SECTION 4.0 SUMMARY OF REQUEST

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This Notice of Alteration addresses the areas of expansion/alteration required within the Maple Leaf Pork processing plant in Brandon, Manitoba to accommodate the second processing shift per day operation. This Notice of Alteration covers areas requiring expansion and/or additions (other than the operational improvements to the Pretreatment system that are addressed under separate cover with the expanded IWWTF) and includes the following areas:

- Additional holding pens
- Cooler area
- Carcass load-out area
- Shipping area
- Freezer area
- Other internal/external plant modifications

The request involves expanding the existing areas by anywhere from 66% to 127% of the existing floor areas. During the original construction and with operations to date, no significant impacts have occurred that were not predicted and mitigated in the original construction and/or operation. We anticipate the impacts from expansion to be even less significant, because all the expansions are taking place in already disturbed areas. A few of the expansions namely the holding pen area expansion, the cooler area expansion and the shipping area will require some disruption of existing facilities. The addition to the barn will require moving a road, ditch and fence further east; the cooler area expansion will require moving a fence and filling in a ditch, and the shipping area for dropping trailers will require moving a fence and rebuilding a ditch.

Environmental impacts that occur from the operation of the plant have been addressed previously in the "Manitoba Environment Act Proposal Form and Supporting Documentation for an Operating Licence for Maple Leaf Meats, Inc.'s Hog Processing Plant in Brandon, Manitoba" dated May 1999.

Construction impacts are not anticipated to be materially different than in the original construction. A summary of the environmental impacts resulting from the anticipated construction activities is given in Table 4.1 following.

Table 4.1: Summary of Environmental Impacts (Construction)

Classification of Potential Impact	Project Phase	Potential Impact	Magnitude of Impact	Direction of Impact	Duration of Impact	Frequency of Impact	Scope of Impact	Mitigative Measures	Degree of Reversibility	Residual Impact
Air Emissions	Construction	Construction Vehicle Exhaust	Negligible	Negative	Short Term	Continuous during working hours	Local	Vehicles to be well main-tained	Irreversible	Normal construc-tion equipment emissions
		Airborne Dust and Particulates	Low	Negative	Short Term	Intermittent	Local	Non-toxic dust control measures will be taken if necessary	Reversible	Minimum air-borne dust and particles
		Odours	Low	Negative	Short Term	Intermittent	Local	Buffer zone to property line; only one nearby residence.	Irreversible	Odours dispersed naturally
Greenhouse Gasses	Construction	Construction Vehicle Exhaust	Low to Negligible	Negative	Short Term	Continuous during working hours	Provincial	Vehicles to be well maintained	Irreversible	Minimization of GHG emissions
Noise	Construction	Back-up Beepers	Negligible	Neutral	Short Term	Intermittent	Local	None, safety issue	Reversible	Minor annoyance in sparsely populated area
		Machinery Noise	Low	Neutral	Short Term	Intermittent	Local	Vehicles to be well maintained and operate only during appropriate hours	Reversible	Minor annoyance in sparsely populated area
		Pile Driving Equipment	Low	Neutral	Short Term	Once	Local	Restrict hours of use to appropriate times	Reversible	Some noise and vibration in a sparsely populated area.
Human Heath	Construction	Construction worker health/ safety	Low	Negative	Short Term	Intermittent during working hours	Local	Manitoba Workplace Safety and Health regulations to be followed	Reversible	Minimize health/ safety impacts
		Particulate emissions (dust) affecting humans	Low	Negative	Short Term	Intermittent	Local	Non-toxic dust control measures will be under-taken if necessary.	Reversible	Minimize dust etc. on work site
Surface Water from ditch relocation	Construction	Sediment deposition via runoff	Low	Negative	Moderate	Intermittent	Local	Silt fences will be placed in ditches	Reversible	Sediment in run-off is intercepted

Table 4.1: Summary of Environmental Impacts (Construction) (*Cont'd)*

Classification of Potential Impact	Project Phase	Potential Impact	Magnitude of Impact	Direction of Impact	Duration of Impact	Frequency of Impact	Scope of Impact	Mitigative Measures	Degree of Reversibility	Residual Impact
		Chemical spills to ditches	Low	Negative	Moderate	Intermittent	Local	Check dams will be constructed if necessary.	Reversible	Nil, clean-up activities would be employed to remove contaminants
Groundwater	Construction	Chemical/Fuel spills on the site	Moderate	Negative	Moderate	Intermittent	Local	Chemicals and Fuels stored and used in a designated area of the site with high impermeability and berms to the greatest extent possible	Reversible	Nil, clean-up activities would be employed to remove contaminants
		Chemical/Fuel spills in ditches	Moderate	Negative	Moderate	Intermittent	Local	Immediate Clean-up measures will be under-taken	Reversible	Nil, clean-up activities would be employed to remove contaminants
Soils	Construction	Chemical/fuel spills on the site	Low	Negative	Long term	Intermittent	Local	Chemicals and Fuels stored and used in a designated area of the site with high impermeability and berms to the greatest extent possible	Reversible	Nil, clean-up activities would be employed to remove contaminants
		Loss of previously disturbed areas to surface preparation	Low	Negligible	Long Term	Once	Local	Confine activities to project area, salvage topsoil materials suitable for reclamation, and revegetation to prevent erosion	Reversible	Nil
Wildlife	Construction	Minor habitat reduction	Low	Negative	Long Term	Continuous	Local	Areas of disturbance will limited to existing disturbed areas.	Irreversible	Minimal habitat reduction

Table 4.1: Summary of Environmental Impacts (Construction) (*Cont'd)*

Classification of Potential Impact	Project Phase	Potential Impact	Magnitude of Impact	Direction of Impact	Duration of Impact	Frequency of Impact	Scope of Impact	Mitigative Measures	Degree of Reversibility	Residual Impact
		Habitat alienation in adjacent areas due to noise and light disturbance (has already occurred)	Low	Negative	Short Term	Continuous	Local	Confine activity to project area	Reversible	Nil
		Deer mortality due to vehicle collisions	Negligible	Negative	Moderate	Intermittent	Local	Awareness training and encourage personnel to obey speed limits on access roads	Reversible	Small increase in number of kills in short term
Vegetation	Construction	Minor vegetation reduction through site leveling	Low	Negative	Moderate	Continuous	Local	New earthwork limited to new holding pen area as much as possible. Topsoil stock-piled for use in land-scaping.	Reversible	Minimal reduction in vegetation in short term
		Fuel/chemical spills causing injury to vegetation	Negligible	Negative	Short Term	Intermittent	Local	Employee training and awareness programs and contingency plans	Reversible	Minimal vegetation injury
Overall Economic Impact	Construction	Direct and indirect employment	Moderate	Positive	Moderate	Continuous	Regional	No mitigation necessary	Irreversible	Economic gain to region
Transportation	Construction	Increase in immediate site traffic	Moderate	Neutral	Short term	Continuous	Regional	On site vehicle storage will be provided; i.e. no vehicles parked on public roads.	Irreversible	Normal inconvenience for local traffic with turning vehicles
		Increase in accident rate	Low	Negative	Short Term	Intermittent	Regional	Ample rest area parking for 18-wheelers exist at commercial truck stops in Brandon.	Irreversible	Factors leading to fatigue and accidents will be reduced

Table 4.1: Summary of Environmental Impacts (Construction) (*Cont'd)*

Classification of Potential Impact	Project Phase	Potential Impact	Magnitude of Impact	Direction of Impact	Duration of Impact	Frequency of Impact	Scope of Impact	Mitigative Measures	Degree of Reversibility	Residual Impact
Heritage Impacts	Construction	Disturbance or demolition of heritage resources	Negligible	Negative	Short Term	Once	Local	The site was inspected by a qualified consultant so that items/areas of significance could be addressed.	Reversible	Nil, no significant heritage resources were encountered on the site.
Ozone Depleting Substances	Construction	Propellant emissions	Negligible	Negative	Short Term	Intermittent	Provincial	Use alternative products	Irreversible	Negligible
		Refrigerant emissions	Low	Negative	Long Term	Intermittent	Provincial	Refrigerants to be serviced and recovered by qualified personnel according to regulations.	Irreversible	Minimal to no impact on ozone layer via refrige-rant releases
Waste Generation and Disposal	Construction	Disposal of construction wastes	Low	Negative	Short Term	Continuous	Local	Wastes generated through the construction process will be gathered and periodically hauled to the local landfill.	Reversible	Construction wastes properly disposed of in a safe manner
		Disposal of hazardous wastes, solvents, etc.	Low	Negative	Moderate	Intermittent	Regional	Hazardous wastes gen-erated on the site such as solvents, etc. will be properly stored, trans-ported, and disposed of according to regulations.	Reversible	Hazardous wastes disposed of properly. Minimal human health risks

As can be seen from the previous table, there are few significant impacts from the construction of the proposed alterations, particularly after mitigative measures have been undertaken. Some increased traffic will occur during construction, but it will generally be less than the increase in traffic attributed to the already approved second-shift traffic. Wildlife kills may also be incrementally increased over the construction period, however, these should remain below the increased rate of the already approved second-shift traffic.

Similar to the summary of construction impacts, the environmental impacts from operation of the second shift at Maple Leaf Pork will not be materially different than for one-shift operation. The anticipated environmental impacts are summarized in Table 4.2, other than those impacts upon the Assiniboine River that will be addressed under separate cover. This summary is provided for information only, since the operation of the second-shift is already approved under Manitoba Environment Act Licence No. 2311 S2R.

Table 4.2: Summary of Environmental Impacts (Operation)

Classification of Potential Impact	Project Phase	Potential Impact	Magnitude of Impact	Direction of Impact	Duration of Impact	Frequency of Impact	Scope of Impact	Mitigative Measures	Degree of Reversibility	Residual Impact
Air Emissions	Operation	Vehicle Exhaust	Negligible	Negative	Long Term	Intermittent during working hours	Local	Vehicles to be well maintained	Irreversible	Normal Yard Equipment Emissions
	Operation	Airborne Dust and Particulate	Low	Negative	Long Term	Intermittent	Local	Non-toxic dust control measures will be under-taken, if necessary. Pavement in future.	Reversible	Minimum air-borne dust and particles
	Operation	Odours/Stack Emissions	Low to Medium	Negative	Long Term	Intermittent	Local	Buffer zone to property line (100 m for holding pens; 11m for manure pad)	Irreversible	Odours dispersed naturally. Limited use of 65th St. E other than Terhune and Denbow.
Greenhouse Gasses	Operation	Global Warming	Low to Negligible	Negative	Long Term	Continuous during working hours	Provincial & National	L.E. Equipment to be used and well maintained	Irreversible	Minimization of GHG emissions
Noise	Operation	Back-up Beepers	Negligible	Neutral	Short Term	Intermittent	Local	None, safety issue	Reversible	Minor annoyances in sparsely populated area
	Operation	Machinery Noise	Low	Neutral	Short Term	Intermittent	Local	Interior Machinery; well maintained. Hearing protection provided to workers, as required	Reversible	Minor annoyance in sparsely populated area

Table 4.2: Summary of Environmental Impacts (Operation) *(Cont'd)*

Classification of Potential Impact	Project Phase	Potential Impact	Magnitude of Impact	Direction of Impact	Duration of Impact	Frequency of Impact	Scope of Impact	Mitigative Measures	Degree of Reversibility	Residual Impact
	Operation	Traffic	Medium	Negative	Short Term	Intermittent	Local	Traffic Control and keep site equipment in good working order	Reversible	More traffic in an industrial area
Human Health	Operation	Worker Health/Safety	Low	Negative	Short Term	Intermittent during working hours	Local	Manitoba Workplace Safety and Health regulations to be followed. Safety Officer and Nurse on staff	Reversible	Minimize health/ safety impacts
	Operation	Particulate Emissions (Dust) Affecting Humans	Low	Negative	Short Term	Intermittent	Local	Use of water and non-toxic dust control measures will be undertaken if necessary	Reversible	Minimize dust, etc. on site; dust detrimental to product control
Human Health	Operation	Personal Injury	Low, Medium, or High	Negative	Short or Long Term	Intermittent	Local	Nurse on site; emer-gency response team	Reversible	Persistent or chronic injuries
	Operation	Ammonia Leak	Medium to High	Negative	Short Term	Rare	Local	Equipment maintenance; leak detection, alarm system, back-up power, emergency response plan in place	Reversible	None when totally dispersed

Table 4.2: Summary of Environmental Impacts (Operation) *(Cont'd)*

Classification of Potential Impact	Project Phase	Potential Impact	Magnitude of Impact	Direction of Impact	Duration of Impact	Frequency of Impact	Scope of Impact	Mitigative Measures	Degree of Reversibility	Residual Impact
Surface Water	Operation	Sediment Deposition Via Runoff	Low	Negative	Moderate	Intermittent	Local	Site and ditches will be vegetated, where practical	Reversible	Sediment in runoff is intercepted
	Operation	Chemical Spills to Ditches	Low	Negative	Moderate	Rare	Local	Check dams will be constructed if necessary	Reversible	Nil, clean-up activities would be employed to remove contaminants
Groundwater	Operation	Chemical/Fuel Spills on the Site	Moderate	Negative	Moderate	Rare	Local	Secondary containment; adhere to codes	Reversible	Nil, clean-up activities would be employed to remove contaminants
	Operation	Chemical/Fuel Spills in Ditches	Moderate	Negative	Moderate	Rare	Local	Immediate clean-up measures will be undertaken	Reversible	Nil, clean-up activities would be employed to remove contaminants
	Operation	Hog Pen Leakage	Moderate	Negative	Moderate	Rare	Local	Containment and contaminated water to WWTF	Reversible	Nil, clean-up activities would be employed to remove contaminants
Soils	Operation	Chemical/Fuel Spills on the Site	Low	Negative	Moderate	Intermittent	Local	Secondary containment and adhere to Codes	Reversible	Nil, clean-up activities would be employed to remove contaminants
	Operation	Oil Drips from Vehicles	Low	Negative	Long Term	Intermittent	Local	Visual monitoring and removal of contamin-ated soil, if necessary	Reversible	Nil

Table 4.2: Summary of Environmental Impacts (Operation) *(Cont'd)*

Classification of Potential Impact	Project Phase	Potential Impact	Magnitude of Impact	Direction of Impact	Duration of Impact	Frequency of Impact	Scope of Impact	Mitigative Measures	Degree of Reversibility	Residual Impact
Wildlife	Operation	Habitat Alienation in Adjacent Areas Due to Noise and Light Disturbance	Low	Negative	Long Term	Continuous	Local	Confine activity to project area	Reversible	Nil
	Operation	Deer Mortality Due to Vehicle Collisions	Low	Negative	Long Term	Intermittent	Local	Awareness training and encourage personnel to obey speed limits on access roads	Reversible	Small increase in number of kills in long term
Vegetation	Operation	Native Vegetation Allowed on Remainder of Site	Moderate	Positive	Long Term	Continuous	Local	Allow native vegetation to grow on undisturbed portions of the site	Reversible	Increase in acreage of native vegetation
	Operation	Fuel/Chemical Spills Causing Injury to Vegetation	Negligible	Negative	Short Term	Intermittent	Local	Employee training and awareness programs and contingency plans	Reversible	Minimal vegetation injury
Overall Economic Impact	Operation	Direct and Indirect Employment	High	Positive	Long Term	Continuous	Regional	No mitigation necessary	Reversible	Economic gain to region

Table 4.2: Summary of Environmental Impacts (Operation) *(Cont'd)*

Classification of Potential Impact	Project Phase	Potential Impact	Magnitude of Impact	Direction of Impact	Duration of Impact	Frequency of Impact	Scope of Impact	Mitigative Measures	Degree of Reversibility	Residual Impact
Transportation	Operation	Increase in Site-Bound Traffic	Moderate	Negative	Long Term	Continuous	Regional	Second shift offset from peak hours; improved roadways to site; turning lanes	Reversible	Normal inconvenience for local traffic; more traffic
	Operation	Increase in Accident Rate	Low	Negative	Long Term	Intermittent	Regional	Improved traffic control for higher capacity	Reversible	Factors leading to congestion reduced
Ozone Depleting Substances	Operation	Propellant Emissions	Negligible	Negative	Short Term	Intermittent	Provincial	Use alternative products	Irreversible	Negligible
Solid Waste Generation and Disposal	Operation	Disposal of Operational Wastes	Low	Negative	Long Term	Continuous	Local	Wastes generated through the operation process will be gathered and periodically hauled to the local landfill	Reversible	Operational wastes properly disposed of in a safe manner
	Operation	Manure	Low	Negative	Long Term	Continuous	Regional	Manure composted off-site, and some Digested in IWWTF	Reversible	Negative potential impact turned into positive resource