SECTION 3.0 ENVIRONMENTAL IMPACT ASSESSMENT AND MITIGATIVE MEASURES

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This section addresses the potential environmental impact of each of the requested alterations and describes the proposed mitigative measures to minimize the impacts.

3.1 HOLDING PEN EXPANSION

The expansion of the holding pen area will occupy an already construction-disturbed area immediately east of the existing holding pens. It will occupy the area that is partially used as roadway, drainage ditch, and fence. This area of the ditch is the high point of the existing ditch system, and filling it in will not disrupt the existing drainage system. Drainage from the holding pen expansion will be directed to the ditch on either side (north and south). Each of the ditches that surround the Maple Leaf Pork site eventually drains west off the site. Expansion of the holding pen area will require replacement of the road, fence, drainage ditch, fire loop, electrical services, light standards and the manure pad. It will also likely require replacement of at least three (3) ground water monitoring wells. Normal impacts associated with the operation of large construction equipment will occur as a result of construction of the holding pen expansion. Minor increases in air pollutants, dust and noise will result directly from construction activities however, all of these minor impacts will be intermittent, short term and will occur only during the period of construction. The air quality and dust impacts will be mitigated by ensuring equipment is in good working condition, and should dust become a nuisance, sprinkling water on the surface or other approved dust treatment will be initiated to keep dust levels in check. Significantly elevated dust levels cannot be tolerated in the vicinity of the operating food plant.

The most potentially significant activity resulting from the holding pen expansion could have been the drainage ditch reconstruction to accommodate the truck yard for unloading hogs. However, infilling of the ditch east of the existing holding pens does not present cause for concern because it is the high point of the existing ditch system. Therefore, the holding pen expansion will not disrupt the existing north/south drainage system (other than shortening the ditches in either direction. However, there will be a requirement to modify the ditch system to extend east/west on either side of the expanded holding pen yard. Some reconstruction of ditches in this areas will result in denuded areas and require reseeding in addition to the slope of the infill to the north/south ditch bottom on either side of the holding pen yard.

After seeding the original ditch construction most drainage ditches gained protective vegetative cover by the end of the second summer. Some minor levelling, grading and reseeding of local areas was required before a complete vegetative cover was established.

Inspection of the existing drainage ditches around the entire site by Earth Tech (Canada) Inc. personnel in June 2002 indicated that ditch system was fully vegetated. It was noted that on the north/south ditch on the east side of the employee parking lot, gravel from snow-clearing operations on the parking lot has deposited some gravel on the westerly ditch slope. However, overall the re-vegetation of the original ditch system is excellent. There is no evidence of significant erosion or sedimentation as a result of original ditch construction. As a result of the previous drainage ditch experience on the site, the potential impact from new ditch construction is considered minor, short-term and even if minor erosion results it will be curtailed within the first two summers after construction. Mitigation of this impact will be by the initial use of silt fences during and immediately following construction, seeding and establishment of a vegetative cover as soon after construction as practical, diligent monitoring for erosion, and timely repair and reseeding of any erosion noted.

At least three (3) of 56 existing monitoring wells could be destroyed during construction of the holding pens. These monitoring wells would remain inoperable during the construction of the holding pens but would be replaced immediately after construction in locations selected to best monitor the existing and expanded holding pens.

Operational environmental impacts resulting from an expanded holding pen area will include traffic and air quality, and more specifically odour. These impacts have been covered under the existing operating licence. It has been found during the first shift that odours from the holding pens have not been an issue, as there have been no complaints registered with Manitoba Conservation since start-up of the plant. Also, in the summer of 2002 neighbours within a 3-km radius of the subject site were visited to enquire of concerns or complaints about Maple Leaf Pork. Although a couple of neighbours mentioned they smell odours from the plant from time to time they stated the odours are not significant. The closest residents are J. Terhune and C. Denbow located on the road east of the plant northeast of the northeast corner of the IWWTF property. When visited in June 2002 Terhune and Denbow commented that although they experience odours from time to time, they associate the odours more with the IWWTF than the holding pens. Holding pen odours have not been a source of complaints.

There is some potential for a slight increase in odours from the manure pad area that will now be located closer to 65th Street East. The name “manure pad” is somewhat of a misnomer in that this material consists mainly of bedding from the hog-hauling trucks and is primarily sawdust and/or straw. In any case future traffic, other than to and from the plant, will be limited mostly to those vehicles going to and from the Terhune and Denbow residence. Potential feedback from Terhune and Denbow is solicited on a regular basis, and as in the past, Maple Leaf Pork will take any future complaints seriously. There will also be a potential aesthetic impact from observing the activities around the dead hog bin that will be closer to the road in future however, this will be limited to the loading time during pick-up of dead animals since a “slatted” gate will be installed to screen the area at most times.

More traffic will result from the operation of additional holding pens; primarily from the delivery of hogs, but also from manure trucks and trucks hauling carcasses. Traffic impacts were considered as part of the original Operating Licence Application and any subsequent alterations, and therefore, increased traffic for the second-shift is already approved. An additional entrance will be constructed on the east side of the site to provide access for hog trucks directly to the holding pens, for manure trucks and for trucks hauling carcasses. This will require construction of an on-site roadway, upgrading of 65th Street E from at least Richmond Avenue to the turn-in to the new on-site roadway, and upgrading of the intersection at Richmond Avenue and 65th Street E. Maple Leaf representatives have been in contact with the City of Brandon Engineering Department and Manitoba Transportation and Government Services (Personal Communications – Ted Snure, P.Eng., City of Brandon and Don McKibbon, P.Eng., Manitoba Transportation) with respect to the upgrading of this corner. It is understood that both the City of Brandon and Manitoba Transportation have joint jurisdiction at this intersection. Maple Leaf Foods Inc. undertakes to continue to work with both of these parties to ensure acceptable roadway standards are met at this corner. Any additional fill required for widening the existing road northward on 65th Street N will be taken from Maple Leaf Foods Inc.'s property, if the material is acceptable, since some waste material is anticipated from construction of the truck yard and turn around area east of the expanded holding pens. The environmental impact from the roadway improvement activities is anticipated to be minimal since all will occur on previously disturbed ground. The most significant impact will be disruption to existing traffic during the construction/re-construction of the public roads (Richmond Avenue and 65th Street E). Construction on Richmond Avenue will be staged so as to avoid disruption of traffic to Western Cooperative Fertilizer and Nexen Chemical plants as well as other local traffic.

Impacts associated with moving a portion of a 25 kVA electrical line, relocation of a few light poles, relocation of a portion of the fire loop, and moving a fence will be insignificant and short term since the work will all be carried out on existing graded areas or previously disturbed areas.

In summary, the construction-related impacts anticipated from the expansion of the holding pens include air quality, noise, and some minor potential for drainage ditch erosion. All of these impacts are negative, but minor and short term. Mitigation by sprinkling with water or other approved treatment to control dust and establishment of a vegetative cover on denuded ditch surfaces will ensure that residual environmental impacts from holding pen expansion remain minor and short term. Operating impacts will be primarily from additional odours and additional traffic, both of which are already covered under the existing Manitoba Environment Act Licence. Odour impacts will be mitigated by washing the barns down at least daily; and, frequent hauling (at least daily, except on weekends) of accumulated manure/bedding material from trucks to the off-site composting location north of Brandon.

3.2 COOLER AREA

Expansion of the cooler area does not present a significant increase in terms of environmental impact at the site. The proposed expansion extends south from the existing cooler area, and the affected area currently consists of open, but previously graded area, a ditch and a fence. The ditch will be filled in and the fence will be moved further south into the existing parking lot. Therefore, other than ditch modification, moving the fence, and construction of the expanded cooler, only minor deletion of existing roadway and replacement with a similar roadway and turn-around area on the east side of the proposed expanded cooler area will be required. This construction work will result in minor increases in air pollutants, dust and noise, however, all of these minor impacts will be intermittent and short term. Air quality and dust impacts will be mitigated by ensuring the equipment is in good working condition, and should dust become a nuisance, sprinkling water on the surface or other treatment will be initiated to keep dust levels in check during construction.

Operational experience at the plant to date indicates that no significant impacts have resulted from the cooler operation or freezers in the shipping area. The potential for impacts to air quality from a break in an ammonia line will increase, but there will be only a moderate increase (<15%) in the quantity of ammonia to be added within the system. Currently, the refrigeration system holds 77,180 kg (85 tons) of ammonia, and an additional 11,260 kg (12.4 tons) will be added, while raising the horsepower from about 10,500 to 12,700. An emergency response plan is already in place in the event of an ammonia leak at the site.

Impacts associated with relocation of the fence line, fire loop and ditch modification will be insignificant and short term because all of these occur on existing graded or previously disturbed areas.

3.3 CARCASS LOAD-OUT AREA

The impacts from demolishing the existing carcass load-out area, construction of the temporary load-out area, and final relocation of the carcass load-out area will be similar to other construction activities to take place on the site. Normal impacts on air quality from construction equipment emissions, dust, and noise will occur, but will be mitigated by keeping construction equipment in good working order and sprinkling water or other surface treatment to control dust. In general, construction noise and traffic is anticipated to be no more than a minor annoyance in a sparsely populated area.

The most obvious operational impact from the load-out area expansion is the increased traffic, already considered in the existing licence. However, the increase in overall traffic as a result of load-out area expansion from three bays as compared to one bay will not be as significant as one might anticipate because the number of truck loads of finished goods from the shipping

in an ammonia line will increase, but only from a moderate increase (<15%) in the quantity of ammonia to be added within the system.

3.6 OTHER INTERNAL/EXTERNAL PLANT ALTERATIONS

The internal plant alterations to accommodate the second-shift operation in the Maple Leaf Pork processing plant in Brandon do not pose any additional significant environmental impacts to the site. The required work is all on the interior of the building, except for the addition of one additional 36,320 litre (10,000 U.S. gallon) blood holding tank to be located beside the two existing tanks on the east wall of the kill area. None of these activities are anticipated to cause any significant environmental impact during construction.

During operation there is the remote possibility of a broken line, a ruptured tank or an accidental spill associated with the blood tanks or transfer to trucks. However, to date there have been no problems encountered with the blood tanks, piping or transfer to trucks. To minimize the chance of a major blood spill, Maple Leaf Pork is prepared to provide secondary containment of the blood tanks and bollards to prevent accidental impact.

The environmental effects anticipated from the request to permit a portion of the inedible renderable waste to be delivered to an approved landfill or an approved composting facility is inconsequential. Even if all the high content protein is forwarded to an approved landfill it amounts to no more than between 10 and 16 tonnes or one truck load a day.

area will fall as the number of carcass loads from the load-out area increase. There will be more traffic on 65th Street E. from Richmond Avenue to the new truck entrance. Any net change in traffic will result from the difference in weight between bulk (carcasses) and packed and boxed product loads. The anticipated maximum number of trucks to the load out area is 36 per day, while only 2 per day currently frequent the load-out area. Maple Leaf Pork's current estimate of maximum truck traffic is 440 vehicles per day (in and out), while our original estimate in 1999 of truck traffic was 508 vehicles per day and total traffic estimated was 4,600 vehicles per day. Public transportation has been provided to the plant, thereby decreasing the anticipated vehicular traffic. In summary, the overall traffic including the load-out area from second shift will be less than anticipated in the existing Operating Licence.

3.4 SHIPPING AREA

Expansion of the shipping area will generate typical impacts to air quality from construction equipment emissions and dust, which will be mitigated as described previously. Construction noise will be less noticeable with respect to the closest residents (Terhune and Denbow) because of the considerable distance between the shipping area and their residence.

Impacts from moving the fence line, fire loop, process waste line, sanitary waste line and water line will be insignificant and short term since most of these activities will take place on existing graded areas or previously disturbed areas. The exception is the movement of the ditch, which will require replacement that will result in denuded soils and a potential for erosion. It was found, after the initial plant construction, that the seeded ditches where topsoil was replaced were fully vegetated at the end of the second summer. After the first summer minor areas of erosion were re-graded and reseeded resulting in full ground cover after the second summer.

The most significant operational impact from the shipping area addition will be increased traffic, which is already approved as part of the existing Operating Licence.

3.5 FREEZER AREA

Expansion of the freezer area will again generate the typical construction impacts on air quality from construction equipment emissions and dust, which will be mitigated as described previously. Construction noise from the freezer area with respect to near-by residents (Terhune and Denbow) will also be moderated by distance, which is about the same distance as the shipping area.

Operation of the freezer area is not anticipated to have any additional adverse environmental effects although, as in the case of the cooler area, potential impacts to air quality from a break