Stantec) on behalf of HyLife Foods in accordance with MSD's Information Bulletin, "*Alterations to Developments with Environment Act Licences*". This report documents the currently licensed facility operations, the proposed alteration related to the receiving facility expansion, and the potential environmental effects and planned mitigation measures associated with its operation.

This NOA report is submitted to MSD in support of a request for Notice of Alteration to the existing licence. The existing facility is considered a Class 2 Development under the Classes of Development Regulation (MR 164/88). No changes are proposed to the separate existing R3 Innovations Inc. Industrial Wastewater Treatment Facility (IWWTF) licence.

1.2 THE PROPONENT

For the purposes of development licensing, the proponent is HyLife Foods LP (hereafter "HyLife Foods").

For further information regarding HyLife Foods, please contact the following:

Mr. Sheldon Stott, P.Ag.
Director of Environmental Affairs
HyLife Foods Ltd.
PO Box 100
La Broquerie, MB R0A 0W0
Telephone: (204) 424-2313
Email: Sheldon.Stott@HyLife.com



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This Notice of Alteration was prepared by Stantec Consulting Ltd. The local contact is:

Mr. Stephen Biswanger, P.Eng.
Senior Project Manager, Environmental Engineer
Stantec Consulting Ltd.
500-311 Portage Avenue
Winnipeg, MB R3B 2B9
Telephone: (204) 924-7061
Email: stephen.biswanger@stantec.com

1.3 LAND OWNERSHIP AND PROPERTY RIGHTS

The existing pork processing plant is located in the Town of Neepawa on property owned by HyLife Foods (Neepawa Land Titles Office 2016). The legal description for the subject property is described as SW35-14-15WPM and Lot 5, Plan 7402 NLTO) encompassing approximately 49.11 hectares (see Figure 1-2). Copies of the current Certificates of Title for the subject property (the Site) are included in Appendix C. The pork processing plant (and general office) currently occupies 16,099 m² on the site. The existing hog receiving facility occupies 3,889 m² of the site.

1.4 EXISTING CONDITIONS

The existing environment has been described in previous HyLife NOA submissions, most recently the 2016 NOA. Readers are referred to the 2016 NOA (Stantec 2016) for more detail if required.

The parcel of land for the Project, part of SW35-14-15W is privately owned and has been occupied by HyLife Foods for industrial food processing production since 2007. The land uses adjacent to HyLife Foods' plant site includes a mix of commercial/industrial, rural residential, and open space/recreational. The Project site in the Town of Neepawa is subject to the Town of Neepawa Zoning By-Law No. 2650, is zoned "MH – Industrial Heavy" and is a permitted activity (Town of Neepawa 1987). The proposed receiving facility expansion area is already developed as part of the HyLife Plant facility compound and is considered previously disturbed.

The Project site is accessible from Provincial Trunk Highway (PTH 16). Major roads surrounding the Project site include PTH 5 to the west (to the north and south) and Provincial Road (PR) 352 to the east. There is no direct rail service at the Project site. An electric transformer provides power to the processing plant via overhead utility lines located adjacent to the west and south boundaries of the Project site. Other utilities on-site include gas, wastewater treatment at the adjacent R3 Innovations treatment facility and potable water from the Town of Neepawa.

1.5 PREVIOUS ALTERATIONS/STUDIES

Since 2007, after acquiring the former Springhill Farms processing plant, HyLife Foods has progressively made modifications to the pork processing facility. The alterations that have occurred at the processing plant between 2007 and 2016 are summarized in the table below.



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Alterations to the existing plant approved under previous NOAs prepared for HyLife but not yet constructed on-site totals approximately 2,159 m².

Table 1-1 HyLife Foods Pork Processing Plant Licence NOA 2007-2016

Date	Notice of Alterations	NOA Approval
2007	Equipment modernization and plant modifications in cutting and packaging operations – dehairer equipment replacement, new carcass sprayers Hog capacity – 18,250 hogs/week	December 2007
	Leaf lard processing not yet implemented – remains a future project	
2008	Additions to shipping/staging area – shipping/ receiving building, dirty kill expansion, mezzanine addition, office/welfare area additions	July 2008
2009	Modernization of CO ₂ stunning system	August 2009
2010	Increase processing capacity to 27,550 hogs/week – increase in on-site live hog storage, kill line speed, addition of second cut shift, addition of snap chill freezer, increase in carcass cooler size	September 2010
	Addition of 1,806 m ² snap chill building not yet implemented – remains a future project	
2013	Increase processing capacity to 37,500 hogs/week – additions for casings and heparin production, additional wastewater treatment requirements at the existing R3 Innovations IWWTF, additional treatment infrastructure for changes in wastewater flow and loading	December 2014
	Addition of 353 m ² heparin/casings building not yet implemented – remains a future project	
2015	Addition of biosecurity trailer bake bay	May 2015
2016	Addition of larger cut floor, additional on-site freezer capacity, improvements to hog receiving facility with the addition of 996 m ² to replace Barn #3 (former Springhill Farms Barn) which is now replaced by the receiving facility expansion proposed under the subject NOA, improvements for handling on-site trailer parking	June 2016
	Previously approved alterations include – 1,115 m ² cooler expansion, space for future robotic equipment in new palletizing building (not yet implemented)	

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1.6 SCOPE OF THE ASSESSMENT

1.6.1 Spatial and Temporal Boundaries

The existing facility (the Project) is located along PTH 16 in the Town of Neepawa in southwestern Manitoba. For the purposes of this environmental assessment, the Project site, Local Assessment Area and Regional Assessment Area are consistent with boundaries as defined the 2016 NOA.

The temporal boundaries for the assessment are defined as Construction phase, Operation phase, and Decommissioning phase. Spatial and temporal boundaries are summarized in Table 1-2.

Table 1-2 Spatial and Temporal Boundaries

Spatial Boundaries	Temporal Boundaries
Project Site – the physical footprint of the existing facility (approximately 49 ha) within the subject property, defined as being within part of SW35-14-15W (see Figure 2-1).	Construction phase – a period of 6 months in 2017 over which construction is planned to occur.
Local Assessment Area – area up to a 3-km radius from the Project site (area over which direct effects of the Project are expected to occur).	Operation phase – the period over which the facility will be in operation, at least 50 years.
Regional Assessment Area – area up to a 10-km radius from the Project site (area over which direct effects that act on the PS are compared to determine significance of residual effects).	Decommissioning phase – there are currently no plans for the facility to be decommissioned. Should decommissioning occur at some point in the future, it would be anticipated to consist of the removal of all HyLife Foods equipment from the site. Decommissioning would be conducted according to Licence conditions and regulatory requirements at the time.

1.6.2 Assessment Approach

This assessment was completed to meet the requirements of a request for Notice of Alteration (NOA), and includes assessing project-specific environmental effects. The assessment focuses on valued components (VCs), which are environmental components of particular value or interest to regulators and other parties and are identified based on the biophysical and socio-economic elements. Project-related effects on these VCs are assessed sequentially in the assessment. Residual effects are characterized using specific, predetermined criteria (e.g., direction, magnitude, geographical extent, duration, frequency).

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1.6.2.1 Selection of Project Interactions and Valued Components

Biophysical and socio-economic VCs that could be affected through interactions of the environment with the Project are identified to scope the assessment. The rationale for selecting each VC is explained and potential interactions between the Project and VCs are identified in Table 1-3.

Table 1-3 Designation of Valued Components

Valued Component	Potential Project Interaction	Rationale for Exclusion or Inclusion and Project Potential Effect
Air quality and Odour	√	Construction activities contribute to airshed loading from on-site equipment and truck usage; operation of the hog receiving facility can contribute to odour generation, however, no odour complaints have been received during several years of processing plant operation
Greenhouse gas emissions	√	Construction and operation activities contribute to GHG from on-site equipment and truck usage and combustion sourced building heating
Soils/terrain	x	Expansion of the building footprint on the site will result in limited disturbance of soils that have been previously disturbed during past developments and agricultural usage on the property.
Surface water/ groundwater	x	The proposed addition will be located on the existing developed property. Stormwater will continue to be managed by surface ditching. The potential to affect surface water quality of the Whitemud River (1 km away) is considered very low and mitigable with implementation of industry-accepted practices such as silt fences and erosion control measures to manage surface drainage flow.
Vegetation	x	No native vegetation is present at the Site.
Wildlife and wildlife habitat	x	No substantive wildlife or wildlife habitat is present on the Site.
Property and land use	x	Site activities occur within existing industrial area in an area that has supported the current land use for many years. The project site is zoned for the existing/proposed land use
Infrastructure and services	√	The proposed alteration will generate construction traffic. Increase in the size of the receiving facility may increase the use of power at the site.
Employment and economy	√	Benefits related to employment, tax generation from construction and continued operation; barn expansion is expected to result in a marginal increase in overall employee requirements at the plant for the existing licensed capacity. An increase in the receiving facility size will allow for more stable operation of the processing plant and reduce the potential for shut-down occurrences due to lack of stock



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Table 1-3 Designation of Valued Components

Valued Component	Potential Project Interaction	Rationale for Exclusion or Inclusion and Project Potential Effect
Heritage resources	x	Site is located within an existing industrial area that is already disturbed; there are no heritage concerns.
Aesthetics and Noise	x	Site is located within an existing industrial area with the proposed alteration consistent with current building types and there will be no substantial change to area visual aesthetics. Noise generation will continue to be typical of historic use in the area and no noise complaints have been received by HyLife in several years of operation including during previous construction and plant expansions.
Health and Safety	x	Contractors engaged in the construction phase of the proposed Project will be subject to site specific health and safety plans and worker protection standards and procedures under the provincial <i>Workplace Safety and Health Act</i> . Existing worker health and safety programs as well as animal welfare policies will be maintained for the barn expansion at the Project site.

Following the identification of valued components, an analytical framework is used to evaluate and characterize the potential project effects based on standardized criteria to facilitate quantitative (where possible) and qualitative assessment of residual environmental effects.

1.6.2.2 Residual Effects Description Criteria

Terms used to characterize the residual environmental effects are summarized below.

Table 1-4 Characterization of Residual Environmental Effects

Characterization	Description	Quantitative Measure or Definition of Qualitative Categories
Direction	The long-term trend of the residual effect	<p>Positive— an improvement in the valued component compared with existing conditions and trends</p> <p>Adverse— a decline in the valued component compared with existing conditions and trends</p> <p>Neutral— no change in the valued component from existing conditions and trends</p>
Magnitude	The amount of change in the VC relative to existing conditions	<p>Negligible—no measurable change</p> <p>Low— a change that falls within the level of natural variability</p> <p>Moderate— a measurable change which is unlikely to affect the valued component</p> <p>High— a measurable change which is likely to affect the valued component</p>



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Table 1-4 Characterization of Residual Environmental Effects

Characterization	Description	Quantitative Measure or Definition of Qualitative Categories
Geographic Extent	The geographic area in which an environmental effect occurs	PS —residual effects are restricted to the Project site LAA —residual effects extend into the LAA (up to a 3 km radius of project site) RAA —residual effects extend to other adjacent areas to the property up to a 10 km radius
Frequency	Identifies when the residual effect occurs and how often during the Project or in a specific phase	Single event — residual effect occurs once throughout the life of the Project Multiple irregular event — residual effect occurs sporadically and intermittently (no set schedule) throughout Multiple regular event — residual effect occurs repeatedly and regularly throughout Continuous —residual effect occurs continuously throughout the life of the Project
Duration	The period of time required until the VC returns to its existing condition, or the effect can no longer be measured or otherwise perceived	Short-term — residual effect restricted to the duration of construction (assumed to be six months) Medium-term — residual effect extends to two to ten years Long-term — residual effect extends for longer than ten years
Reversibility	Pertains to whether the VC can return to its existing condition after the project activity ceases	Reversible —the effect is likely to be reversed after activity completion and decommissioning Irreversible —the effect is unlikely to be reversed even after decommissioning
Ecological and Socio-economic Context	Existing condition and trends in the area where environmental effects occur	Undisturbed —area is relatively undisturbed or not adversely affected by human activity Disturbed —area has been substantially previously disturbed by human development or human development is still present

1.7 PUBLIC ENGAGEMENT

The existing facility is located on one privately-owned parcel of land within an area that is appropriately zoned for heavy industrial land use. The plant has been operated by HyLife Foods since 2007 and will continue to be operated at this location. There have been no known nuisance complaints registered with HyLife about the plant operations at Neepawa. Public engagement will be fulfilled through the placement of the NOA on the Public Registry for public review and comment.



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1.8 FUNDING

HyLife Foods will provide funding for all undertakings related to the Project.

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Project Description
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2.0 PROJECT DESCRIPTION

2.1 EXISTING LICENSED DEVELOPMENT

HyLife Foods has been in operation at the Neepawa location since 2007 and is located on a site zoned “MH – Industrial Heavy” under the Town of Neepawa Zoning By-law No. 2650. The plant and general office occupies approximately 16,099 m² on the site, excluding yet to be implemented alterations already approved under previous NOAs. The plant facility is licensed to process 37,500 hogs/week (annual average). The current plant production is approximately 33,750 hogs/week.

A site plan of the facility is provided as Figure 2-1 illustrating the updated planned layout of the project site. The layout of the previously approved additions from the 2016 NOA has been updated in the figure to reflect current design plans. There are no additional environmental effects related to the layout change from the 2016 NOA. A summary of the processes at the plant is provided in the table below. More detailed information on the existing processes at the plant can be found in previous NOA submissions (HyLife 2015; Stantec 2016).

Table 2-1 Existing Plant Description

Existing Development	Description
Hog Receiving Facility	Consists of unloading docks and receiving pens with a total licensed storage capacity of up to 4,000 hogs.
CO2 Stunning Area	Groups of hogs are directed to the CO2 asphyxiation system. CO2 is supplied by a 50 tonne aboveground steel tank; under full production two trucks/month transport CO2 to the plant.
Dirty Kill Area	Carcasses are bled and scalded via vertical conveyance system; carcasses are then dehaired and the toenails are removed, and finally singed and polished before going to the clean kill area.
Dressing Floor (Clean Kill Area)	Carcass bellies are opened and organs and edible offal removed; inedible organs and bones are sent to a third party renderer; hog intestines are separated and ground for hash guts. Carcasses are then split, undergo a final inspection, and receive a final rinse.
Hog Cooler Area	Split carcasses are sent to the cooler area where they remain for 16 hours prior to transfer to the cutting floor area.
Cutting Floor Area	Carcasses are received from the cooler area and are separated into primary and secondary cuts; all like cuts are then conveyed to the packaging area. Any remaining bones, lard and cut fat are sent for third party rendering subject to market demands.
Office/Welfare Area	General office space for management staff/employee cafeteria, lunch room, locker and washroom areas.



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Table 2-1 Existing Plant Description

Existing Development	Description
Truck Wash	Livestock trailers are washed and disinfected in the on-site truck wash facility. Wastewater from the truck wash is sent to the off-site IWWTF for treatment.
Trailer Bedding Materials Pad	Bedding material (and manure) is scraped out of empty transport livestock trucks and stored on one of two concrete manure pads outside on the north side of the facility; this stored material is transferred to third party land in accordance with regulation.
Packaging and Shipping Areas	Products are processed, packaged according to client specifications and shipped off-site for either further processing or distribution and retail sale. Packaged products are staged on shipping pallets and made for loading on transport trucks for shipping and distribution.
Bake Bay	HyLife Foods added a stand-alone trailer bake bay on the property connected by a new access road to the main plant yard area. The trailer bake bay dries livestock trailers after they are washed and disinfected. Wastewater generated from this operation is stored in a holding tank and hauled to the IWWTF for treatment.
Barn #3 (Former Springhill Farms Barn)	HyLife Foods is discontinuing the use of Barn #3 (i.e., former Springhill Farms Barn) as part of the receiving facility. This area (approx. 767 m ²) presently accommodates 650 hogs. A proposed addition to the receiving facility to address holding capacity, described in the 2016 NOA, included adding 996 m ² of space for 1,000 hogs to bring the total hog storage capacity to 4,000 hogs.
On-site Storage	HyLife Foods has a number of on-yard storage trailers for storage of materials and processed goods; other storage areas include an equipment storage area and a pallet shed.

2.1.1.1 Water Use and Wastewater Production

Water use and wastewater production at the plant was summarized in the 2016 NOA. The current licensed hydraulic capacity at the R3 Innovations IWWTF is 1,520 m³/day. The IWWTF has maintained compliance with its licence terms and conditions since inception.

2.1.1.2 Workforce

The number of workers at the processing plant and the administration office currently totals approximately 1,200 staff, consisting of 180 non-union positions, and 1,022 plant, packaging, and maintenance workers (union positions). The projected staffing at the 37,500 hogs/week production rate will see a minimum of approximately 1,250 employees at the pork processing facility.



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2.1.1.3 Traffic Summary

Traffic is estimated to remain the same at approximately 950 to 1,000 vehicles/day (staff and operations) for current licensed full production of 37,500 hogs/week. Traffic travelling to and from the Project site, related to hogs, packaging, chemical use, final product, and waste transfer for the licensed condition of 37,500 hogs/week was summarized in the 2016 NOA.

2.1.1.4 Health and Safety

HyLife Foods' commitment to the ongoing health and safety of its employees remains in place (HyLife Foods 2016) with health and safety plans available for review upon request.

2.1.1.4.1 Animal Welfare, Food Safety and Inspection Policies

Animal welfare measures at plant will continue as is currently the case in full compliance with federal, provincial and industry policies and regulations.

Farms that deliver hogs to Neepawa's pork processing facility are fully compliant with all levels of the Canadian Pork Council's Canadian Quality Assurance (CQA) program. Drivers delivering hogs to the processing plant are required to be Trucker Quality Certified (TQA). The TQA certification ensures that swine transporters, producers and handlers understand how to move/handle and transport hogs (<http://www.HyLifefoods.com/products/>).

HyLife Foods adheres to strict bio-security procedures throughout the production cycle, including professional veterinary care and providing optimal environmental conditions for their animals (HyLife Foods n.d.).

The Canadian Food Inspection Agency (CFIA) regulates the HyLife Foods' facility at Neepawa. The plant is inspected by CFIA on a regular basis and is compliant with the internationally recognized food safety program Hazard Analysis Critical Count Point (HACCP). Products and packaging are regularly inspected and monitored, testing for microbial activity and shelf life (<http://www.HyLifefoods.com/products/>).

2.2 PROPOSED ALTERATION

The proposed alteration will enable HyLife Foods to reduce the risk of disruption to plant operation by increasing the on-site temporary livestock holding capacity. The increase in the size of the receiving facility will allow flexibility to accommodate variabilities in supply logistics and potential short-term transportation disruptions within the current licensed capacity of 37,500 hogs per week (7,500 hogs per day). No increase in the licensed processing capacity is proposed.

The proposed Project building footprint to be constructed at the processing plant will consist of the addition of a 2,702-m² building to add space for 3,500 hogs located on the northwest side of the existing barn footprint. The expanded facility will consist of 72 pens, a 3.0-m-wide side unloading ramp, a 1.8-m alley, and a 3.0-m wide exit ramp to the kill floor. Each pen within the



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expanded barn will house 43 hogs, with an allowance of 0.8 m²/hog. The expanded receiving facility will utilize existing infrastructure at the plant. This proposed addition will effectively replace the hog receiving facility addition (i.e., 996 m² for 1,000 more hogs) as previously proposed and described in the 2016 NOA.

The addition of the new barn will necessitate the relocation of the hair barn and hog by-pass to another location. The existing yard will be reorganized to accommodate the proposed barn expansion as shown in Figure 2-1 in this NOA. No changes are expected to site ingress and egress with respect to the movement of livestock trucks as a result of receiving facility expansion.

2.2.1 Construction Inputs and Outputs

During the construction phase of the proposed alteration, materials required may include concrete, steel, rebar, field-survey tape, paint spray cans, drywall, flooring, gravel, fill, fuel and other materials. Raw materials such as gravel, fill, and asphalt will be required for site works. Most of these materials will be brought to the site from other areas. There may be temporary storage of construction materials in lay-down areas on the site. An average of 12 construction staff will be involved in the expansion of the hog receiving facility. Equipment utilized will be part of the general construction project as documented in the 2016 NOA; no additional pieces of equipment will be required.

Outputs during construction can include surface runoff and fugitive dust and vehicle emissions from construction equipment. Other outputs generated from construction work related to spent packaging materials, solvents, used oils, surplus building materials, etc., will be regularly transported off the site and disposed of or recycled according to applicable regulations.

2.2.2 Operation Inputs and Outputs

2.2.2.1 Chemical Usage

Typical operational chemical inputs for the processing plant operation (excluding fuel) including citrate, CO₂ (stunning), CO₂ (dry ice), chlorinated detergent, foaming acid cleaner, and caustic powder cleaner are expected to remain the same and will not change from that described in the 2016 NOA as a result of the proposed barn expansion.

The increase in the required sanitation chemical usage is expected to be proportional to the expansion of the receiving facility from 3,889 m² (including Barn #3) to 6,591 m² – a 50% increase in area for the total receiving area representing 17% of the overall plant size. All chemicals used will continue to be stored in the chemical storage room where there remains sufficient room for storage.

2.2.2.2 Water Use and Wastewater Production

The expansion of the receiving facility will increase the area to be washed, resulting in an increase in the volume of water used for sanitation. The change in water use (i.e., washdown,



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misting, watering) is conservatively estimated to increase in proportion to the 50% increase in area for the receiving facility. The previous 2016 NOA estimated the daily water requirement for the total plant at 1,359 m³/day (Stott 2016). Proportionally, the proposed alteration may result in an increase in water use by up to 4 m³/day to 1,363 m³/day, which is well within the plant's licensed capacity. The additional volume represents a negligible increase in the overall water use at the plant.

The character of generated wastewater is not expected to change substantially. As no new processing is involved with the barn expansion, changes in effluent loadings to the R3 Innovations IWWTF are not anticipated. As noted in Section 2.2.1.1, the current licensed hydraulic capacity at the R3 Innovations IWWTF is 1,520 m³/day. The annual average daily volume of effluent discharged to the IWWTF between January 1, 2016 and December 31, 2016, was 1,161 m³/day. The projected effluent volume for proposed full plant operations remains at 1,520 m³/day.

The number of livestock trucks washed out at the on-site wash facility and dried out in the bake bay per day are not anticipated to change as a result of the proposed alteration.

2.2.2.3 Fuel, Electricity and Gas Utilities

Additional space heating for the receiving facility expansion will be required, but the natural gas load increases for building heat for the barn are expected to be about 2% or less (Stott 2017). Electricity is provided to the plant site via a single transformer substation located west of the Project site. It is expected that the increase in electricity usage for the receiving facility expansion will be nominal, and the plant's single existing transformer will be sufficient.

2.2.2.4 Waste Management

Typical construction waste will be generated from the building addition and will require proper handling and disposal at licensed landfills. All operational outputs, including renderable materials, collected blood by-product, and scrapings of bedding material/manure will remain as documented in the 2016 NOA based on moving to a production capacity of 37,500 hogs/week. The existing R3 IWWTF will continue to meet wastewater treatment requirements for effluent discharge to the Whitemud River as stipulated in the IWWTF *Environment Act* Licence (Licence No. 2870). The wastewater treatment process will not change with the proposed alteration. Similarly, the volumes of domestic waste and recyclables are not anticipated to substantively change with the proposed barn expansion.

2.2.2.5 Odour Generation

Odour sources from the plant will remain as previously documented. There will be an increase in the maximum allowable hog holding capacity (i.e., from 4,000 hogs to 7,500 hogs) at one time as a result of the application. Therefore, it can be expected that an increase in odours may occur as a result.



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To date there have been no odour complaints reported to HyLife Foods from processing plant operation or the construction work that has been undertaken in the last several years. HyLife Foods will continue to address odour complaints as they arise on a case-by-case basis in cooperation with Manitoba Sustainable Development as necessary.

2.2.2.6 Workforce

The 2016 NOA indicated that 1,250 staff members would be required to support the fully licensed operation. Currently, HyLife Foods has 1,200 staff members. The addition of two staff is contemplated for the barn expansion.

2.2.2.7 Traffic Volumes

The number of trucks involved in shipping raw materials in, and final product out, will remain the same with the proposed alteration. In addition, total hogs transported to the site on a daily average basis (24 hours) will remain the same as proposed in the previous NOA. No changes are expected to daily operational traffic volumes from the plant as documented in the 2016 NOA. However, the need for hogs to be delivered early in the process to buffer production will mean essentially more trucks arriving at the receiving facility earlier in the day. There will also be a negligible and temporary short-term increase in traffic related to the construction phase for the proposed alteration.

2.2.2.8 Animal Welfare

The enforcement of safety and animal welfare policies at the processing plant will continue to be conducted in full compliance with federal and provincial Health and Safety legislation and standard industry animal handling codes of practice (HyLife Foods 2016). Consistent with current operations at the plant, HyLife will work to maintain a rest period of four hours per hog (once hogs are delivered and unloaded) and maintain compliance with hog welfare procedures and policies currently in place (Stott 2016).

2.3 PROJECT SCHEDULE

The start of the construction phase is expected to be May 2017 with completion by November 2017.

3.0 ENVIRONMENTAL EFFECTS AND MITIGATION

This section outlines the assessment of environmental effects for those components identified in Table 1-1 as having potential project interactions. Components included in this assessment are: air quality and odour; greenhouse gas emissions; infrastructure and services; and employment and economy.

3.1 ASSESSMENT OF ENVIRONMENTAL EFFECTS

3.1.1 Air Quality and Odour

Potential air quality effects related to the proposed receiving facility expansion are related to emissions from building heating and construction equipment, fugitive dust generation due to movements of construction equipment and other vehicular traffic on the site, odour generation from activities and materials used during construction, and increased odour generation due to the increase in size of the receiving facility.

Construction Phase:

During the construction phase, changes to air quality can occur due to vehicle and construction equipment exhaust emissions. Effects will be mitigated by using properly maintained equipment and vehicles, and by limiting unnecessary idling of vehicles on the site. With the proximity of the site to traffic on PTH 16 and the existing on-site operational traffic, the potential adverse effect of emissions from construction equipment and vehicles is expected to be incremental but negligible in comparison in the LAA. The effect will be short term (limited to the construction phase) and reversible upon completion of the construction phase of the project.

The generation of fugitive dust from on-site traffic movements can affect local air quality and may result in irritation to nearby residents, particularly during dry periods. The potential changes in local air quality from construction phase fugitive dust emissions will be mitigated by applying water or other dust palliatives as required to the unpaved portions of the site as necessary. Further, the residual effects from dust emissions are expected to be negligible given the separation of the site from residents, prevailing wind directions, and a lack of dense residential development in proximity. With mitigation in place to address excessive dust generation, resultant air quality effects from construction of the receiving facility expansion are expected to be negligible, limited to the PS and immediate LAA, reversible, and short term in duration.

Odours typical of some construction processes and materials may also be generated during the construction phase of the project, including those associated with asphalt roofing, adhesives, painting, etc. The activities generating these odours are expected to be short term, occurring multiple times irregularly over the construction phase. The prevailing wind direction for Neepawa (based on the Brandon, Manitoba meteorological station) is principally from the west

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(Environment Canada 2015b). Although the closest residence to the site is located approximately 260 m west of the project site, the lands surrounding the site are largely agricultural or industrial in nature and are sparsely populated. The prevailing wind direction, combined with the short term of odour-generating activities and a lack of dense residential development mitigates the effect of odour generation at the site on air quality in the LAA.

Operation Phase:

During the operation of the proposed expanded receiving facility, changes to ambient air quality could occur due to an anticipated increase in natural gas combustion emissions from heating the larger facility. The incremental change in natural gas consumption is anticipated to be negligible to low (i.e., about 2% or less) compared to present operations at the plant. The emissions related to the increase in natural gas usage are expected to result in negligible adverse effects on local air quality that would be reversible and occur on an irregular basis during cold periods over the operational phase of the project.

The increase in the size of the receiving facility could result in a short-term increase in the number of hogs stored on the site on a hour-by-hour basis, however the daily number of hogs stored at the site will remain within the licensed operating capacity of the plant (7,500 hogs/day). On a daily basis there will be no increase in the number of hogs on the site. Odour emissions from the increased size and capacity of the receiving facility will be mitigated through continued good housekeeping consistent with current operations. Regular wash down of the facility combined with proper management of feed and rest time for the livestock will continue to be employed in line with current practices, to mitigate operational odour emissions. To date there have been no odour complaints reported to HyLife Foods from processing plant operation or the construction work that has been undertaken in the last several years. If odour complaints are received, HyLife Foods will address odour complaints on a case-by-case basis in cooperation with Manitoba Sustainable Development as necessary. The adverse effects of odour on air quality for receptors in the area are expected to be negligible to low in the LAA.

Summary

The potential effects on air quality from emissions during construction and operation are expected to be negligible, primarily limited to the PS or immediately surrounding LAA, short- to long-term in duration, multiple irregular in frequency, and reversible upon Project decommissioning. The potential adverse effects of odour are expected to be negligible to low, limited to the immediate LAA, short-term (construction phase), long-term in duration (operation phase), multiple irregular in frequency, and reversible upon Project decommissioning.

3.1.2 Greenhouse Gas Emissions

Greenhouse gas emissions are currently generated at the pork processing facility and will continue to be generated as part of the proposed project. Based on HyLife's current information, the natural gas consumption at the plant for process water heating as well as the



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fuel consumption for shunt trucks and forklifts, etc., will remain in line with the values estimated for the 2016 NOA submission.

Operation Phase:

The proposed increase to the receiving facility does not affect the licensed processing capacity of the plant. The average livestock residence time at the receiving facility is expected to remain at approximately 4 hours (Stott 2017). To generate a conservative estimate of greenhouse gas emissions, the estimated methane (CH₄) generated emissions from the hogs in the expanded barn facility were calculated as if the receiving facility was occupied to capacity on a full-time basis (i.e., 7500 hogs per day).

The use of natural gas to heat the buildings and process heat on-site produces CO₂, CH₄, N₂O, NO_x, CO emissions, volatile organic compounds (VOCs), trace sulphur dioxide (SO₂) and particulate matter (PM). Natural gas usage at the plant was estimated to be 4,590,000 m³ per year over a 12-month period in the 2016 NOA (Stantec 2016). It is estimated that the proposed alterations would result in an increase in plant natural gas usage to 4,681,800 m³ (approximately 2%) over a 12-month period (Stott 2017).

The estimated total GHG emissions at the HyLife Foods facility including the proposed receiving facility expansion were estimated as 8,909 tonnes (8.91 kilotonnes) per year carbon dioxide equivalent (CO₂ e) using the 1990-2014 Canada National Inventory Report information, up from 8.73 kilotonnes as noted in the 2016 NOA. The GHG emission estimate for the subject alteration is summarized in Table D-1 (Appendix D). Environment Canada's mandatory reporting threshold for greenhouse gas emissions on an annual basis is 50,000 tonnes (or 50 kt) of CO₂ e. The facility's revised estimates generate about 18% of the reporting threshold. As such, the plant and its expansion are not considered a major contributor of greenhouse gas emissions.

The greenhouse gas emissions reported in 2014 by the Province of Manitoba in Canada's National Inventory Report 1990-2014 totaled 21,500,000 tonnes of CO₂ e (Environment Canada 2016). HyLife Foods' facility greenhouse gas emissions remain negligible in comparison to total provincial greenhouse gas emissions.

Summary

The proposed alterations at HyLife's facility are expected to have a negligible contribution to operational GHG emissions in the RAA. However, emissions are long-term in duration, continuous, and irreversible upon Project decommissioning.

3.1.3 Infrastructure and Services

Potential infrastructure and services effects related to the proposed receiving facility expansion are related to movement of construction equipment and vehicles and other vehicular traffic on the site during operations, and use of services for the expanded receiving facility.



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Construction Phase:

During the construction phase, there will be an increase in the number of vehicles travelling to and from the Project site with construction equipment and associated materials. Vehicular access to the construction area will be limited to existing access points only to reduce potential conflicts with local traffic from turning vehicles. The potential effects of the increase in vehicle traffic along PTH 16 over existing levels (i.e., 3,190 veh/day to 3,260 veh/day maximum) AADT (MIT and University of Manitoba 2015), are anticipated to be negligible, irregular, and short-term in duration.

Operation Phase:

PTH 16 and the municipal road allowance to the east of the processing plant will continue to be the main routes used by employees and for trucks and livestock trailers. Trucks and truck trailers will continue to enter and exit the plant site as noted in the 2016 NOA. The estimated traffic at the plant site at licensed capacity is not expected to change from the 2016 NOA for the receiving facility expansion (HyLife Foods 2016).

Adverse traffic effects are expected to be limited to short-term delays (less than 5 minutes typically) in access to PTH 16 in the form of normal traffic congestion, typical of highway access from municipal roads. The effect is expected to be negligible in magnitude, limited to the LAA (immediately surrounding the project site), regular, continuous, and reversible.

The existing electrical service is considered sufficient to supply the additional power demands of the proposed project. Other existing utility services on-site, including gas, wastewater treatment at the adjacent R3 Innovations treatment facility and potable water from the Town of Neepawa, are also sufficient for the proposed project.

Summary

The potential adverse residual effects on infrastructure and services related to traffic are expected to be negligible, limited to the LAA, long-term in duration, continuous in frequency, and reversible upon Project decommissioning. Effects on utility usage are expected to be neutral, negligible, limited to the PS, long-term, continuous, and reversible.

3.1.4 Employment and Economy

Potential employment and economy effects related to the proposed receiving facility expansion are related to the purchase/contract of local goods and services, and continued benefits from the ongoing contribution to the local and regional economies.

Construction Phase:

The period of construction activity is expected to extend over about six months, ending in October 2017. Construction-related jobs will be short-term in nature. The construction workforce



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is estimated to be approximately 12 workers per day on average (Stott 2016). The effect of this employment will be positive but negligible relative to the RAA. There is potential for the purchase/contract of local goods and services related to the Project consistent with project size and scale.

Operation Phase:

The continued operation of the expanded plant will support the present positive effects related to employment of the workforce at the plant and its ongoing contribution to the local and regional economy (i.e., through the purchase of goods and services and tax generation). The proposed receiving facility expansion is anticipated to result in the addition of two staff persons. The 2016 NOA indicated that 1,250 staff members were required for the processing plant. Currently, HyLife Foods has 1,200 staff members. No additional mitigation is proposed.

Summary

The potential residual effect on employment and economy is anticipated to be positive in direction, negligible in magnitude, extending to the RAA, short to long-term in duration, continuous and reversible.

3.1.5 Summary of Mitigation Measures

Proposed mitigation measures incorporated as part of this NOA includes those standard practices and procedures identified under the 2016 NOA (Stantec 2016) as well as other general mitigation measures that are typically applied in the course of project construction and operation. Mitigation measures to be employed to prevent or mitigate adverse effects identified in the sections above include the following:

- Dust generation from exposed or disturbed areas will be kept to a minimum; additional dust suppression will be undertaken at the construction site as required (i.e., spraying material stockpiles and work areas with water or other non-toxic measures).
- Excavated topsoil will be stockpiled separately on the plant site for future use in leveling activities and vegetating disturbed areas.
- Material stockpiles will be placed in areas identified and approved by HyLife Foods; stockpile heights will be limited.
- Disturbed areas will be kept to a minimum and site restoration will occur as soon as practically possible where necessary.
- Construction activities will be limited during heavy precipitation/runoff events.
- Construction traffic and equipment movements will be limited to designated access routes within the Project site.



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- Contractor will be responsible for repair and site restoration activity as a result of construction damage (i.e., rutting, compaction of soils).
- Silt fences and other erosion protection measures will be installed as necessary during construction for stormwater to prevent erosion and sediments from being transported off-site past site boundary ditching to surface water.
- Surface water drainage patterns will be maintained on-site.
- Exhaust emissions from construction and plant operation will be minimized through the proper maintenance of vehicles and equipment and restricting vehicle idling.
- HyLife Foods will continue to engage with adjacent landowners to monitor the extent, if any, of experienced effects related to plant operation (i.e., noise, odour) as appropriate according to existing licence provisions; HyLife Foods will address any nuisance concerns as they arise on an individual basis.
- Gather and properly dispose of construction waste at a regional licensed landfill; encourage recycling of construction waste to the extent possible.
- Limit construction activity to normal daylight working hours only in accordance with local municipal by-law provisions.
- Limit construction access to existing access points only; appropriate construction signage and flagpersons will be utilized for the construction site as required.
- Adhere to proper procedures for storage and handling of hazardous materials (i.e., fuels, chemicals) in designated areas.
- Maintain an emergency response spill kit and implement emergency response measures for spill clean-up and remediation.
- The Project site will be regularly inspected for loose debris and waste to maintain a clean site.
- Vehicle and truck traffic will be limited to existing traffic routes and access points only.
- Contractors engaged in construction activities at the Project site will adhere to federal and provincial Health and Safety legislation.
- Contractors will adhere to Project-specific safety plan developed as appropriate.
- Project site employees will be kept aware of safety requirements and on-site construction works to ensure worker safety.

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- Workers will be provided with appropriate personal protective equipment (PPE); hearing protection will be provided to employees/workers as required.

3.2 SUMMARY OF RESIDUAL EFFECTS CHARACTERIZATION

A summary of residual environmental effects characterization is found in Table 3-1. Residual effects related to air quality, greenhouse gas emissions, and infrastructure and services are characterized. Positive and neutral effects are not addressed, only adverse effects are characterized.

Table 3-1 Summary of Residual Environmental Effects

Project Effects	Residual Environmental Effects Characterization						
	Direction	Magnitude	Geographical Extent	Duration	Frequency	Reversibility	Ecological and Socio-economic Context
Air Quality							
Fugitive dust generation, building and vehicle emissions	A	N	PS/LAA	S-L	MI	R	D
Odour generation	A	N-L	LAA	S-L	MI	R	D
Greenhouse Gas Emissions							
Facility and site operation, vehicle emissions	A	N	RAA	L	C	IR	D
Infrastructure and Services							
Traffic pattern/volume	A	N	LAA	S	C	R	D
Utility usage	N	N	PS	L	C	R	D
See Table 6-2 for detailed definitions							
KEY							
Direction				Duration	Ecological/Socio-Economic Context:		
P Positive				S Short-term	U Undisturbed		
A Adverse				M Medium-term	D Disturbed		
N Neutral				L Long-term	N/A Not applicable		
Magnitude				Frequency			
N Negligible				S Single event			
L Low				MI Multiple irregular event			
M Moderate				MR Multiple regular event			
H High				C Continuous			
Geographical Extent				Reversibility			
PS Project Site				R Reversible			
LAA Local Assessment Area				IR Irreversible			
RAA Regional Assessment Area							



3.3 ACCIDENTS AND MALFUNCTIONS

The effects of accidents and malfunctions for the Project are primarily related to the potential for mechanical equipment failure, fuel or other chemical spills, and transportation accidents as noted in the 2016 NOA. During construction and operation, there exists the potential for fires at the Project site involving mechanical equipment and fuels, potential for environmental effects due to fuel and chemical spills and/or leaks from equipment, and transportation accidents that can result in the release of vehicle fluids to the environment (i.e., diesel, gasoline, oils, etc.) and the materials the vehicles were transporting. Accidents and malfunctions can potentially result in harm to on-site personnel, damage to equipment, the release of contaminants and hazardous materials from equipment/vehicles due to leaks or improper storage and handling and degradation of the environment and human health and safety.

Potential effects resulting from spills occurring is anticipated to be irregular and short-term in duration. The potential for an increase in vehicle traffic along PTH 16 over existing levels that could lead to transportation accidents is anticipated to be negligible. Operational traffic at the plant site operating at slow speeds and the utilization of qualified transport companies reduces the potential for on-site transportation accidents and risks. Measures to prevent adverse effects associated with fire/explosion, spills and transportation accidents are as follows:

- Flammable waste and materials will be removed on a regular basis and disposed of at an appropriate licensed disposal facility.
- Appropriate fire extinguishers are available on-site during operations and are maintained to manufacturer's standards.
- Potentially hazardous materials and chemicals are stored and handled at dedicated areas and labelled in accordance with applicable regulatory requirements.
- Hazardous materials are transported in accordance with the *Dangerous Goods Handling and Transportation Act* and used according to product-use instructions.
- Refueling of vehicles and equipment will adhere to proper procedures and will use designated refueling areas or will be refueled off-site.
- Emergency spill kits will be maintained on-site and staff will be trained to properly deploy spill kit materials and clean up spills.
- Inspections of hydraulic and fuel systems on equipment and machinery will be undertaken on a routine basis. Leaks detected will be repaired immediately by trained personnel.
- Above-ground storage tanks will be regularly inspected and maintained to prevent leaks and failures.
- Existing traffic control measures (i.e., speed limits, signage) will be adhered to.
- HyLife Foods maintains policies related to emergency preparedness, workplace hazardous materials information system (WHMIS) and spill response procedures.

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4.0 SUMMARY CONCLUSIONS

Stantec has prepared this environmental assessment report on behalf of HyLife Foods LP, in support of the NOA application for the proposed receiving facility expansion. The NOA application is filed in accordance with Section 14(1) of *The Environment Act* which requires a proponent to notify the Director (for Class 1 and 2 developments) if the proponent intends to alter a licensed development (MSD 2016).

Potential interactions of the proposed project and the environment were evaluated with likely interactions examined to assess residual effects. Those interactions deemed to potentially generate adverse effects were described and evaluated with the assumption of typical mitigation measures representative of best practices and previous construction methods employed at the site.

On the basis of the desktop studies undertaken and information available to date as presented in this report, the proposed alteration is not expected to create significant adverse effects to the biophysical and socio-economic environment. It is anticipated that the proposed alteration at the plant, essentially involving an expansion to the existing hog receiving facility at the existing plant site and its associated operational and potential environmental effects, will be considered as a minor alteration to the licensed development.

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5.2 PERSONAL COMMUNICATIONS

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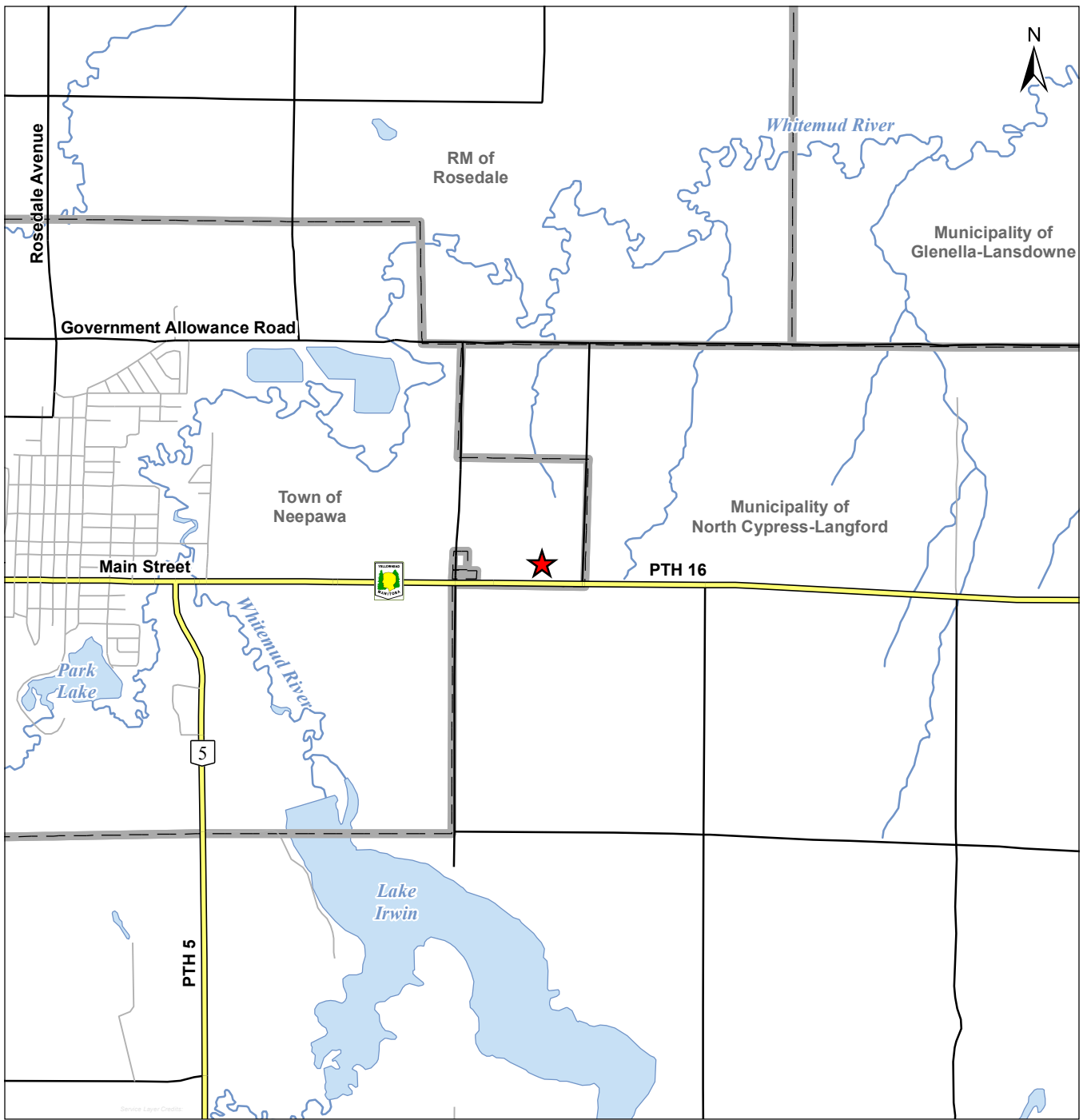
Stott, Sheldon. Director of Environmental Affairs, Hylife Foods Ltd. Email correspondence to Stephen Biswanger, Stantec Consulting Ltd., November 22, 2016.

Stott, Sheldon. Director of Environmental Affairs, Hylife Foods Ltd. Telephone conversation with Stephen Biswanger, Stantec Consulting Ltd., December 9, 2016.

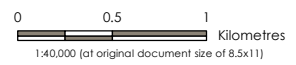
HYLIFE FOODS LP PROCESSING RECEIVING FACILITY EXPANSION NOTICE OF ALTERATION

Appendix A Figures
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Appendix A **Figures**



- Legend**
- Site Location
 - Major Road
 - Minor Road
 - Local Road
 - Watercourse
 - Waterbody
 - Rural Municipality



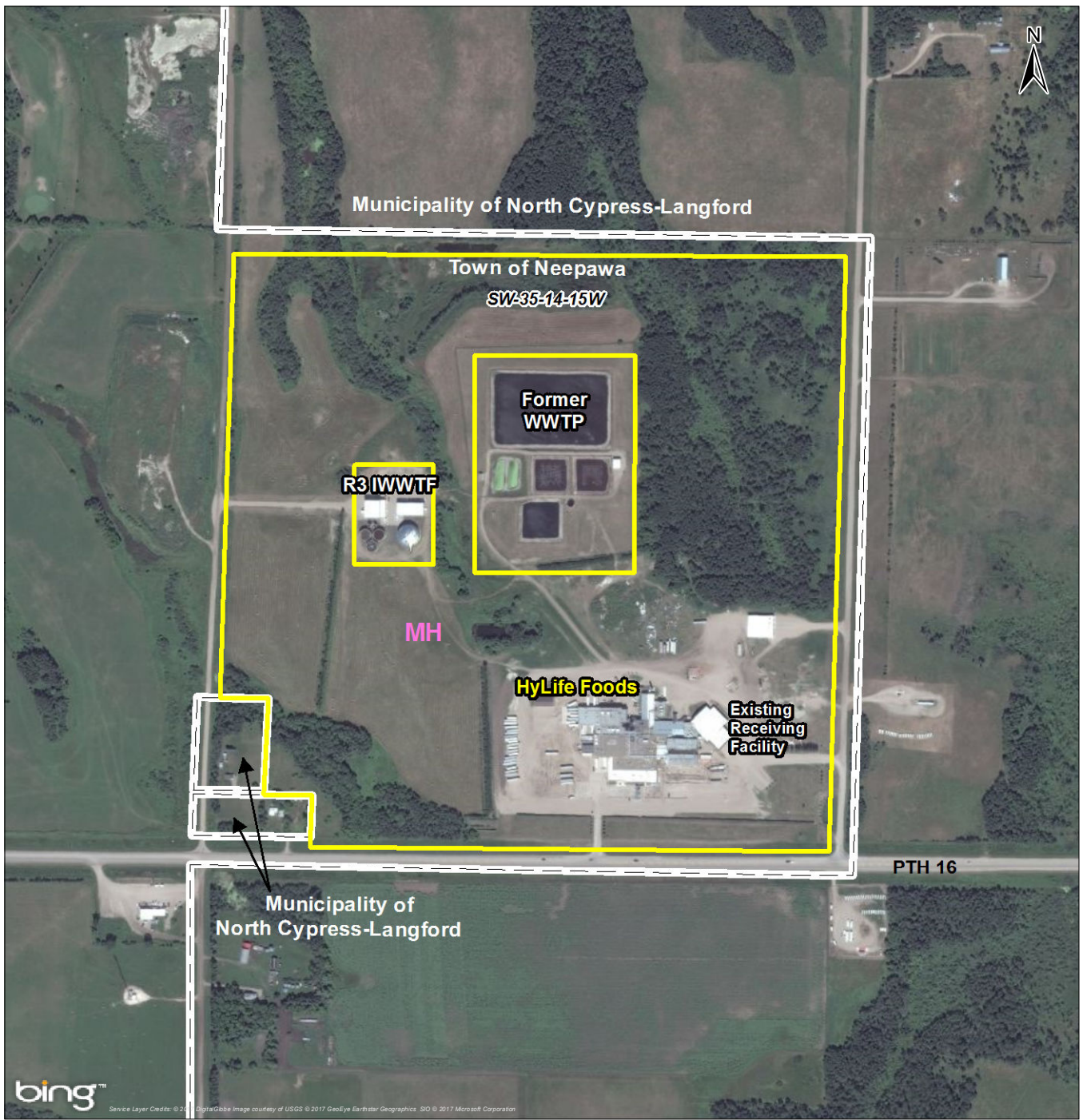
Project Location: 111440368
 Town of Neepawa, Manitoba
 Prepared by AC on 2016-05-11
 Technical Review by BK on 2016-05-11

Client/Project: HYLIFE FOODS LTD.
 HyLife Foods LP Processing Facility
 Notice of Alteration

Figure No. **1-1**
 Title

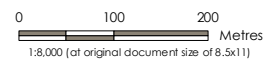
Site Location Plan

Disclaimer: Stantec assumes no responsibility for data supplied in electronic format. The recipient accepts full responsibility for verifying the accuracy and completeness of the data. The recipient releases Stantec, its officers, employees, consultants and agents, from any and all claims arising in any way from the content or provision of the data.



Legend

- Rural Municipality
- MH Industrial Heavy Zone
- HyLife Foods (Approximate)



Project Location 111440368
 Town of Neepawa,
 Manitoba
 Prepared by AC on 2017-01-27
 Technical Review by SB on 2017-01-27

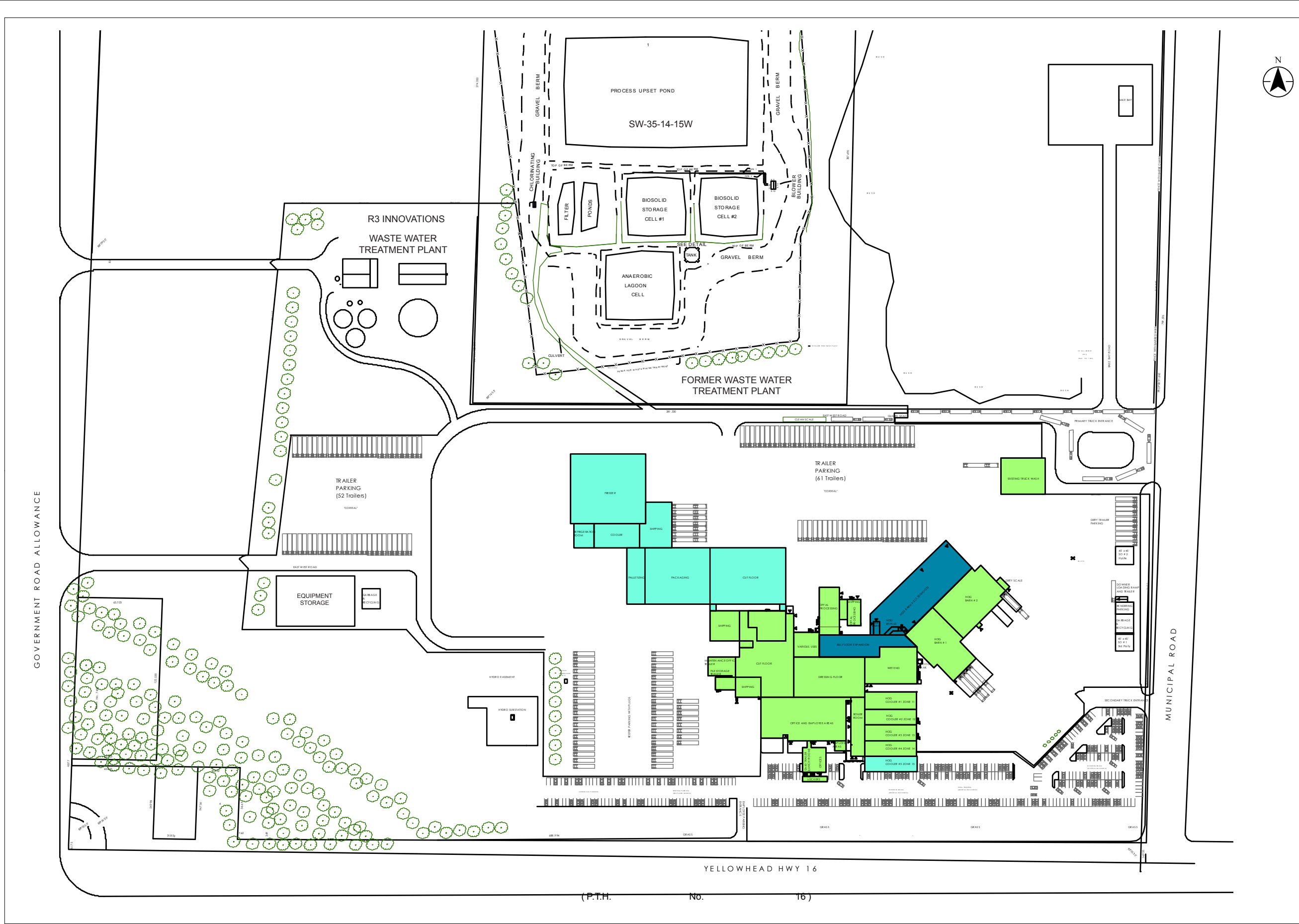
Client/Project
 HYLIFE FOODS LTD.
 HyLife Foods LP Processing Facility
 Notice of Alteration

Figure No.
1-2
 Title

Site Plan

- Notes**
1. Coordinate System: NAD 1983 UTM Zone 14N
 2. Base features provided by the Government of Manitoba and the Government of Canada
 3. Imagery courtesy of Microsoft (Bing).

Disclaimer: Stantec assumes no responsibility for data supplied in electronic format. The recipient accepts full responsibility for verifying the accuracy and completeness of the data. The recipient releases Stantec, its officers, employees, consultants and agents, from any and all claims arising in any way from the content or provision of the data.



- DRAWING LEGEND:**
- EXISTING FACILITY
 - WORK IN PROGRESS
 - PROPOSED NOA

Project Location 111440368
 Town of Neepawa, Manitoba Prepared by AC on 2017-02-06
 Technical Review by BK on 2017-02-06

Client/Project
 HYLIFE FOODS LTD.
 Hylife Foods LP
 Processing Facility
 Notice of Alteration

Figure No.
2-1
 Title
**Site Plan
 Layout**

HYLIFE FOODS LP PROCESSING RECEIVING FACILITY EXPANSION NOTICE OF ALTERATION

Appendix B Licence Correspondence
February 7, 2017

Appendix B Licence Correspondence



Sustainable Development

Environmental Stewardship Division
Environmental Approvals Branch
123 Main Street, Suite 160, Winnipeg, Manitoba, Canada R3C 1A5
T 204 945-8321 F 204-945-5229
www.gov.mb.ca/conservation/eal

File: 2754.10

June 15, 2016

Mr. Sheldon Stott, P.Ag.
Director of Environmental Affairs
HyLife Foods Ltd.
Box 10000, 623 Main Street
Neepawa, MB R3C 1A5

Dear Mr. Stott:

Re: HyLife Foods LP (HyLife Foods) –Environment Act Licence No. 1102 R – Notice of Alteration

Receipt of the May 18, 2016 report submitted by Stantec Consulting Ltd. on behalf of HyLife Foods is acknowledged as a notice of alteration in accordance with Section 14 of *The Environment Act*.

The requested changes to the Development as Licensed are to modernize, upgrade and expand the Development to process hogs more efficiently. The expansion will increase the processing plant building footprint by approximately 10,387 m². The proposed expansions are to the hog receiving facility, cut floor, packaging area, palletizing area, shipping area, and cold storage area as well as the re-organization of the yard area.

No changes are proposed to the Licensed production capacity of the processing plant or to the R3 Innovations Inc. Industrial Wastewater Treatment Facility which treats the wastewater from HyLife Foods and operates under Environment Act Licence No. 2870 R.

The potential environmental effect of the requested changes to the Development as Licensed is insignificant and considered to be a minor alteration in accordance with Section 14(2) of *The Environment Act*. Approval is hereby granted for the alteration to the Development as described in the May 18, 2016 report.

If you have any questions, please contact Jennifer Winsor, P.Eng. at 204-945-7012.

Yours sincerely,

“original signed by”
Tracey Braun, M.Sc.
Director

- c. Don Labossiere/Tim Prawdzik/Peter Crocker– Environmental Compliance and Enforcement Branch, Manitoba Sustainable Development
Jennifer Winsor – Environmental Approvals Branch, Manitoba Sustainable Development
Public Registries



Conservation and Water Stewardship

Environmental Stewardship Division
Environmental Approvals Branch
123 Main Street, Suite 160, Winnipeg, Manitoba R3C 1A5
T 204 945-8321 F 204 945-5229
www.gov.mb.ca/conservation/eal

CLIENT FILE NO.: 2754.10

December 18, 2014

Denis Vielfaure
HyLife Foods LP
P.O. Box 100
La Broquerie MB R0A 0W0

Dear Mr. Vielfaure:

Enclosed is **revised Environment Act Licence No. 1102 R** dated December 18, 2014 issued to **HyLife Foods LP** for the operation and expansion of the Development being a hog processing plant located in SW 35-14-15WPM in the Town of Neepawa with all wastewater being discharged to the R3 Innovations Inc. & Town of Neepawa industrial wastewater treatment facility (IWWTF) for treatment and in accordance with the Proposal filed under *The Environment Act* on June 12, 2013 and additional information provided on November 25, 2013.

In addition to the enclosed Licence requirements, please be informed that all other applicable federal, provincial and municipal regulations and by-laws must be complied with. A Notice of Alteration must be filed with the Director for approval prior to any alteration to the Development as licensed.

For further information on the administration and application of the Licence, please feel free to contact Peter Crocker, Environment Officer at 204-726-6565.

Pursuant to Section 27 of *The Environment Act*, this licensing decision may be appealed by any person who is affected by the issuance of this Licence to the Minister of Conservation and Water Stewardship within 30 days of the date of the Licence.

Yours truly,

“original signed by”

Tracey Braun, M.Sc.
Director
Environment Act

c: Don Labossiere, Director, Environmental Compliance and Enforcement
Tim Prawdzik, Provincial Manager, Environmental Compliance and Enforcement
Public Registries

NOTE: Confirmation of Receipt of this Licence No. 1102 R (by the Licencee only) is required by the Director of Environmental Approvals. Please acknowledge receipt by signing in the space provided below and faxing a copy (letter only) to the Department by January 8, 2015.

On behalf of HyLife Foods LP

Date

LICENCE

Licence No. / Licence n° 1102 R

Issue Date / Date de délivrance December 18, 2014

In accordance with *The Environment Act* (C.C.S.M. c. E125) /
Conformément à *la Loi sur l'environnement* (C.P.L.M. c. E125)

Pursuant to Section 11(1) / Conformément au Paragraphe 11(1)

THIS LICENCE IS ISSUED TO: / CETTE LICENCE EST DONNÉE À:

HYLIFE FOODS LP;
"the Licence"

for the operation and expansion of the Development being a hog processing plant located in SW 35-14-15WPM in the Town of Neepawa with all wastewater being discharged to the R3 Innovations Inc. & Town of Neepawa industrial wastewater treatment facility (IWWTF) for treatment and in accordance with the Proposal filed under *The Environment Act* on June 12, 2013 and additional information provided on November 25, 2013 and subject to the following specifications, limits, terms and conditions:

DEFINITIONS

In this Licence,

"accredited laboratory" means an analytical facility accredited by the Standard Council of Canada (SCC), or accredited by another accrediting agency recognized by Manitoba Conservation and Water Stewardship to be equivalent to the SCC, or be able to demonstrate, upon request, that it has the quality assurance/quality control (QA/QC) procedures in place equivalent to accreditation based on the international standard ISO/IEC 17025, or otherwise approved by the Director;

"affected area" means a geographical area, excluding the property of the Development;

"approved" means approved by the Director or assigned Environment Officer in writing;

"ASTM" means the American Society for Testing and Materials;

"day" or "daily" means any 24-hour period;

"Director" means an employee so designated pursuant to *The Environment Act*;

****A COPY OF THE LICENCE MUST BE KEPT ON SITE AT THE DEVELOPMENT AT ALL TIMES****

"dissolved air floatation (DAF) system" means an aeration component in an industrial wastewater pre-treatment system;

"effluent" means wastewater flowing or pumped out of the hog processing plant;

"Environment Officer" means an employee so designated pursuant to *The Environment Act*;

"Environmental Management System (EMS)" means the part of the overall management system that includes organizational structure, planning activities, responsibilities, practices, procedures, processes, and resources for developing, implementing, achieving, reviewing and maintaining the environmental policy;

"hog processing" means the slaughtering, bleeding, scalding, de-hairing, pasteurization, splitting, eviscerating, cutting or packaging of hogs, the processing or rendering of edible materials, or any combination of these activities;

"hog processing plant" means the main hog processing plant structure;

"Industrial Services Agreement" means a signed and legally binding agreement, arrived at between R3 Innovations Inc. and the Town of Neepawa and the Licencee which outlines clear limits respecting the maximum daily and maximum weekly flow rates, as well as maximum daily and maximum weekly loading limits on such physical, chemical and biological parameters as may be requested of the Licencee by R3 Innovations Inc. and the Town of Neepawa;

"industrial wastewater" means wastewater derived from an industry which manufactures, handles or processes a product and does not include wastewater from commercial and residential buildings;

"IWWTF" means the Industrial Wastewater Treatment Facility owned by the Town of Neepawa and R3 Innovations Inc. and operating under Environment Act Licence No. 2870 R;

"mg/L" means milligrams per litre;

"MSDS" means material safety data sheets;

"noise nuisance" means an unwanted sound, in an affected area, which is annoying, troublesome, or disagreeable to a person:

- a) residing in an affected area;
- b) working in an affected area; or
- c) present at a location in an affected area which is normally open to members of the public;

if the unwanted sound

- d) is the subject of at least 5 written complaints, received by the Director in a form satisfactory to the Director and within a 90-day period, from 5

different persons falling within clauses (a), (b) or (c), who do not live in the same household; or

- e) is the subject of at least one written complaint, received by the Director in a form satisfactory to the Director, from a person falling within clauses (a), (b) or (c) and the Director is of the opinion that if the unwanted sound had occurred in a more densely populated area there would have been at least 5 written complaints received within a 90-day period, from 5 different persons who do not live in the same household;

"odour nuisance" means a continuous or repeated odour, smell or aroma, in an affected area, which is offensive, obnoxious, troublesome, annoying, unpleasant or disagreeable to a person:

- a) residing in an affected area;
- b) working in an affected area; or
- c) present at a location in an affected area which is normally open to members of the public;

if the odour, smell or aroma

- d) is the subject of at least 5 written complaints, received by the Director in a form satisfactory to the Director and within a 90-day period, from 5 different persons falling within clauses (a), (b) or (c), who do not live in the same household; or
- e) is the subject of at least one written complaint, received by the Director in a form satisfactory to the Director, from a person falling within clauses (a), (b) or (c) and the Director is of the opinion that if the odour, smell or aroma had occurred in a more densely populated area there would have been at least 5 written complaints received within a 90-day period, from 5 different persons who do not live in the same household;

"process wastewater" means a liquid stream, containing or comprised of process water or any chemicals used by the Development, which is designated for release into the environment;

"pollutant" means a pollutant as defined in *The Environment Act*;

"record drawings" means engineering drawings complete with all dimensions which indicate all features of the Development as it has actually been built;

"sewage" means household and commercial wastewater that contains human waste;

"Standard Methods for the Examination of Water and Wastewater" means the most recent edition of Standard Methods for the Examination of Water and Wastewater published jointly by the American Public Health Association, the American Waterworks Association and the Water Environment Federation;

"wastewater" means the spent or used water of a community or industry which contains dissolved and suspended matter;

"wastewater collection system" means the sewer and pumping system used for the collection and conveyance of domestic, commercial, industrial and process wastewater; and

"WHMIS" means Workplace Hazardous Materials Information System.

GENERAL TERMS AND CONDITIONS

This Section of the Licence contains requirements intended to provide guidance to the Licencee in implementing practices to ensure that the environment is maintained in such a manner as to sustain a high quality of life, including social and economic development, recreation and leisure for present and future Manitobans.

Future Sampling

1. In addition to any of the limits, terms and conditions specified in this Licence, the Licencee shall, upon the request of the Director:
 - a) sample, monitor, analyze and/or investigate specific areas of concern regarding any segment, component or aspect of pollutant storage, containment, treatment, handling, disposal or emission systems, for such pollutants or ambient quality, aquatic toxicity, leachate characteristics and discharge or emission rates, for such duration and at such frequencies as may be specified;
 - b) determine the environmental impact associated with the release of any pollutant(s) from the Development; or
 - c) conduct specific investigations in response to the data gathered during environmental monitoring programs.

Reporting Format

2. The Licencee shall submit all information required to be provided to the Director or Environment Officer under this Licence, in writing, in such form (including number of copies) and of such content as may be required by the Director or Environment Officer, and each submission shall be clearly labelled with the Licence Number and Client File Number associated with this Licence.

Equipment Breakdown

3. The Licencee shall, in the case of physical or mechanical equipment breakdown or process upset where such breakdown or process upset results or may result in the release of a pollutant in an amount or concentration, or at a level or rate of release, that causes or may cause a significant adverse effect, immediately report the event by calling 204-944-4888 (toll-free 1-855-944-4888). The report shall indicate the nature of the event, the time and estimated duration of the event and the reason for the event.
4. The Licencee shall, following the reporting of an event pursuant to Clause 3,

- a) identify the repairs required to the mechanical equipment;
- b) undertake all repairs to minimize unauthorized discharges of a pollutant;
- c) complete the repairs in accordance with any written instructions of the Director;
and
- d) submit a report to the Director about the causes of breakdown and measures taken, within one week of the repairs being done.

Safety and Security

5. The Licencee shall continually maintain an up-to-date inventory of any process and cleaning chemicals used and/or stored on-site that would be captured by any applicable federal/provincial WHMIS regulations and protocols, and make this information and applicable MSDS sheets available to an Environment Officer upon request.
6. The Licencee shall prepare, within 90 days of the date of issuance of this Licence, and maintain an emergency response contingency plan in accordance with the Canadian Centre for Occupational Health and Safety “Emergency Response Planning Guide” or other emergency planning guidelines acceptable to the Director.
7. The Licencee shall, at all times during the operation of the Development, implement a high standard of equipment maintenance and operational practices.
8. The Licencee shall implement and continually maintain in current status, an Environmental Management System (EMS) for the Development which is acceptable to the Director.

Environmental Coordinator

9. The Licencee shall designate an employee, within 60 days of the date of issuance of this Licence, as the Licencee’s Environmental Coordinator, whose job description will include assisting the Licencee in complying with the limits, terms and conditions in this Licence and assisting Senior Management of the Licencee to manage environmental issues at the Development. The name of the Environmental Coordinator shall be submitted in writing to the Director within 14 days of appointment and any subsequent appointment.

Industrial Services Agreement

10. The Licencee shall:
 - a) prepare and execute a current comprehensive and enforceable Industrial Services Agreement to be legally entered into with R3 Innovations Inc. and the Town of Neepawa, which is acceptable to the Director, for the purposes of defining maximum daily and maximum weekly influent limits respecting volume and pollutant loading rates which would protect the operational integrity of the IWWTF in terms of the design capability and/or in consideration of the actual

- performance of the IWWTF relative to the effluent quality limits as specified in Environment Act Licence No. 2870 R, or any revision thereof;
- b) provide the Director with a copy of the Industrial Services Agreement upon being signed by all parties; and
 - c) provide the Director with a copy of any future revised Industrial Services Agreement.

SPECIFICATIONS, LIMITS, TERMS AND CONDITIONS

Respecting Construction

11. The Licencee shall notify the designated Environment Officer not less than two weeks prior to beginning construction of the Development. The notification shall include the intended starting date of construction and the name of the contractor responsible for the construction.
12. The Licencee shall obtain all necessary federal, provincial and/or municipal licences, authorizations, permits and/or approvals for construction of relevant components of the Development prior to commencement of construction.
13. The Licencee shall locate fuel storage and equipment servicing areas established for the construction and operation of the Development a minimum distance of 100 metres from any waterbody, and shall comply with the requirements of *Manitoba Regulation 188/2001* respecting *Storage and Handling of Petroleum Products and Allied Products* or any future amendment thereof.
14. The Licencee shall, during construction of the Development, operate, maintain and store all materials and equipment in a manner that prevents any deleterious substances (fuel, oil, grease, hydraulic fluids, coolant, paint, uncured concrete and concrete wash water, etc.) from entering watercourses, and have an emergency spill kit for in-water use available on site during construction.

Respecting the Operation of the Development

15. The Licencee shall limit the rate of hog processing at the Development to no more than 37,500 hogs per week averaged over any 12 month period.
16. The Licencee shall direct all delivered, live and unloaded hogs as soon as possible into the hog receiving facility and not exceed the storage of 4,000 hogs at any time.
17. The Licencee shall remove all offal, bones, dead-on-arrival animals and solids regularly from the Development to a third party rendering facility, approved by the Director, which is licensed under *The Environment Act*.
18. The Licencee shall not direct pollutants into any surface drainage route leading off the property of the Development or into the local groundwater.

19. The Licencee shall actively participate in any future watershed based management study, plan or nutrient reduction program, approved by the Director.

Respecting Air Emissions

20. The Licencee shall not cause or permit an odour nuisance to be created as a result of the construction, operation or alteration of the Development, and shall take such steps as the Director may require to eliminate or mitigate an odour nuisance.
21. The Licencee shall not cause or permit a noise nuisance to be created as a result of the construction, operation or alteration of the Development, and shall take such steps as the Director may specify to eliminate or mitigate a noise nuisance.

Respecting Blood Collection

22. The Licencee shall minimize the loss of blood to the process wastewater sewers by maximizing the efficiency of the blood collection to the satisfaction of the Director.
23. The Licencee shall dispose of the blood collected at the Development by having the blood hauled to a facility specializing in blood collection as approved by the Director, using vehicles utilizing containment provisions satisfactory to the Director.

Respecting Solid Wastes

24. The Licencee shall not undertake any on-site burning of solid waste.
25. The Licencee shall minimize the generation of domestic solid waste and maximize, wherever possible, the collection and recycling of recyclable wastes generated through the operation of the Development.
26. The Licencee shall:
- a) collect, store and land apply all dry hog manure and bedding from the unloading docks, truck trailers and holding pens in accordance with *the Livestock Manure and Mortalities Management Regulation MR 42/98* or any future amendment thereof; and
 - b) direct all of the hog manure collected inside the hog processing plant, or washed off the floor of the hog holding pens, or washed out of the transporting truck trailers, to the process wastewater sewers, unless otherwise approved by the Director.
27. The Licencee shall not deposit domestic solid waste into the environment except into a waste disposal ground operating under the authority of:
- a) a permit issued pursuant to the *Waste Disposal Grounds Regulation 150/91*, or any future amendment thereof; or
 - b) a Licence issued pursuant to *The Environment Act*.

Respecting Dangerous Goods or Hazardous Waste

28. The Licencee shall not release dangerous goods or hazardous wastes into the wastewater collection system.
29. The Licencee shall comply with all the applicable requirements of:
 - a) *The Manitoba Dangerous Goods Handling and Transportation Act*, and regulations issued thereunder, respecting the handling, transport, storage and disposal of any dangerous goods brought onto or generated at the Development; and
 - b) *Manitoba Storage and Handling of Petroleum Products and Allied Products Regulation 188/2001*, or any future amendments thereto.
30. The Licencee shall collect, transport and store used oil or hydraulic fluids removed from on-site machinery in secure, properly labeled, non-leaking containers and shall regularly send them to a recycling or disposal facility approved to accept hazardous wastes.
31. The Licencee shall install and maintain spill recovery equipment at the Development at all times.

Respecting Process Wastewater

32. The Licencee shall operate and maintain the screening and DAF unit to pre-treat all process wastewater prior to discharging to the IWWTF.
33. The Licencee shall direct all solids from the DAF unit to an off-site rendering facility that is licensed under *The Environment Act* or under the appropriate legislation of another corresponding jurisdiction.
34. The Licencee shall not release any process wastewater or sanitary wastewater from the Development except through the wastewater collection system to the industrial wastewater treatment facility (IWWTF).

MONITORING AND REPORTING

Respecting Monitoring

35. The Licencee shall:
 - a) monitor, determine and record the number of hogs processed by the end of each week;
 - b) monitor, determine and record the total weekly quantity (cubic meters) of raw water used by the Development; and
 - c) maintain the recorded information in a monthly report and make the report available to the Environment Officer upon request.

Record Drawings

36. The Licencee shall:

- a) prepare "record drawings" for the Development and shall label the drawings "Record Drawings"; and
- b) provide to the Director, within six months from the date of this Environment Act Licence, two electronic copies of the "record drawings".

REVIEW AND REVOCATION

- A. This Licence replaces Environment Act Licence No. 1102 which is hereby rescinded.
- B. If, in the opinion of the Director, the Licencee has exceeded or is exceeding or has or is failing to meet the specifications, limits, terms, or conditions set out in this Licence, the Director may, temporarily or permanently, revoke this Licence.
- C. If, in the opinion of the Director, new evidence warrants a change in the specifications, limits, terms or conditions of this Licence, the Director may require the filing of a new proposal pursuant to Section 11 of *The Environment Act*.

“original signed by”

Tracey Braun, M.Sc.
Director
Environment Act

Client File No.: 2754.10

HYLIFE FOODS LP PROCESSING RECEIVING FACILITY EXPANSION NOTICE OF ALTERATION

Appendix C Certificates of Title
February 7, 2017

Appendix C Certificates of Title

DATE: 2013/08/08
TIME: 08:58

MANITOBA

TITLE NO: 2522732/5

STATUS OF TITLE

PAGE: 1

STATUS OF TITLE.....	ACCEPTED	PRODUCED FOR..	THOMPSON DORFMAN SWEATMAN
ORIGINATING OFFICE...	NEEPAWA	ADDRESS.....	TD CENTRE
REGISTERING OFFICE...	NEEPAWA		2200-201 PORTAGE AVENUE
REGISTRATION DATE....	2011/04/21		WINNIPEG MB R3B 3L3
COMPLETION DATE.....	2011/04/27	LTO BOX NO....	166
		CLIENT FILE...	NA
		PRODUCED BY...	A. MOODIE

LEGAL DESCRIPTION:

HYLIFE FOODS INC.

IS REGISTERED OWNER SUBJECT TO SUCH ENTRIES RECORDED HEREON IN THE FOLLOWING DESCRIBED LAND:

SP LOT 5 PLAN 7402 NLTO
IN SW 1/4 35-14-15 WPM

ACTIVE TITLE CHARGE(S):

83-4840/5	ACCEPTED FROM/BY: TO: CONSIDERATION:	CAVEAT MANITOBA TELEPHONE SYSTEM	REG'D: 1983/06/29 NOTES: AFF: ELY 40' PERP
85-3176/5	ACCEPTED FROM/BY: TO: CONSIDERATION:	CAVEAT MANITOBA TELEPHONE SYSTEM	REG'D: 1985/05/27 NOTES: AFF: PART
86-1191/5	ACCEPTED FROM/BY: TO: CONSIDERATION:	CAVEAT THE TOWN OF NEEPAWA	REG'D: 1986/03/21 NOTES:
86-2833/5	ACCEPTED FROM/BY: TO: CONSIDERATION:	CAVEAT THE RM OF LANGFORD	REG'D: 1986/06/24 NOTES:
86-5122/5	ACCEPTED FROM/BY: TO: CONSIDERATION:	CAVEAT MANITOBA HYDRO-ELECTRIC BOARD	REG'D: 1986/11/14 NOTES:

CERTIFIED TRUE EXTRACT PRODUCED FROM THE LAND TITLES DATA
STORAGE SYSTEM ON 2013/08/08 OF TITLE NUMBER 2522732/5

DATE: 2013/08/08
TIME: 08:58

MANITOBA

TITLE NO: 2522732/5

STATUS OF TITLE

PAGE: 2

STATUS OF TITLE.....	ACCEPTED	PRODUCED FOR..	THOMPSON DORFMAN SWEATMAN
ORIGINATING OFFICE...	NEEPAWA	ADDRESS.....	TD CENTRE
REGISTERING OFFICE...	NEEPAWA		2200-201 PORTAGE AVENUE
REGISTRATION DATE....	2011/04/21		WINNIPEG MB R3B 3L3
COMPLETION DATE.....	2011/04/27	LTO BOX NO....	166
		CLIENT FILE...	NA
		PRODUCED BY...	A. MOODIE

ACTIVE TITLE CHARGE(S):

1017447/5	ACCEPTED	CAVEAT	REG'D: 2001/08/23
	DESCRIPTION:	EASEMENT AGREEMENT	
	FROM/BY:	MTS COMMUNICATIONS INC.	
	TO:		
	CONSIDERATION:		NOTES: AFF: SLY 20M PERP
1063384/5	ACCEPTED	MORTGAGE	REG'D: 2008/02/15
	DESCRIPTION:	\$200,000,000.00 DEBENTURE	
	FROM/BY:	SPRINGHILL FARMS INC.	
	TO:	ROYAL BANK OF CANADA	
	CONSIDERATION:		NOTES:
1063444/5	ACCEPTED	CAVEAT	REG'D: 2008/02/21
	DESCRIPTION:	AGREEMENT FOR SHACKLE SPACE BY AGENT DAVID B. KOVNATS	
	FROM/BY:	5559406 MANITOBA INC.	
	TO:		
	CONSIDERATION:		NOTES:
1087544/5	ACCEPTED	MORTGAGE	REG'D: 2011/07/12
	FROM/BY:	HYLIFE FOODS INC.	
	TO:	FARM CREDIT CANADA	
	CONSIDERATION:	\$10,000,000.00	NOTES:
1087804/5	ACCEPTED	PERSONAL PROPERTY SECURITY NOTICE	REG'D: 2011/07/25
	DESCRIPTION:	FIXTURES, EXP 2016/09/15 BY AGT JOHN T. MCGOEY	
	FROM/BY:	FARM CREDIT CANADA	
	TO:	HYLIFE FOODS INC.	
	CONSIDERATION:		NOTES:

ADDRESS(ES) FOR SERVICE:

EFFECT	NAME AND ADDRESS	POSTAL CODE
ACTIVE	HYLIFE FOODS INC. C/O PITBLADO LLP 2500 - 360 MAIN STREET WINNIPEG MB	R3C 4H6

CERTIFIED TRUE EXTRACT PRODUCED FROM THE LAND TITLES DATA
STORAGE SYSTEM ON 2013/08/08 OF TITLE NUMBER 2522732/5

***** STATUS OF TITLE 2522732/5 CONTINUED ON NEXT PAGE *****

DATE: 2013/08/08
TIME: 08:58

MANITOBA

TITLE NO: 2522732/5

STATUS OF TITLE

PAGE: 3

STATUS OF TITLE.....	ACCEPTED	PRODUCED FOR..	THOMPSON DORFMAN SWEATMAN
ORIGINATING OFFICE...	NEEPAWA	ADDRESS.....	TD CENTRE
REGISTERING OFFICE...	NEEPAWA		2200-201 PORTAGE AVENUE
REGISTRATION DATE....	2011/04/21		WINNIPEG MB R3B 3L3
COMPLETION DATE.....	2011/04/27	LTO BOX NO....	166
		CLIENT FILE...	NA
		PRODUCED BY...	A. MOODIE

ORIGINATING INSTRUMENT(S):

REGISTRATION NUMBER	TYPE	REG. DATE	CONSIDERATION	SWORN VALUE
1085831/5	TREQ	2011/04/21	\$0.00	\$0.00
PRESENTED BY:	PITBLADO			
FROM:	HYLIFE FOODS INC.			
TO:				

FROM TITLE NUMBER(S):

2279928/5 ALL

LAND INDEX:

LOT	BLOCK	SURVEY PLAN
-----	-------	-------------

5 7402

NOTE: IN SW 35-14-15W

ACCEPTED THIS 21ST DAY OF APRIL, 2011
BY E.SIMS FOR THE DISTRICT REGISTRAR OF
THE LAND TITLES DISTRICT OF NEEPAWA.

CERTIFIED TRUE EXTRACT PRODUCED FROM THE LAND TITLES DATA
STORAGE SYSTEM ON 2013/08/08 OF TITLE NUMBER 2522732/5.

***** END OF STATUS OF TITLE 2522732/5 *****

DATE: 2013/08/08
TIME: 08:58

MANITOBA

TITLE NO: 2522733/5

STATUS OF TITLE

PAGE: 1

STATUS OF TITLE.....	ACCEPTED	PRODUCED FOR..	THOMPSON DORFMAN SWEATMAN
ORIGINATING OFFICE...	NEEPAWA	ADDRESS.....	TD CENTRE
REGISTERING OFFICE...	NEEPAWA		2200-201 PORTAGE AVENUE
REGISTRATION DATE....	2011/04/21		WINNIPEG MB R3B 3L3
COMPLETION DATE.....	2011/04/27	LTO BOX NO....	166
		CLIENT FILE...	NA
		PRODUCED BY...	A. MOODIE

LEGAL DESCRIPTION:

HYLIFE FOODS INC.

IS REGISTERED OWNER SUBJECT TO SUCH ENTRIES RECORDED HEREON IN THE FOLLOWING DESCRIBED LAND:

THE SW 1/4 OF SECTION 35-14-15 WPM
EXC FIRSTLY: SP PLAN 7402 NLTO
SECONDLY: PLANS 23208 AND 48468 NLTO
AND THIRDLY: ROAD PLAN 4611 NLTO

ACTIVE TITLE CHARGE(S):

30550/5	ACCEPTED	CAVEAT	REG'D: 1952/08/01
	FROM/BY:	CROWN TRUST COMPANY	
	TO:		
	CONSIDERATION:	NOTES:	
83-4838/5	ACCEPTED	CAVEAT	REG'D: 1983/06/29
	FROM/BY:	MANITOBA TELEPHONE SYSTEM	
	TO:		
	CONSIDERATION:	NOTES: AFF: PART	
85-3172/5	ACCEPTED	CAVEAT	REG'D: 1985/05/27
	FROM/BY:	MANITOBA TELEPHONE SYSTEM	
	TO:		
	CONSIDERATION:	NOTES: AFF: PART	
86-1191/5	ACCEPTED	CAVEAT	REG'D: 1986/03/21
	FROM/BY:	THE TOWN OF NEEPAWA	
	TO:		
	CONSIDERATION:	NOTES:	
86-2833/5	ACCEPTED	CAVEAT	REG'D: 1986/06/24
	FROM/BY:	THE RM OF LANGFORD	
	TO:		
	CONSIDERATION:	NOTES:	

CERTIFIED TRUE EXTRACT PRODUCED FROM THE LAND TITLES DATA
STORAGE SYSTEM ON 2013/08/08 OF TITLE NUMBER 2522733/5

***** STATUS OF TITLE 2522733/5 CONTINUED ON NEXT PAGE *****

DATE: 2013/08/08
TIME: 08:58

MANITOBA

TITLE NO: 2522733/5

STATUS OF TITLE

PAGE: 2

STATUS OF TITLE.....	ACCEPTED	PRODUCED FOR..	THOMPSON DORFMAN SWEATMAN
ORIGINATING OFFICE...	NEEPAWA	ADDRESS.....	TD CENTRE
REGISTERING OFFICE...	NEEPAWA		2200-201 PORTAGE AVENUE
REGISTRATION DATE....	2011/04/21		WINNIPEG MB R3B 3L3
COMPLETION DATE.....	2011/04/27	LTO BOX NO....	166
		CLIENT FILE...	NA
		PRODUCED BY...	A. MOODIE

ACTIVE TITLE CHARGE(S):

86-5122/5	ACCEPTED	CAVEAT	REG'D: 1986/11/14
	FROM/BY:	MANITOBA HYDRO-ELECTRIC BOARD	
	TO:		
	CONSIDERATION:	NOTES:	
1017447/5	ACCEPTED	CAVEAT	REG'D: 2001/08/23
	DESCRIPTION:	EASEMENT AGREEMENT	
	FROM/BY:	MTS COMMUNICATIONS INC.	
	TO:		
	CONSIDERATION:	NOTES: AFF: PART	
1063384/5	ACCEPTED	MORTGAGE	REG'D: 2008/02/15
	DESCRIPTION:	\$200,000,000.00 DEBENTURE	
	FROM/BY:	SPRINGHILL FARMS INC.	
	TO:	ROYAL BANK OF CANADA	
	CONSIDERATION:	NOTES:	
1063444/5	ACCEPTED	CAVEAT	REG'D: 2008/02/21
	DESCRIPTION:	AGREEMENT FOR SHACKLE SPACE BY AGENT DAVID B. KOVNATS	
	FROM/BY:	5559406 MANITOBA INC.	
	TO:		
	CONSIDERATION:	NOTES:	
1087544/5	ACCEPTED	MORTGAGE	REG'D: 2011/07/12
	FROM/BY:	HYLIFE FOODS INC.	
	TO:	FARM CREDIT CANADA	
	CONSIDERATION:	\$10,000,000.00	NOTES:
1087804/5	ACCEPTED	PERSONAL PROPERTY SECURITY NOTICE	REG'D: 2011/07/25
	DESCRIPTION:	FIXTURES, EXP 2016/09/15 BY AGT JOHN T. MCGOEY	
	FROM/BY:	FARM CREDIT CANADA	
	TO:	HYLIFE FOODS INC.	
	CONSIDERATION:	NOTES:	

CERTIFIED TRUE EXTRACT PRODUCED FROM THE LAND TITLES DATA
STORAGE SYSTEM ON 2013/08/08 OF TITLE NUMBER 2522733/5

***** STATUS OF TITLE 2522733/5 CONTINUED ON NEXT PAGE *****

DATE: 2013/08/08
TIME: 08:58

MANITOBA

TITLE NO: 2522733/5

STATUS OF TITLE

PAGE: 3

STATUS OF TITLE.....	ACCEPTED	PRODUCED FOR..	THOMPSON DORFMAN SWEATMAN
ORIGINATING OFFICE...	NEEPAWA	ADDRESS.....	TD CENTRE
REGISTERING OFFICE...	NEEPAWA		2200-201 PORTAGE AVENUE
REGISTRATION DATE....	2011/04/21		WINNIPEG MB R3B 3L3
COMPLETION DATE.....	2011/04/27	LTO BOX NO....	166
		CLIENT FILE...	NA
		PRODUCED BY...	A. MOODIE

ADDRESS(ES) FOR SERVICE:

EFFECT	NAME AND ADDRESS	POSTAL CODE
ACTIVE	HYLIFE FOODS INC. C/O PITBLADO LLP 2500 - 360 MAIN STREET WINNIPEG MB	R3C 4H6

ORIGINATING INSTRUMENT(S):

REGISTRATION NUMBER	TYPE	REG. DATE	CONSIDERATION	SWORN VALUE
1085831/5	TREQ	2011/04/21	\$0.00	\$0.00
PRESENTED BY:	PITBLADO			
FROM:	HYLIFE FOODS INC.			
TO:				

FROM TITLE NUMBER(S):

2357478/5 ALL

LAND INDEX:

LOT	QUARTER SECTION	SECTION	TOWNSHIP	RANGE
	SW	35	14	15W
NOTE:	EX SP 7402	EX PL'S 23208 & 48468	EX RD PL 4611	

ACCEPTED THIS 21ST DAY OF APRIL, 2011
BY E.SIMS FOR THE DISTRICT REGISTRAR OF
THE LAND TITLES DISTRICT OF NEEPAWA.

CERTIFIED TRUE EXTRACT PRODUCED FROM THE LAND TITLES DATA
STORAGE SYSTEM ON 2013/08/08 OF TITLE NUMBER 2522733/5.

***** END OF STATUS OF TITLE 2522733/5 *****

DATE: 2013/08/08
TIME: 08:57

MANITOBA

STATUS OF TITLE

TITLE NO: 2421294/5

PAGE: 1

STATUS OF TITLE.....	ACCEPTED	PRODUCED FOR..	THOMPSON DORFMAN SWEATMAN
ORIGINATING OFFICE...	NEEPAWA	ADDRESS.....	TD CENTRE
REGISTERING OFFICE...	NEEPAWA		2200-201 PORTAGE AVENUE
REGISTRATION DATE....	2009/12/17		WINNIPEG MB R3B 3L3
COMPLETION DATE.....	2009/12/18	LTO BOX NO....	166
		CLIENT FILE...	NA
		PRODUCED BY...	A. MOODIE

LEGAL DESCRIPTION:

R3 INNOVATIONS INC.

IS REGISTERED OWNER SUBJECT TO SUCH ENTRIES RECORDED HEREON IN THE FOLLOWING DESCRIBED LAND:

PARCEL "B" PLAN 48468 NLTO
IN SW 1/4 35-14-15 WPM

ACTIVE TITLE CHARGE(S):

30550/5	ACCEPTED	CAVEAT	REG'D: 1952/08/01
	FROM/BY:	CROWN TRUST COMPANY	
	TO:		
	CONSIDERATION:	NOTES:	
86-1191/5	ACCEPTED	CAVEAT	REG'D: 1986/03/21
	FROM/BY:	THE TOWN OF NEEPAWA	
	TO:		
	CONSIDERATION:	NOTES:	
86-2833/5	ACCEPTED	CAVEAT	REG'D: 1986/06/24
	FROM/BY:	THE RM OF LANGFORD	
	TO:		
	CONSIDERATION:	NOTES:	
86-5122/5	ACCEPTED	CAVEAT	REG'D: 1986/11/14
	FROM/BY:	MANITOBA HYDRO-ELECTRIC BOARD	
	TO:		
	CONSIDERATION:	NOTES:	

ADDRESS(ES) FOR SERVICE:

EFFECT	NAME AND ADDRESS	POSTAL CODE
ACTIVE	R3 INNOVATIONS INC. BOX 100000, 623 MAIN ST. EAST NEEPAWA MB	ROJ 1H0

CERTIFIED TRUE EXTRACT PRODUCED FROM THE LAND TITLES DATA
STORAGE SYSTEM ON 2013/08/08 OF TITLE NUMBER 2421294/5

***** STATUS OF TITLE 2421294/5 CONTINUED ON NEXT PAGE *****

DATE: 2013/08/08
TIME: 08:57

MANITOBA

TITLE NO: 2421294/5

STATUS OF TITLE

PAGE: 2

STATUS OF TITLE.....	ACCEPTED	PRODUCED FOR..	THOMPSON DORFMAN SWEATMAN
ORIGINATING OFFICE...	NEEPAWA	ADDRESS.....	TD CENTRE
REGISTERING OFFICE...	NEEPAWA		2200-201 PORTAGE AVENUE
REGISTRATION DATE....	2009/12/17		WINNIPEG MB R3B 3L3
COMPLETION DATE.....	2009/12/18	LTO BOX NO....	166
		CLIENT FILE...	NA
		PRODUCED BY...	A. MOODIE

ORIGINATING INSTRUMENT(S):

REGISTRATION NUMBER	TYPE	REG. DATE	CONSIDERATION	SWORN VALUE
1076409/5	T	2009/12/17	\$1.00	\$2,310.00
PRESENTED BY:	THOMPSON DORFMAN SWEATMAN			
FROM:	SPRINGHILL FARMS INC.			
TO:	R3 INNOVATIONS INC.			

FROM TITLE NUMBER(S):

2357477/5 ALL

LAND INDEX:

LOT	BLOCK	SURVEY PLAN
-----	-------	-------------

B 48468

NOTE: IN SW 35-14-15W

ACCEPTED THIS 17TH DAY OF DECEMBER, 2009
BY E.SIMS FOR THE DISTRICT REGISTRAR OF
THE LAND TITLES DISTRICT OF NEEPAWA.

CERTIFIED TRUE EXTRACT PRODUCED FROM THE LAND TITLES DATA
STORAGE SYSTEM ON 2013/08/08 OF TITLE NUMBER 2421294/5.

***** END OF STATUS OF TITLE 2421294/5 *****

Appendix D Greenhouse Gas Emissions

D.1 Facility Level Greenhouse Gas Emissions

To determine the potential change in greenhouse gas emissions related to the proposed Project, a facility level estimate of direct greenhouse gas emissions was completed for the existing HyLife Foods facility and the proposed alteration at the site. Estimates were derived from HyLife Foods data provided in previous estimates for industrial processes and fuel consumption for on-site vehicle usage and natural gas usage for existing commercial process heat and proposed building heat (Stott 2017). Direct greenhouse gas emission sources are based on the following:

- Enteric fermentation of live hogs at the facility and CO₂ used in stunning and dry ice production (Industrial Process)
- Combustion of diesel fuel used on-site in the yard trucks and diesel shunts generates carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), nitrogen oxides (NO_x), and carbon monoxide (CO) – all greenhouse gases (Mobile Combustion)
- Natural gas combusted for building and process heat on-site (Stationary Fuel Combustion)

The most recent Environment Canada National Inventory Report 1990-2014 was utilized, which included the application of updated IPCC emission factors (Table D-1). Emissions of hydrofluorocarbons (HFCs) from refrigeration and air conditioning are not considered part of an industrial process and as such are not included and reported (Environment Canada 2014).

D.2 Change in Greenhouse Gas Emissions

The processes at the pork processing plant that generate greenhouse gases (i.e., enteric fermentation [CH₄], CO₂, diesel fuel) are expected to remain the same as the existing and proposed conditions at the HyLife Foods facility estimated in the 2016 NOA (Stantec 2016). GHG emissions generated as a result are summarized in Table D-1. The increase from 4,000 hogs as noted in the 2016 NOA to 7,500 hogs in this alteration is a conservative estimate for the purposes of the GHG estimate and represents the total number of hogs at the facility for a 24-hour day although the average livestock residence time is 4 hours per hog.

The use of natural gas to heat the buildings and process heat on-site produces CO₂, CH₄, N₂O, NO_x, CO emissions, volatile organic compounds (VOCs), trace sulphur dioxide (SO₂) and particulate matter (PM). Natural gas usage at the plant was estimated to be 4,590,000 m³ per year over a 12-month period in the 2016 NOA (Stantec 2016). It is estimated that the proposed alteration at the plant's receiving facility will result in an increase in natural gas usage to 4,681,800 m³ (approximately 2%) over a 12-month period (Stott 2017). GHG emissions associated with the plant's use of marketable natural gas in Manitoba is presented in Table D-1 (Environment Canada 2014).

HYLIFE FOODS LP PROCESSING RECEIVING FACILITY EXPANSION NOTICE OF ALTERATION

Appendix D Greenhouse Gas Emissions
February 7, 2017

Table D-1 Greenhouse Gas Emissions Summary

HyLife Foods Plant Proposed Conditions					
GHG Source	Consumption ¹	Emission Factors	Units	Emissions	Reference
GHG Emissions = Fuel Consumption x Emission Factor					
Industrial Process - Live hog population - CO ₂ use (stunning and dry ice)	7,500 hogs (max.) 946,800 kg	kg/head/year CH ₄ – 1.5	kg/year kg/year	CH ₄ – 11,250 CO ₂ – 946,800	Environment Canada NRI Report 1990-2014 Table A6-27 CH ₄ Emission Factor for Enteric Fermentation emission factor (pigs)
Mobile Combustion (On-site Transportation) - Heavy duty diesel truck	9,100 L/year	g/L fuel CO ₂ – 2,690 CH ₄ – 0.14 N ₂ O – 0.082	g/year	CO ₂ – 24,479,000 CH ₄ – 1,274 N ₂ O – 746.2	Environment Canada NRI Report 1990-2014 Table A6-12 Emission Factors for Energy Mobile Combustion Sources, Heavy Duty Diesel Truck, Moderate Control emission factor
Stationary Fuel Combustion - Natural gas	4,681,800 m ³ /year	g/m ³ CO ₂ – 1,886 CH ₄ – 0.037 N ₂ O – 0.035	g/year	CO ₂ – 8,829,874,800 CH ₄ – 173,226.6 N ₂ O – 163,863	Environment Canada NRI Report 1990-2014 Table A6-1 CO ₂ Emission Factors for Natural Gas, Manitoba Marketable emission factor Environment Canada NRI Report 1990-2014 Table A6-2 CH ₄ and N ₂ O Emission Factors for Natural Gas, Industrial emission factor
Total Usage	946,800 kg 9,100 L/year 4,681,800 m ³ /year	Total Emissions	g/year	CO ₂ – 8,855,300,600 CH ₄ – 185,750.6 N ₂ O – 164,609.2	HyLife Foods Ltd. 2017; Stott 2017; Natural Resources Canada 2011
GHG Emissions		Total CO ₂ Total CH ₄ Total N ₂ O	kg/day	CO ₂ – 24,261.10 CH ₄ – 0.51 N ₂ O – 0.45	IPCC 2006
Global Warming Potentials²		GWP	100-year	CO ₂ – 1 CH ₄ – 25 N ₂ O – 298	IPCC values (updated 2014)
Total CO₂ Equivalent		Total CO ₂ e	kg/day tonnes/year kt/year	CO ₂ e 24,407.95 CO ₂ e 8,908.90 CO ₂ e 8.91	IPCC 2006
Source: Environment Canada 2014; IPCC Fifth Assessment Report 2014; IPCC Guidelines for National Greenhouse Gas Inventories 2006; Stott 2017					
Notes: ¹ Usage numbers provided by HyLife Foods Ltd.; ² the 100-year GWP for methane (CH ₄) is 25 – an emission of 100 kilotonnes (kt) of methane is equivalent to 2,500 kt CO ₂ equivalent (25 x 100 kt)					

