

DARUENE<sup>1</sup>  
COPY

**REPORT ON THE  
PROPOSED ABATTOIR  
FOR THE  
SOUTH TIMISKAMING AREA**

**PROVIDED TO THE  
STEERING COMMITTEE  
OF THE  
SOUTH TIMISKIMING C.D.C.**

**Final Report**

**January 2006**



**P.M. Associates Ltd.**

**Management, Financial, Engineering and Design Consultants**

65 Dewdney Avenue, Winnipeg, Manitoba R3B 0E1 Telephone (204) 949-5150 Fax (204) 943-3700

## TABLE OF CONTENTS

| Section | Title   | Page No. |
|---------|---|----------|
| 1.0     | Introduction.....   | 1        |
| 2.0     | Potential Supply of Red Meat Animals .....                | 2        |
| 3.0     | Market Assessment.....                                    | 5        |
| 3.1     | Background.....   | 5        |
| 3.2     | Competitive Factors.....                                  | 5        |
| 3.3     | Potential for Meat Sales on a Wholesale/Retail Basis..... | 8        |
| 3.4     | Custom Volumes.....                                       | 25       |
| 4.0     | Waste Issues.....   | 28       |
| 4.1     | Types of Plants Considered and Slaughter Process.....     | 28       |
| 4.2     | Solid Waste .....   | 29       |
| 4.3     | Disposal of Solid Waste.....                              | 33       |
| 4.4     | Liquid Waste.....   | 35       |
| 4.5     | Typical Compositions of Effluent .....                    | 36       |
| 4.6     | Effluent Disposal .....                                   | 38       |
| 5.0     | Other Infrastructure Considerations .....                 | 39       |
| 5.1     | Site Considerations and Access .....                      | 39       |
| 5.2     | Availability of Electrical Power .....                    | 42       |
| 5.3     | Access .....  | 42       |
| 5.4     | Water.....  | 42       |
| 6.0     | Facility (Preliminary).....                               | 44       |
| 6.1     | Building.....   | 44       |
| 6.2     | Equipment Costs .....                                     | 45       |
| 6.3     | Summary of Costs.....                                     | 48       |
| 7.0     | Financial Projections.....                                | 53       |

i)

## TABLE OF CONTENTS

| Section | Title   | Page No. |
|---------|---|----------|
| 8.0     | Management and Staffing.....                              | 82       |
| 8.1     | Overview.....   | 82       |
| 8.2     | Structure (Typical).....                                  | 83       |
| 8.3     | Management.....   | 84       |
| 9.0     | Marketing.....  | 86       |
|         | <b>Appendix A:</b> Quebec Livestock Statistics            |          |
|         | <b>Appendix B:</b> List of Stores & Meat Markets Surveyed |          |
|         | <b>Appendix C:</b> Specified Risk Materials               |          |
|         | <b>Appendix D:</b> Rothsay – Press Release                |          |
|         | <b>Appendix E:</b> Best Management Practices              |          |
|         | <b>Appendix F:</b> K. Smart Associates Ltd.               |          |
|         | <b>Appendix G:</b> Hydro One Estimate                     |          |
|         | <b>Appendix H:</b> Meat Inspection Fees                   |          |

ii)

## 1.0 INTRODUCTION

In the spring of 2005, the South Temiskaming Community Futures Development Corporation commissioned a study to assess the potential viability of developing a regional abattoir. Step One was to conduct a market analysis. This final report provides details in respect of the market analysis for adjacent areas in both Ontario and Quebec, as well as other issues pertaining to the project. If and when a decision is made to proceed, it would form the basis of a business plan.

It is generally acknowledged that an open border would impact on the live price of utility beef animals. This would mean that plants dependent on cow processing would face decreased margins. In conclusion, the proposed New Liskard project will face some uncertainties.

It is noted that having an experienced operator with management experience in the industry is of critical importance. Marketing expertise is also a critical element. It is often said that "filling the cooler is easy, emptying it out to paying customers is the hard part".

Waste disposal is also an emerging issue and the industry is awaiting final CFIA regulations on SRM material.

The other uncertainty pertains to the potential re-opening of the USA border to animals over 30 months of age.



## 2.0 POTENTIAL SUPPLY OF RED MEAT ANIMALS

The Ontario Ministry of Agriculture and Food (OMAF) maintains statistics on livestock numbers in the various districts of Ontario. The following data was provided by OMAF by species:

### BEEF

| NUMBER OF CATTLE IN TIMISKAMING DISTRICT |                   |               |                              |              |  |   |                    |                    |                 |
|--|-------------------|---------------|------------------------------|--------------|--|---|--------------------|--------------------|-----------------|
| Year                                     | Bulls<br>(>1 yr.) | Dairy<br>Cows | Dairy<br>Heifers<br>(>1 yr.) | Beef<br>Cows | Beef Heifers<br>for breeding<br>(>1 yr.) | Beef Heifers<br>for slaughter<br>(>1 yr.) | Steers<br>(>1 yr.) | Calves<br>(>1 yr.) | Total<br>Cattle |
| 2000                                     | -                 | -             | -                            | -            | -  | -   | -                  | -                  | 28,090          |
| 2001                                     | 450               | 5,700         | 2,900                        | 8,300        | 1,600                                    | 750                                       | 1,900              | 8,750              | 30,350          |
| 2002                                     | 450               | 5,600         | 2,700                        | 9,100        | 1,500                                    | 800                                       | 2,100              | 9,600              | 31,850          |
| 2003                                     | 500               | 5,400         | 2,800                        | 10,100       | 1,700                                    | 900                                       | 2,300              | 9,600              | 33,300          |
| 2004                                     | 550               | 5,000         | 2,800                        | 11,100       | 1,900                                    | 1,000                                     | 2,400              | 9,100              | 33,850          |

According to local OMAF officials, only about 1,000 calves are finished in the area. It was also indicated that livestock numbers are up. Pre-BSE, there was a promotion on to increase cow numbers in the area.

### PORK

| NUMBER OF PIGS IN TIMISKAMING DISTRICT |                                  |                   |                |            |           |       |            |
|--|----------------------------------|-------------------|----------------|------------|-----------|-------|------------|
| Year                                   | Sows &<br>Bred Gilts<br>(>6 mo.) | Boars<br>(>6 mo.) | All Other Pigs |            |           | Total | Total Pigs |
|  |                                  |                   | < 45 lbs       | 45-130 lbs | > 130 lbs |       |            |
| 2000                                   | -                                | -                 | -              | -          | -         | -     | -          |
| 2001                                   | 150                              | -                 | 250            | 1,150      | 1,000     | 2,400 | 2,550      |

|      |     |   |     |       |       |       |       |
|------|-----|---|-----|-------|-------|-------|-------|
| 2002 | 150 | - | 250 | 1,200 | 1,000 | 2,450 | 2,600 |
| 2003 | 100 | - | 250 | 1,100 | 900   | 2,250 | 2,350 |
| 2004 | 100 | - | 200 | 1,100 | 850   | 2,150 | 2,250 |

There is limited pork production in the area at present.

### SHEEP

| NUMBER OF SHEEP IN TIMISKAMING DISTRICT |               |                         |                |                            |                       |                      |                       |
|---|---------------|-------------------------|----------------|----------------------------|-----------------------|----------------------|-----------------------|
| Year                                    | Rams (>1 yr.) | Ewes & Wethers (>1 yr.) | Sheep (>1 yr.) | Replacement Lambs (<1 yr.) | Market Lambs (<1 yr.) | Total Lambs (<1 yr.) | Total Sheep and Lambs |
| 2000                                    | -             | -                       | -              | -                          | -                     | -                    | -                     |
| 2001                                    | 150           | 3,650                   | 3,800          | 650                        | 1,600                 | 2,250                | 6,050                 |
| 2002                                    | 150           | 3,500                   | 3,650          | 600                        | 1,900                 | 2,500                | 6,150                 |
| 2003                                    | 150           | 3,900                   | 4,050          | 700                        | 2,100                 | 2,800                | 6,850                 |
| 2004                                    | 150           | 4,100                   | 4,250          | 700                        | 2,300                 | 3,000                | 7,250                 |

Other livestock totals as of 2001 were as follows:

| OTHER LIVESTOCK IN TIMISKAMING DISTRICT – May 2001 |       |            |   |                 |     |                            |     |       |   |                    |    |
|--|-------|------------|---|-----------------|-----|----------------------------|-----|-------|---|--------------------|----|
| Goats  |       | Wild Boars |   | Bison (Buffalo) |     | Deer (excluding wild deer) |     | Elk   |   | Llamas and Alpacas |    |
| Farms  | #     | Farms      | # | Farms           | #   | Farms                      | #   | Farms | # | Farms              | #  |
| 31   | 1,085 | 1          | X | 3               | 240 | 5                          | 170 | 1     | X | 8                  | 12 |

Farms = Farms Reporting

X = suppressed to protect confidentiality

There are no restrictions on the movement of live animals from Quebec to Ontario (or vice versa). The plant could therefore draw on Quebec production for animals. Please see Appendix A for Quebec livestock statistics adjacent to the study area.

Live animal supply for a new plant could definitely be augmented by animals coming from Quebec in all of the categories.

*Northern Quebec - 2 large feed lots -*

## **3.0 MARKET ASSESSMENT**

### **3.1 BACKGROUND**

A zone analysis was used for the market analysis. The consultants reviewed the market in Ontario and Quebec, based on the plant being federally licensed. There are indications that the provinces are working on inter-provincial licensing, which could facilitate sales into Quebec and other provinces, but it is unclear when this might occur (if ever).

The zone analysis looked at a circular zone of 120 miles (192 km) from New Liskeard within Ontario and Quebec as per the accompanying map.

### **3.2 COMPETITIVE FACTORS**

Within the zone described in 3.1, there are five existing facilities listed as licensed establishments under the Ontario Act including:

1. Rheal's Abattoir & Meat Market  
RR2, Kenabeek, ON, P0J 1M0  
County of Temiskaming  
(705) 647-7419
  
2. Eric's Clay Belt Abattoir  
P.O. Box 6, Earlton, ON, P0J 1E0  
County of Temagami  
(705) 563-8131

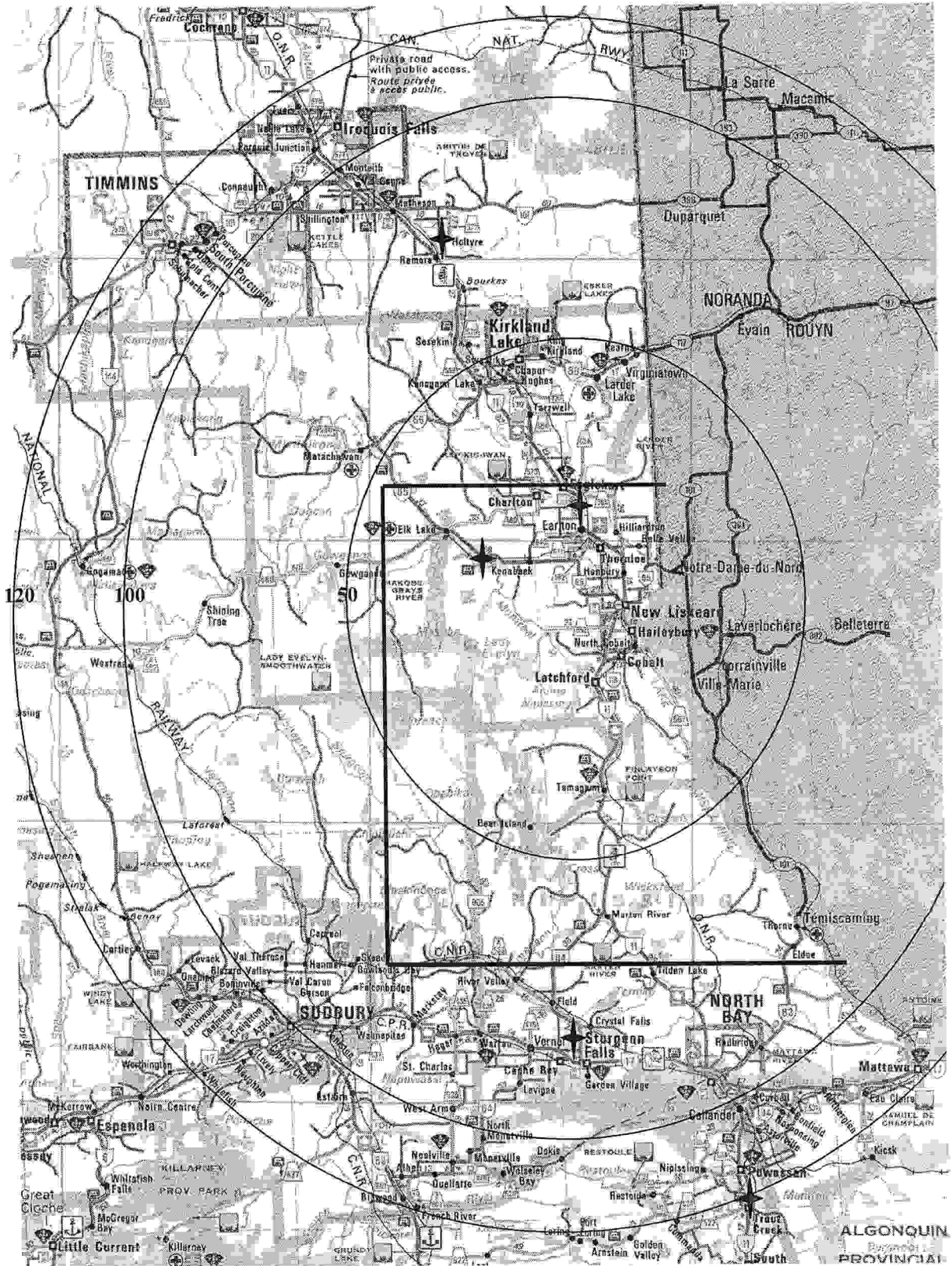
3. Bennett Abattoir  
Ramore, ON, P0K 1R0  
County of Timmins  
(705) 236-4498
  
4. Northern Meat Packers & Abattoir Ltd.  
RR1, Box 175, Trout Creek, ON, P0H 2L0  
(705) 723-5573
  
5. Abattoir Simon & Fils  
725 LeBlanc Road, Sturgeon Falls, ON, P2B 2N6  
(705) 753-1112

The first two establishments are “local” where as the other facilities are somewhat further away (by road).

|                |                          |
|----------------|--------------------------|
| Sturgeon Falls | 149 km from New Liskeard |
| Trout Creek    | 201 km from New Liskeard |
| Ramore         | 125 km from New Liskeard |

As was previously reported, the two local plants will need to address some issues to meet the new licensing requirements. Rheal’s Abattoir & Meat Market will not likely be salvageable, but the operators wish to continue in the business. The other operator plans to continue and claims to have identified costs of \$10,000 for the required upgrades. The combined volumes of the two plants, based on the two operators’ comments, is estimated as follows:

- 1,650 beef animals
- 200 hogs
- Total gross revenue of \$550,000-600,000



✦ Indicates current abattoirs

These plants are mainly doing custom work. The operators believe the unlicensed kill is between 1,000 and 1,650 animals per year (or roughly equal to what the two licensed plants are now doing). The availability of this business in the future would depend on whether (and how) the new rules and regulations are applied in order to stop activity by unlicensed operators.

Both operators are keen to continue in the industry.

### **3.3 POTENTIAL FOR MEAT SALES ON A WHOLESALE/RETAIL BASIS**

The potential for meat sales by the proposed/new meat processing business, in the catchment area for the plant, is a function of the area population, per capita meat consumption and the existing competitive situation in the retail and wholesale trade.

#### **3.3.1 Approach**

The market analysis focused on the local market. Research was not done in respect of the "export" of meat to other countries, such as the USA. Analysis of these markets was not done as the initial focus on regional opportunities is a better approach for new plants.

#### **3.3.2 Market Size**

##### **A. Ontario**

The Ontario market represents the largest provincial market in Canada. Ontario's population was 12,274,251 in 2003, which is some 38.4% of the total population of Canada.

The Ontario catchment area is located within the Timiskaming district of the Northeast economic region. The Northeast region has a total population of 567,800 of which the Timiskaming district encompasses 35,500 people.

The specific population of the Haileybury area (includes Haileybury, New Liskeard, Cobalt, Dymond and two smaller areas) was 12,375 in 2004.

A further breakdown of the local district is provided as follows (2001 data):

| <b>Township</b> | <b>Population</b> |
|-----------------|-------------------|
| Armstrong       | 1,223             |
| Thornloe        | 120               |
| Temagami        | 893               |
| Latchford       | 363               |
| New Liskeard    | 4,906             |
| James           | 467               |
| Kerns           | 360               |
| Harley          | 557               |
| Harris          | 518               |
| Hilliard        | 241               |
| Dymond          | 1,181             |
| Haileybury      | 4,543             |
| Cobalt          | 1,229             |
| Coleman         | 550               |
| Casey           | 421               |
| Brethour        | <u>57</u>         |
|                 | 18,027            |



Additional population centres within the 120-mile zone include the following:

| Township                                    | Population    |
|---|---------------|
| Timmins                                     | 43,445        |
| Kirkland Lake                               | 7,840         |
| Iroquois Falls                              | 5,157         |
| Sudbury                                     | 158,000       |
| Nipissing District (partly within the zone) | <u>85,300</u> |
|   | 299,742       |

**Summary (Ontario Portion)**

|                        |                       |
|------------------------|-----------------------|
| Local Trading Area     | 18,027                |
| Adjacent Kirkland Lake | <u>7,840</u>          |
|                        | 25,867                |
| Edges of Zone          | <u>291,902</u>        |
| <b>Total</b>           | <b><u>317,769</u></b> |

**B. Quebec**

The Quebec market is the second largest provincial market in Canada. In 2003, Quebec's population was 7,558,600, which is some 23.85% of the total population of Canada.

The Quebec catchment area is with census district 65, which is known as Abitibi-Témiscamingue. There are five sub-districts within zone 65 as per the following:

| Region                | Population          |                 |
|-----------------------|---------------------|-----------------|
|                       | 2003 Estimate (000) | % of Cdn. Total |
| Abitibi-Témiscamingue | 149.7               | 0.47            |
| Témiscamingue         | 18.1                | 0.06            |
| Rouyn-Noranda         | 40.8                | 0.13            |
| Abitibi-Ouest         | 22.4                | 0.07            |
| Abitibi               | 25.1                | 0.08            |
| Vallée-de-l'Or        | 43.2                | 0.14            |

### C. Combined Trading Region (Ontario/Quebec)

The total population for the Ontario/Quebec trading region is 467,469.

#### 3.3.3 Meat Consumption

Consumption data for meat products in Canada is tracked by CanFax Research Services. The most recent data available indicated the following:

- Per capita beef consumption in 2003 was 51.5 lbs, which was a slight increase (5%) over 2001 and 2002. Some analysts attribute the increase to support for farmers over the BSE crisis, but other factors include the various low carbohydrate diet fads and some retail price reductions. The above figure is on a retail weight basis (RWB).
- Pork consumption in 2003 was 42.2 lbs per person, which was a 10% decline over 2002. Chicken and turkey consumption has remained stable at 67.2 lbs and 9.3 lbs respectively.

- Lamb consumption is 1.8 lbs per person.

On the basis of the above, the market for red meat in Ontario and the study area would be as follows:

| <b>Market for Red Meat</b>     |                |                          |                     |                          |                     |
|--------------------------------|----------------|--------------------------|---------------------|--------------------------|---------------------|
|                                | Population     | Beef Per Capita<br>(lbs) | Total Beef<br>(lbs) | Pork Per Capita<br>(lbs) | Total Pork<br>(lbs) |
| Immediate Area                 | 18,027         | 51.5                     | 928,390             | 42.2                     | 760,739             |
| Adjacent Kirkland<br>Lake Area | 7,840          | 51.5                     | 403,760             | 42.2                     | 330,848             |
| Edges of Zone                  | 291,902        | 51.5                     | 15,032,953          | 42.2                     | 12,318,264          |
| Total Ontario Zone             | 317,769        | -                        | 16,365,103          | -                        | 13,409,851          |
| Total Quebec Zone              | 149,700        | -                        | 7,709,550           | -                        | 6,317,340           |
| <b>Total</b>                   | <b>467,469</b> | <b>-</b>                 | <b>24,074,653</b>   | <b>-</b>                 | <b>19,727,191</b>   |

The lamb per capita figure of 1.8 lbs per person would also imply the regional lamb markets could be some 841,444 lbs. However, lamb consumption is highly dependent on product availability, so the per capita figures may not be as applicable as those for beef and pork.

There are no per capita consumption figures for bison, elk or other game animals.

Average lbs of meet per carcass animal are as follows:

|          | CWB (Lbs) | RWB (Lbs) | Yield from Live |
|----------|-----------|-----------|-----------------|
| Steer    | 834       | 590       | 43%             |
| Cow      | 689       | 396       | 33%             |
| Midrange |           | 493       |                 |
| Lamb     | 65        | 49        | 41%             |
| Hogs     | 182       | 133       | 53%             |

For beef, the number of animals required to meet local and adjacent market demand is calculated as follows:

| <b>Beef</b>         |                         |                               |            |                                   |               |
|---------------------|-------------------------|-------------------------------|------------|-----------------------------------|---------------|
|                     | <b>Total Meat (RWB)</b> | <b>Average RWB per Animal</b> |            | <b>Total Steers or Total Cows</b> |               |
| <b>Ontario Side</b> |                         | <b>Steer</b>                  | <b>Cow</b> |                                   |               |
| Immediate Area      | 928,390                 | 590                           | 396        | 1,573                             | 2,344         |
| Kirkland Lake       | 403,760                 | 590                           | 396        | 684                               | 1,020         |
| <b>Subtotal</b>     | <b>1,332,150</b>        | -                             | -          | <b>2,257</b>                      | <b>3,364</b>  |
| Edge of Zone        | 15,032,953              | 590                           | 396        | 25,480                            | 37,962        |
| <b>Total</b>        | <b>16,365,103</b>       | <b>590</b>                    | <b>396</b> | <b>27,737</b>                     | <b>41,326</b> |
| <b>Quebec Side</b>  | <b>7,709,550</b>        | <b>590</b>                    | <b>396</b> | <b>13,067</b>                     | <b>19,468</b> |

It is noted that the Ontario side of the area likely produces some 6,000 male calves per year. Only 1,000 are currently finished in the area. The total cow cull would be some 1,000 animals per year (at 10%).

For pork, the number of animals required to meet local and adjacent market demand is calculated as follows:

| <b>Pork</b>         |                         |                            |                   |
|---------------------|-------------------------|----------------------------|-------------------|
|                     | <b>Total Meat (RWB)</b> | <b>Average RWB per Hog</b> | <b>Total Hogs</b> |
| <b>Ontario Side</b> |                         |                            |                   |
| Immediate Area      | 760,739                 | 133                        | 5,720             |
| Kirkland Lake       | 330,848                 | 133                        | 2,888             |
| <b>Subtotal</b>     | <b>1,091,587</b>        | -                          | <b>8,608</b>      |
| Edge of Zone        | 12,318,264              | 133                        | 92,618            |
| <b>Total</b>        | <b>13,409,851</b>       | <b>133</b>                 | <b>101,226</b>    |
| <b>Quebec Side</b>  | <b>6,317,340</b>        | <b>133</b>                 | <b>47,498</b>     |

Based on current sow inventories, total area production could be as high as 2,700 hogs per year based on 18 pigs per sow per year.

Lamb requirements could be as follows:

| <b>Lamb</b>         |                             |                                    |                    |
|---------------------|-----------------------------|------------------------------------|--------------------|
|                     | <b>Total Meat<br/>(RWB)</b> | <b>Average RWB per<br/>Carcass</b> | <b>Total Lambs</b> |
| <b>Ontario Side</b> |                             |                                    |                    |
| Immediate Area      | 32,448                      | 49                                 | 662                |
| Kirkland Lake       | 14,112                      | 49                                 | 288                |
| <b>Subtotal</b>     | <b>46,560</b>               | <b>-</b>                           | <b>950</b>         |
| Edge of Zone        | 525,424                     | 49                                 | 10,723             |
| <b>Total</b>        | <b>571,984</b>              | <b>49</b>                          | <b>11,673</b>      |
| <b>Quebec Side</b>  | <b>149,700</b>              | <b>49</b>                          | <b>5,499</b>       |

Based on the ewe inventory, the potential lamb production could be some 4,000 – 5,000 lambs per year.

In conclusion, the area appears to be a net importer of pork, beef and lamb, as current inventory would not meet demand based on per capita consumption averages.

### 3.3.4 Market Characteristics and Trends

The distribution system of food sales in Canada is large in size, with annual sales of some \$75 billion in total (2002). The industry employs 455,000 workers in over 24,000 stores. Canadians enjoy a very competitive shopping environment and spend only 9.1% of their incomes on grocery products.

The study area has a number of chains or networked outlets which sell groceries:

A & P Foods

Loeb Canada

Cooperative Regionale

M & M Meats

Food Town

No Frills

|                      |               |
|----------------------|---------------|
| Foodland (Sobeys)    | Price Chopper |
| Grocery Depot        | Valu-Mart     |
| "Independent" chains |               |

**Notes:**

- Independent and No Frills are part of the Loblaws family of companies.
- The Sobeys family includes Sobeys and Price Choppers.
- A & P Foods is part of the Dominion family of companies which is now owned by Metro. Loeb and Foodland are part of this group.
- M & M Meats is a partner of J.M. Schneider.

The vast majority of total retail food sales occur through chain supermarkets. According to Agriculture Canada, meat sales represent \$2.4 billion annually. It is known that 86% of retail food sales occur through supermarkets and food stores so their share of the meat business is very significant. The market shares are as follows:

|  |           |
|--|-----------|
| Chain Stores such as Loblaws, Sobeys, etc. | 45%       |
| Independent Grocery Stores (Buying groups) | 35%       |
| Independent Stores                         | <u>6%</u> |
|  | 86%       |

Specialty food stores (meat markets, fresh produce stores, bakeries) account for 8% with the remainder of sales (6%), being done through convenience stores. Loblaws is the largest grocery retailer in Canada with 32% of the overall market. Sobeys is another major player with a market share of about 14%. The following table shows the grocery sales and market share for Canadian retailers (2002).

| <b>Canadian Grocery Retailer</b> | <b>Billions (\$) Canadian</b> | <b>Market Share (%)</b> |
|----------------------------------|-------------------------------|-------------------------|
| Loblaw                           | 23,894                        | 32.03                   |
| Sobeys                           | 10,960                        | 14.69                   |
| Safeway                          | 5,492                         | 7.36                    |
| Metro                            | 5,201                         | 6.97                    |
| Overwaitea                       | 2,380                         | 3.19                    |
| A & P                            | 4,400                         | 5.90                    |
| Convenience Stores               | 3,250                         | 4.36                    |
| Costco Food                      | 3,550                         | 4.76                    |
| Drug                             | 2,659                         | 3.56                    |
| Wal-Mart                         | 2,758                         | 3.70                    |
| Co-op                            | 2,667                         | 3.58                    |
| Other                            | 7,389                         | 9.90                    |
| <b>Total</b>                     | <b>74,600</b>                 | <b>100.00</b>           |

**Note:** Metro has moved up close to number two with its acquisition of A & P/Dominion.

### 3.3.5 Meat Industry Developments

Traditionally, meat sales were made through specialty “butcher shops”. Meat cutting was a skilled trade, and butchers generally had their own abattoir facilities in which they killed animals purchased from farmers.

As the grocery industry evolved, many “butcher shops” were replaced by supermarket meat departments. These facilities included equipment and space for skilled butchers to process animal sides into packaged meat including customized products “on demand”.

The next generation of meat department, which replaced the in-store meat markets, is the boxed meat facility. These operations have no rails and cannot process sides or quarters. They order loins, top sirloins, etc. and thus do very little processing and have less waste. The butcher staff skill requirements are also lower.

The big supermarket chains are now in the process of evolving their operations to handle "case-ready" meat. All processing is done off site by an owned or affiliated company, and the meat comes packaged for maximum shelf life. No skilled meat cutting staff are required for this type of operation. The reasons for adopting a case-ready strategy are as follows:

- to ensure food safety in meat (particularly ground beef);
- to address labour shortages of meat cutters;
- to provide a more consistent product throughout all of their stores; and
- to keep pace with competitors such as Wal-Mart.

Meat sales to chain supermarkets and members of buying groups are not available to local abattoirs such as this one due to the following reasons:

- Most chains operate in several provinces and thus require sourcing from a federal plant;
- Many chains are owners, partners or in the same corporate family as their meat suppliers;
- Consistent quality is a key issue. They want a proven track record, including recognized programs such as HACCP, ISO 9000, etc.; and
- Local store managers have no authority to buy products from local suppliers.



Most meat sales in the region occur through the chain outlets.

### **3.3.6 Market Research (Wholesale/Retail) (Updated)**

In order to assess the potential for local stores to be customers, a comprehensive local area survey was originally carried out by telephone. Within the zone depicted in the previous map, 61 stores were identified (see Appendix B for the list). Subsequently, two supplementary surveys were carried out including:

- A survey of store outlets in the Iroquois Falls/Hearst/Kapuskasing area (13 stores as per the list provided in Appendix B)
- A survey of store outlets in Quebec adjacent to the New Liskeard area (Rouyn-Noranda, Val d'Or, La Sarre, La Motte, etc. as per the list in Appendix B for a total of 17 stores)

The three surveys are referred to as follows:

|          |                        |
|----------|------------------------|
| Survey A | Original Survey        |
| Survey B | Iroquois Falls et. al. |
| Survey C | Quebec                 |

### **3.3.7 Survey A Results**

#### **1. Grocery Stores**

The following survey results were received:

- 51 of the 61 stores responded to the survey. Ten either could not be contacted or would not participate.
- 16 of 37 responded yes to the question about whether a new abattoir was needed in the area. 21 of 37 said no, and 24 did not respond.
- 14 of the 16 that said yes to a new abattoir said they would buy from a new abattoir. It needs to be an inspected facility.
- 14 respondents wanted pork, 15 wanted beef, and 5 wanted lamb.
- Packaging needs:

7/16 carcass

12/16 boxed

3/16 case ready

- Total Annual Pounds of Meat (RWB) for Grocery Stores

|             |         |
|-------------|---------|
| <b>Beef</b> | 224,100 |
| <b>Pork</b> | 258,400 |
| <b>Lamb</b> | 720     |

## 2. Meat Market/Butcher Shops

A list of 13 stores was used. Contact was made with 11 of these operations, and we received the following results:

- Only nine were currently involved in meat sales.

- Six of the nine respondents would be interested in meat purchases. Six wanted beef, five wanted pork, and three wanted lamb.

- Packaging needs:

5/8 carcass

2/8 boxed

1/8 case ready

- Total Annual Pounds of Meat (RWB) for Meat Markets:

|             |         |
|-------------|---------|
| <b>Beef</b> | 466,400 |
| <b>Pork</b> | 227,032 |
| <b>Lamb</b> | 10,400  |

- Total Combined Annual Pounds of Meat (RWB) for Grocery Stores & Meat Markets:

| <b>Survey A</b> |                         |
|-----------------|-------------------------|
| <b>Species</b>  | <b>Total RWB Weight</b> |
| Beef            | 690,500                 |
| Pork            | 485,432                 |
| Lamb            | 11,120                  |

### 3.3.8 Survey B Results

- 13 store outlets were identified. 3 either would not respond or could not be reached.

- 8 of 13 were not interested in buying meat from a new abattoir.
- 2 of 13, depending on price and quality, would be interested. Both indicated a new abattoir would be a welcome addition to the area.
- Additional (RWB) volumes identified were as follows:

|             |         |
|-------------|---------|
| <b>Beef</b> | 213,200 |
| <b>Pork</b> | 88,400  |

### 3.3.9 Survey C Results

- 17 stores were contacted, of which 15 sold meat.
- 4 felt a new abattoir was needed, and 11 did not have an opinion.
- There was support for a mobile abattoir. There was also a belief that the abattoir should only sell wholesale.
- 6 of 15 would be interested in buying from the abattoir. There were two comments about supporting local producers.
- 12 of the 15 outlets surveyed handle pork, 14 of the 15 handle beef and 1 of the 15 handle lamb.
- Packaging needs:

3/13 carcass

5/13 boxed

5/13 case ready

Two surveyors did not respond.

- Total Annual Pounds of Meat (RWB):

|             |         |
|-------------|---------|
| <b>Beef</b> | 171,154 |
| <b>Pork</b> | 152,412 |
| <b>Lamb</b> | 5,200   |

### 3.3.10 Summarized Survey Results

- Total Identified Volumes

| Survey | Beef      | %   | Pork    | %   | Lamb   | %   |
|--------|-----------|-----|---------|-----|--------|-----|
| A      | 690,500   | 64% | 485,432 | 67% | 11,120 | 68% |
| B      | 213,200   | 20% | 88,400  | 12% | N/A    | -   |
| C      | 171,154   | 16% | 152,412 | 21% | 5,200  | 32% |
|        | 1,074,854 |     | 726,244 |     | 16,320 |     |

- The total study area market for beef was 16,365,103 lbs based on current per capita consumption patterns. The identified potential volumes from the market research would represent only 6.6% of total consumption. Pork would be 5.4% of total consumption.

- Markets identified by the market research for beef, pork and lamb would require the following animals:

| Species | Total RWB      | RWB/Animal | No. of Animals |
|---------|----------------|------------|----------------|
| Beef*   |                |            |                |
| Cows    | 429,942        | 396        | 1,085          |
| Steers  | <u>644,912</u> | 590        | <u>1,093</u>   |
|         | 1,074,854      |            | 2,178          |
| Pork    | 726,244        | 133        | 5,460          |
| Lamb    | 16,320         | 49         | 333            |

\* Based on 60% steers by weight. If all cows were used, 2,714 animals would be needed. If steers were used, 1,821 animals would be required.

### Capture (Beef)

The capture rate will depend on the ability of the proposed abattoir to produce a good product at a competitive price. The market research has determined current intentions, which means the store owners have an open mind about purchasing meat. Beef supply is readily available. The markets added from the supplementary surveys may be harder to obtain, so we have used a lower capture rate (80% for Survey B and 70% for Survey C as opposed to 90% for Survey A (Year One).

The weighted average of capture is 84.6%, which is based on an assumption of top quality management and an effective sales and marketing campaign.

## Beef

### Potential Capture Estimate:

- 84% opening year
- Split of 60% steers, 40% cows (by weight)
- 5% growth rate

|              | <b>Base Potential</b> | <b>84%</b>   | <b>Yr 1</b>  | <b>Yr 2</b>  | <b>Yr 3</b>  | <b>Yr 4</b>  | <b>Yr 5</b>  |
|--------------|-----------------------|--------------|--------------|--------------|--------------|--------------|--------------|
| Cows         | 1,085                 | 911          | 956          | 1,004        | 1,054        | 1,107        | 1,162        |
| Steers       | 1,093                 | 918          | 963          | 1,012        | 1,062        | 1,115        | 1,171        |
| <b>Total</b> | <b>2,178</b>          | <b>1,829</b> | <b>1,919</b> | <b>2,016</b> | <b>2,116</b> | <b>2,222</b> | <b>2,333</b> |

The above represents animals purchased, slaughtered and processed for resale as fresh/frozen meat.

## Pork

The pork situation is somewhat different due to the current lack of pork production in the area. The slaughter plant could bring in hogs from Quebec or wait for local farmers to increase total production. The marketing of pork meat could also be more difficult for the more distant zones. To account for the lack of supply and the distant zone market issue, we have reduced the potential capture to 50% in Year One.

- 50% by Year Three (due to lack of hog supply in the region)
- All hogs
- 5% growth rate

|      | <b>Base Potential</b> | <b>50%</b> | <b>Yr 1</b> | <b>Yr 2</b> | <b>Yr 3</b> | <b>Yr 4</b> | <b>Yr 5</b> |
|------|-----------------------|------------|-------------|-------------|-------------|-------------|-------------|
| Hogs | 5,460                 | 2,730      | 2,866       | 3,009       | 3,160       | 3,318       | 3,484       |

The above projection is for animals purchased, slaughtered and processed for resale.

### **Lamb**

Lamb sales were not significant enough to be included.

### **3.4 CUSTOM VOLUMES**

For the purposes of analysis, it was assumed that the new plant would capture 100% of Rheal's Abattoir & Meat Market volume, and 75% of the unlicensed kill volume. This assumes he is shut down after licensing implementation takes place.

#### **Existing Volumes**

|      | <b>Rheal's</b> | <b>Unlicensed*</b> | <b>Total</b> |
|------|----------------|--------------------|--------------|
| Beef | 1,250          | 990                | 2,240        |
| Pork | 150            | 25                 | 175          |

\* The average of the unlicensed kill is 1,325 (high 1,650 – low 1,000). A capture of 75% of this total is utilized in the table.



**Growth @ 5% per year**

| <b>Custom Slaughter</b> |             |             |             |             |             |
|-------------------------|-------------|-------------|-------------|-------------|-------------|
|                         | <b>Yr 1</b> | <b>Yr 2</b> | <b>Yr 3</b> | <b>Yr 4</b> | <b>Yr 5</b> |
| Beef                    | 2,240       | 2,352       | 2,470       | 2,593       | 2,722       |
| Pork                    | 175         | 183         | 193         | 203         | 213         |

**Total Units for Custom and Owned Meat Sales**

| <b>Beef</b> |             |             |             |             |             |
|-------------|-------------|-------------|-------------|-------------|-------------|
|             | <b>Yr 1</b> | <b>Yr 2</b> | <b>Yr 3</b> | <b>Yr 4</b> | <b>Yr 5</b> |
| Owned Meat  | 1,919       | 2,016       | 2,116       | 2,222       | 2,333       |
| Custom      | 2,240       | 2,352       | 2,470       | 2,593       | 2,722       |
| Total       | 4,159       | 4,368       | 4,586       | 4,815       | 5,055       |

- More fed cattle will be needed from the area than are currently produced.

| <b>Pork</b> |             |             |             |             |             |
|-------------|-------------|-------------|-------------|-------------|-------------|
|             | <b>Yr 1</b> | <b>Yr 2</b> | <b>Yr 3</b> | <b>Yr 4</b> | <b>Yr 5</b> |
| Owned Meat  | 2,866       | 3,009       | 3,160       | 3,318       | 3,480       |
| Custom      | 175         | 183         | 193         | 203         | 213         |
| Total       | 3,041       | 3,192       | 3,353       | 3,521       | 3,693       |

- Achieving these pork volumes will require sourcing outside the district.

Animal Unit (AU) Equivalent – One animal unit is the equivalent to a finished steer in weight. A hog is 0.3 AUs, and a lamb is 0.1 AUs.

| <b>AUs for Model</b> |             |             |             |             |             |
|----------------------|-------------|-------------|-------------|-------------|-------------|
|                      | <b>Yr 1</b> | <b>Yr 2</b> | <b>Yr 3</b> | <b>Yr 4</b> | <b>Yr 5</b> |
| Beef                 | 4,159       | 4,368       | 4,586       | 4,815       | 5,055       |
| Hogs                 | 912         | 957         | 1,005       | 1,056       | 1,107       |
| Total                | 5,071       | 5,325       | 5,591       | 5,871       | 6,162       |

This would represent weekly volumes of 101 in Year 1 rising to 123 by Year 5 (based on 50 weeks of operation). Typically plants would kill for 2 to 3 days and do processing for the remaining days. The kill per day would therefore range from 34 to 41 based on a 3-day kill (AU basis). This means the plant would need to be 20% larger than originally projected. Federal plants are typically 20-25% more expensive to construct.

There would also be federal inspection costs to pay. In order to maintain a federal license, plants are required to meet Hazard Analysis and Critical Control Point (HACCP) guidelines. HACCP is a systematic approach to the identification, evaluation and control of food safety hazards. More detail will be provided in the final report.

## **4.0 WASTE ISSUES**

Waste disposal is a major issue for abattoir projects. There are two main components to waste disposal, including one for solid material and one for liquids. The constraints relating to both have become more significant in recent times due to issues such as BSE, water pollution, landfill restrictions and rendering industry changes. Waste disposal costs can threaten project viability, so the capital and operating costs for waste disposal need to be carefully considered for any such project. In many cases, waste disposal costs can threaten the viability of the project.

### **4.1 TYPES OF PLANTS CONSIDERED AND SLAUGHTER PROCESS**

#### **Red Meat**

For this project, the proposed red meat plant is defined as a “simple slaughterhouse”. This is “a plant that slaughters animals and does a very limited amount of by-product processing. Its main products are fresh meat in the form of whole, half or quarter carcasses or in smaller meat cuts.” This could include slaughter only or slaughter as well as cut and wrap facilities.

The slaughter process is as follows:

Stunning;

Suspension from an overhead rail by the hind legs;

Sticking and bleeding over a collecting trough. The collected blood may be sewerred or processed;

Hide removal (cattle) or scalding and dehairing (hogs);

In some plants hogs are skinned to eliminating scalding and dehairing. Scalding is a method to loosen hair before removal. For several minutes, the hogs are held in a scalding tank at approximately 60°C. After scalding, the hogs are mechanically dehaired by abrasion and singed in a gas flame to complete the hair removal process.

Decapitation;

Opening of the carcass by cutting;

Inspection of the carcass;

Evisceration (removal of intestines and internal organs);

Splitting and cutting of the carcass; and

Chilling or freezing.

If the plant goes beyond slaughter to do cut and wrap, the following additional activities take place:

Cutting and deboning.

## **4.2 SOLID WASTE**

### **Red Meat – Beef**

The products resulting from red meat slaughter include carcasses and by-products. The dressing percentage is the carcass weight expressed as a percentage of live weight. Saleable meat results from the carcass being broken down into the various cuts. Dressing percentages and saleable meat percentages vary with a prime finished steer yielding the highest, and canner cows yielding lower.

**Average Dressing %**

|             |     |
|-------------|-----|
| Prime Steer | 64% |
| Canner Cow  | 45% |

When the animal is further processed, the quantity of saleable meat depends on the quality of the animal. A lean, heavily muscled animals will yield more than a fat animal. For planning purposes, an average beef animal could yield as follows:

|   |     |
|---|-----|
| Dressing Percentage of Carcass Weight           | 61% |
| Saleable Meat as a Percentage of Carcass Weight | 71% |
| Saleable Meat Percentage of Live Weight         | 43% |

(Very high quality animals could be as high as 52%, lower quality animals could be as low as 30%.)

The 57% residual includes the hide, which is generally saleable. It represents 8% of weight. This leaves 49% of the animal that is waste including bone, fat, viscera, paunch manure, etc. For planning purposes, 50% of beef volume is waste.

**Hogs**

For hogs, the yield is typically higher. An average market hog would yield as follows:

|   |     |
|---|-----|
| Dressing Percentage                             | 72% |
| Saleable Meat as a Percentage of Carcass Weight | 65% |
| Saleable Meat as a Percentage of Live Weight    | 47% |

(High quality animals could yield as high as 65%, low quality animals could be 37%.)

For planning purposes, the waste to be disposed of from hogs would amount to 50-53% of total live weight.

**Lamb**

Lamb yields are somewhat lower than beef. For planning purposes, an average lamb would yield as follows:

|   |     |
|---|-----|
| Dressing Percentage of Carcass Weight       | 54% |
| Saleable Meat as a Percentage of LiveWeight | 75% |
| Saleable Meat Percentage                    | 41% |

(Lamb yields range from 31% to 44%.)

For planning purposes, lamb waste to be disposed would be 60%. (This could be reduced somewhat if a market could be found for the hides.)

**4.2.1 Potential Volumes of Solid Waste**

**Beef**

Assumptions

- Beef weight average of 1,150 lbs (live weight)
- 50% solid waste (assumes hide is sold) which equals 575 lbs

|                       | Yr 1      | Yr 2      | Yr 3      | Yr 4      | Yr 5      |
|-----------------------|-----------|-----------|-----------|-----------|-----------|
| No. of Animals        | 4,159     | 4,368     | 4,586     | 4,815     | 5,055     |
| Avg. Wt. Solid Waste  | 575       | 575       | 575       | 575       | 575       |
| Total Waste Wt. (lbs) | 2,391,425 | 2,511,600 | 2,636,950 | 2,768,625 | 2,906,625 |
| Tons                  | 1,196     | 1,256     | 1,318     | 1,384     | 1,453     |
| Metric Tons (Mt)      | 1,085     | 1,139     | 1,196     | 1,256     | 1,318     |
| Weekly Mt             | 20.9      | 21.9      | 23.0      | 24.2      | 25.3      |

### Pork

#### Assumptions

- Hog average live weight of 250 lbs
- 50% solid waste or 125 lbs

|                       | Yr 1    | Yr 2    | Yr 3    | Yr 4    | Yr 5    |
|-----------------------|---------|---------|---------|---------|---------|
| No. of Animals        | 3,041   | 3,192   | 3,353   | 3,521   | 3,693   |
| Avg. Wt. Solid Waste  | 125     | 125     | 125     | 125     | 125     |
| Total Waste Wt. (lbs) | 380,125 | 399,000 | 419,125 | 440,125 | 461,625 |
| Tons                  | 190     | 200     | 210     | 220     | 231     |
| Mt                    | 172     | 181     | 190     | 200     | 209     |
| Weekly Mt             | 3.3     | 3.5     | 3.7     | 3.8     | 4.0     |

The total solid generation for this model would range from 24 Mt per week in Year One to 30 Mt per week in Year 5.

### 4.3 DISPOSAL OF SOLID WASTE

There are two options that could be considered (landfill was not considered) including:

1) Rendering Company Pick-up

The Sanimal Corporation has indicated they would pick up the solid waste at a cost of \$0.05 per kg plus \$2,000 per load (30 Mt) for shipping to their Quebec City plant. This works out to \$0.053 per lb. This results in the following costs per animal:

- Cows/Steers  
Average waste percentage is 50%, which equals 550 lbs per animal.  
Total waste cost if all goes to rendering  $(0.053 \times 550) = \$29.15$
- Hogs  
Average waste percentage is 53% of live weight, which equals 132.5 lbs per animal. Total waste cost if all goes to rendering  $(0.053 \times 132.5) = \$7.02$

2) Compost

The CFIA has announced draft regulations pertaining to the disposal of material containing Specified Risk Material (SRM) by means of composting. The regulations are expected to become final in December. The regulations pertaining to composting SRM are as follows:



- To operate a composting operation, a permit is required from the CFIA.
- Composted material can not be disposed of on hay or pasture land (or on land which could be grazed by animals).

This would imply that composed material could be spread on crop land or on forest lands but there is some uncertainty to this until the regulations are finalized.

B.J. Packers of Beasejour, Manitoba has developed a composting operation for mixed species (beef and hogs). The essential elements of this system include:

- an uncovered hard surfaced site with areas for three stages of composting;
- a dump truck/conveyance vehicle for moving the material from the plant to the compost site;
- a rubber-tired loader for turning and moving compost material;
- a conveyor that takes the material from the plant to the truck; and
- a source of carbon to aid in the composting process (shavings, straw, etc.)

Operating costs are minimal and are estimated at \$25.00 per mt. This works out to \$0.011 per lb.

Estimated Capital Cost:

|                  |          |
|------------------|----------|
| Hard surface lot | \$25,000 |
|------------------|----------|

|              |                 |
|--------------|-----------------|
| Used loader  | 25,000          |
| Used truck   | <u>25,000</u>   |
| <b>Total</b> | <b>\$75,000</b> |

#### 4.4 LIQUID WASTE

Slaughterhouse effluent is considered to have significant potential for environmental pollution, bad odours and health hazards.

##### Volume Estimate

##### **Red Meat**

A minor quantity of moisture comes from the animals slaughtered, but most effluent results from clean-up procedures. All water used results in wastewater that will require disposal.

Guidelines from CFIA do not prescribe minimum water use quantities per animal unit. The guidelines are generally based on using enough water to adequately maintain the required standard of cleanliness.

Water utilization estimates vary considerable and are dependent on factors such as:

- the use of dry, pre-clean-up procedures;
- blood collection;
- the use of water conservation nozzles; and
- dry dumping of paunch contents or whole handling of paunch.

Water use estimates per animal unit range from 50 gallons to 440 gallons.

### Examples

- Mallot Creek Engineers – Estimate for a Beef Slaughterhouse (Rainy River, Ontario)  
440 gallons/AU
- CFIA Ontario  
200 gallons/AU
- San Juan Mobile Unit (Slaughter Only)  
50 gallons/AU

A planning average volume use of 200 gallons per AU is considered appropriate. Liquid waste produced is generally 85% of water used. If scalding hogs, water use would be higher.

|                 | <b>Yr 1</b> | <b>Yr 2</b> | <b>Yr 3</b> | <b>Yr 4</b> | <b>Yr 5</b> |
|-----------------|-------------|-------------|-------------|-------------|-------------|
| AU              | 5,071       | 5,325       | 5,591       | 5,871       | 6,162       |
| Gallons per AU  | 200         | 200         | 200         | 200         | 200         |
| Total Water Use | 1,014,200   | 1,065,000   | 1,118,200   | 1,174,200   | 1,232,400   |
| Waste at 85%    | 862,070     | 905,250     | 950,470     | 998,070     | 1,047,540   |

## **4.5 TYPICAL COMPOSITIONS OF EFFLUENT**

### Definitions

**BOD<sub>5</sub> – Biological Oxygen Demand**

This refers to the amount of oxygen that would be consumed (in 5 days) if all the organics in one litre of water were oxidized by bacteria and protozoa. A very clear lake water sample could show a reading of 2 mg/litre or less, while residential sewage typically is at 300-350 mg/litre. Abattoir effluent can be as high as 3,500-4,000 mg/litre. (Blood is a major contributor. Pure blood could be as high as 405,000 mg/litre.) The target BOD<sub>5</sub> for a treatment plant output is 25 mg/litre.

**TSS – Total Suspended Solids**

This refers to solids in water that can be trapped by a filter. High TSS blocks light and slows down decomposition. Target range for treated effluent is 30 mg/litre. Abattoir wastewater is usually within 1,500-2,500 mg/litre, while household waste is typically 220 mg/litre.

**FOG – Fats, Oils and Grease**

This refers to fats, oils and grease that end up in the waste stream. The average value is 100 mg/litre, and the objective is to reduce or eliminate these substances as they are detrimental to the treatment process. Abattoir wastewater ranges are from 300-500 mg/litre.

**Total N<sub>2</sub> – Nitrogen**

This refers to nitrogen in the effluent. The average residential effluent is 40 mg/litre. Abattoir effluent ranges from 100 – 400 mg/litre.

## **Total Phosphorus**

Values in residential average 12 mg/litre. Abattoir effluent ranges from 20-60 mg/litre.

### **Summary of Abattoir Effluent Values**

|                      |                    |
|----------------------|--------------------|
| BOD <sub>5</sub>     | 3,500 – 4,500 mg/l |
| TSS                  | 1,500-2,500 mg/l   |
| FOG                  | 300-500 mg/l       |
| Total N <sub>2</sub> | 100-400 mg/l       |
| Total Phosphorus     | 20-60 mg/l         |

It is suggested that the plant would follow recommended practices for cleanup and water conservation as per the Best Management Practices. Please find a copy of this document in Appendix E. This can reduce nitrogen or phosphorus loading.

## **4.6 EFFLUENT DISPOSAL**

The composition of abattoir effluent practices precludes its direct disposal into a municipal treatment system. We have consulted with K. Smart Associates Ltd., who are an engineering firm located in Kitchener, Ontario (see Appendix F). They have suggested a treatment plant costing \$600,000 would be required. The treatment plant cost was based on an abattoir processing 8,000 AUs, which allows for future expansion.

## 5.0 OTHER INFRASTRUCTURE CONSIDERATIONS

### 5.1 SITE CONSIDERATIONS AND ACCESS

Three sites were identified by the Township of Coleman:

- Site 1     Old pit across from miller pit (Sharp Lake)
- Site 2     Old miller pit adjacent to Highway 11
- Site 3     Adjacent to road to landfill

The criteria for selection will be based on the following:

- Isolation from conflicting land uses (i.e. residential);
- Availability of power;
- Adjacency to an existing road for access and/or retail viability;
- Soil conditions for foundation, waste disposal, etc.;
- Availability of water; and
- Zoning.

#### Notes:

1. Site One is located across the highway from Site Two. It has the most potential for adjacent land use conflicts (cottage access road beside the property). It is very visible from Highway 11. The terrain is flat and would require less site work depending on where the project is situated. There is a power line within ¼ mile (probably single phase). Well water availability is unknown. The zoning is open land, which would require rezoning. It is crown land, and the municipality expects to own it within three weeks (since the time of the visit in May of 2005).

2. Site Two is less well isolated, but conflict with other adjacent land uses appears unlikely. There is no power line. It is adjacent to Highway 11, which is an attractive feature. Water ponding is prevalent, and substantial reshaping and/or filling would be needed. Well water source conditions are unknown. It is zoned as open land, which would require rezoning. The municipality is considering acquisition of the land.
  
3. Site Three is well isolated from conflicting land use activities. There is a power line, but it appears to be single phase. It is adjacent to a road for access but has no visibility from a main traffic artery. There appears to be a well on or near the site. Water quality is unknown at this time. It is zoned rural, which could mean an abattoir is a permitted use. The land is all owned by the municipality.





At the present time, Site One is being looked at as a possible site as it has good potential for highway visibility for retail. It may also require less work in respect of site improvements. In addition, soil conditions seem favourable.

## 5.2 AVAILABILITY OF ELECTRICAL POWER

The plant will require three (3) phase power. Hydro One has provided a quote to provide a primary line (347/600V 600A disconnect at a primary line voltage of 12.5KV phase to phase):

- \$18,000 + \$1,750 staking fees + GST
- Plus clearing of 5,500 m<sup>2</sup> of land (roughly 1.5 acres)  
Average land clearing cost/acre assumed at \$1,000 (total = \$1,500 + GST)
- Total = \$21,250 + GST

Please see Appendix G for a copy of the quote.

## 5.3 ACCESS

There is an existing road off the Highway, which goes by the site. It should be possible to access the building site from this road, rather than developing a new approach from the highway.

## 5.4 WATER

Abattoirs require potable water which meets Canadian Drinking Water Standards. Sourcing municipal water was not considered. According to Link Drilling, the following information is relevant to this area:

- Good water is available at depths of 200 feet
- The approximate cost of two wells would be \$50,000, including drilling, casing, pumps, etc.

Water from a non-treated source will need periodic testing (bi-weekly).

## 6.0 FACILITY (PRELIMINARY)

### 6.1 BUILDING

A facility to process 6,000 to 8,000 AUs per year would typically be laid out as per the included drawings. This plant, not including the holding areas, has a total area of 9,880 s.f. It does not include provision for retail.

The approximate cost of the basic building including cooling and refrigeration at \$170/s.f. would be \$1,679,600. This is based on recent quotes for a similarly sized plant in Northwestern Ontario.

It should be noted that these preliminary drawings do not represent an approved CFIA design. The process for approval is complex and requires ongoing consultation with CFIA. In addition, the floor plan is subject to modification during the design process. These plans were prepared in consultation with Sperling Boss, of Omaha and Winnipeg, Manitoba, who are suppliers to the industry in Canada and the USA. The following represent issues which could result in modifications and cost changes.

- 1) The plan shows separate pork and beef slaughter areas. One combined area would reduce costs.
- 2) The degree of further processing that will be undertaken (production of ham, sausage, prepared meats, etc.) could impact on the size of the processing room.
- 3) Cooler hang times will impact on the size of refrigeration. Long hang times mean coolers must be sized to hold more inventory.

- 4) Federal regulations require separate coolers/freezers for beef and pork.

## 6.2 EQUIPMENT COSTS

The cost of equipment for the proposed plant will depend on a number of factors, including:

- whether new or used (refurbished) equipment is used;
- how mechanized the operation will be; and
- what degree of processing will be done – will there be value-added (bacon, ham, sausages, etc.)

A typical new equipment inventory, as per the following, has been provided by Sperling Boss, along with a cost of supply and installation. This cost estimate does not include moveable items/hand tools, such as knives, carts, trolleys, rail hooks, etc. Sperling Boss suggested an additional allowance of \$100,000 be allowed for these items.

In order to reduce the capital cost, it may be possible to use refurbished equipment.

The consultants were unable to find one specific supplier with equipment on hand to cover the complete list noted in the new equipment list from Sperling Boss. Typically, refurbished equipment sells at 50% of new. However, equipment can also be made available at greater discounts from plant closeouts (voluntary closures, bankruptcies, foreclosures, etc.). An experienced operator could evaluate whether such buying opportunities would provide a basis to proceed at a lower cost.

For the purposes of analysis, we have run a second scenario based on the following:

- 50% discount from new for acquisition \$900k to \$450k
- insulation at same price
- hand/inevitable at same price

**Temiskaming Abattoir  
100/WK Beef and Pork Plant  
Equipment List (new)**

**Section 1**

|      |                        |
|------|------------------------|
| 1.02 | Beef Hoist             |
| 1.03 | Shackle Lander         |
| 1.04 | Shackle Positioner     |
| 1.05 | Bleed Rail             |
| 1.06 | Shackle Dropper        |
| 1.07 | Shackle Release        |
| 1.08 | Support Steel          |
| 1.09 | Blood Pan              |
| 1.10 | Skinning High Platform |
| 1.11 | Skin Front Platform    |
| 1.12 | Skin Butt Platform     |
| 1.13 | Hide Puller Assembly   |

**Section 2**

|      |                        |
|------|------------------------|
| 2.01 | Pork Knock Box         |
| 2.02 | Pork Hoist and Trolley |
| 2.03 | Hoist Rail Assembly    |
| 2.04 | Bleed Pan              |
| 2.05 | Scald Tank             |
| 2.06 | Dehairer               |
| 2.07 | Shavers Platform       |
| 2.08 | Splitter Stand         |
| 2.09 | Dropper/Spreader       |
| 2.10 | (2) Viscera Trucks     |
| 2.11 | Pork Hoist             |
| 2.12 | Meat Rail Assembly     |
| 2.13 | Inspection Platform    |
| 2.14 | Support Steel          |

**Temiskaming Abattoir  
100/WK Beef and Pork Plant  
Equipment List (new)**

**Section 3**

|      |                         |
|------|-------------------------|
| 3.01 | Beef Head Rack          |
| 3.02 | Beef Head Flush Cabinet |
| 3.03 | Dropper/Spreader        |
| 3.04 | Splitter Platform       |
| 3.05 | Inspection Platform     |
| 3.06 | Wash Platform           |
| 3.07 | Paunch Platform         |
| 3.08 | Paunch Opening Table    |
| 3.09 | Drain Table             |
| 3.10 | Drain Table             |
| 3.11 | 5'0" Tripe Washer       |
| 3.12 | Meat Rail Assembly      |
| 3.13 | Support Steel           |

**Section 4**

|      |                        |
|------|------------------------|
| 4.01 | Chill Cooler Rails     |
| 4.02 | Support Steel          |
| 4.03 | Holding Cooler Rails   |
| 4.04 | Support Steel          |
| 4.05 | Rail Scale             |
| 4.06 | Rail Hoist             |
| 4.07 | 30" Table Saw          |
| 4.08 | Paunch Platform        |
| 4.09 | Boning Table           |
| 4.10 | Trim Collection Belt   |
| 4.11 | Trim Collection Belt   |
| 4.12 | Cuts Belt              |
| 4.13 | Chamber Vacuum Machine |
| 4.14 | Shrink Tunnel          |
| 4.15 | Packaged Belt          |

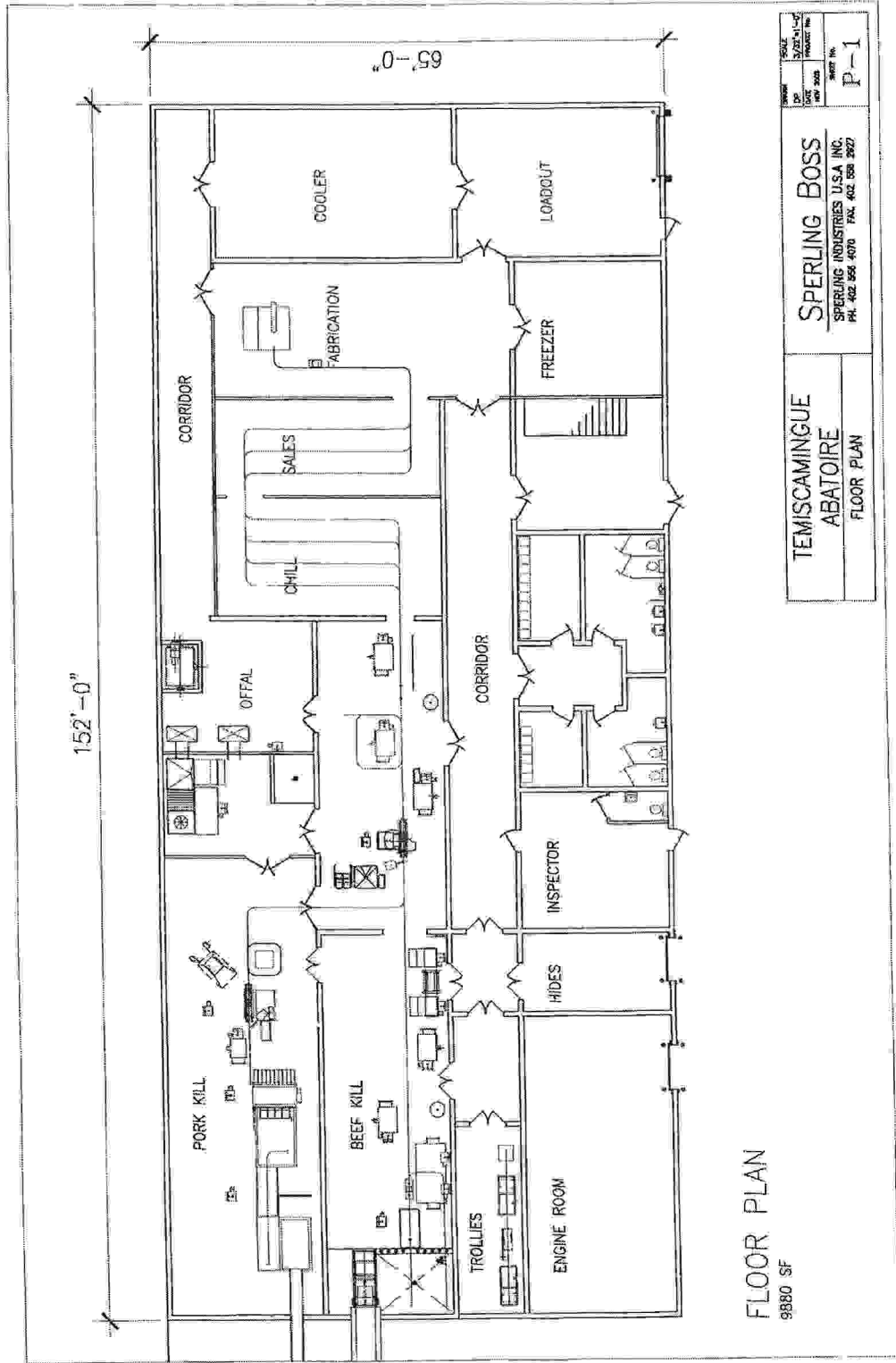
|                          | <u>New</u> | <u>Used/Refurbished</u> |
|--------------------------|------------|-------------------------|
| Budget Price – Equipment | \$900,000  | \$450,000               |
| Budget Price – Install   | 300,000    | 300,000                 |

### 6.3 SUMMARY OF COSTS

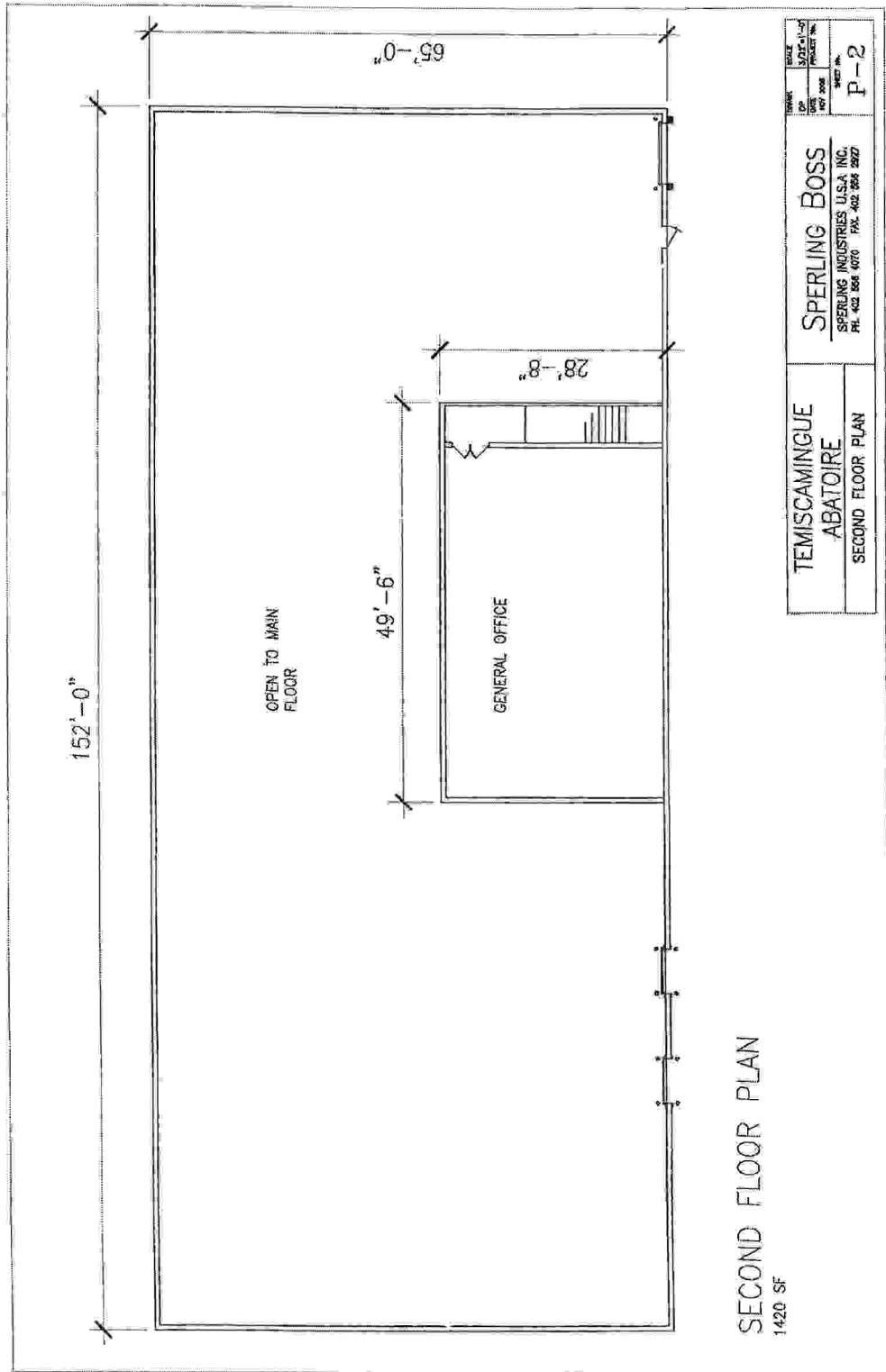
|  | New Equipment      | Used Equipment     |
|--|--------------------|--------------------|
| Basic Building   | \$1,679,600        | \$1,679,600        |
| Equipment (Fixed)  | \$900,000          | 450,000            |
| Installation   | 300,000            | 300,000            |
| Moveable Allowance   | <u>100,000</u>     | <u>100,000</u>     |
|  | \$1,300,000        | \$850,000          |
| Infrastructure   |                    |                    |
| Hydro  | \$21,250           | \$21,250           |
| Wells  | 50,000             | 50,000             |
| Sewage   | 600,000            | 600,000            |
| Composting Facility (including equipment)  | <u>75,000</u>      | <u>75,000</u>      |
|  | \$746,250          | \$746,250          |
| Sub-total  | \$3,725,850        | \$3,275,850        |
| Engineering, Design, and Project Management at 8% on building,<br>sewage and compost lot | <u>184,368</u>     | <u>184,368</u>     |
| <b>Total</b>   | <b>\$3,910,218</b> | <b>\$3,460,218</b> |
| Contingency at 5%  | 195,510            | 173,010            |
| <b>Total</b>   | <b>\$4,105,728</b> | <b>\$3,633,228</b> |

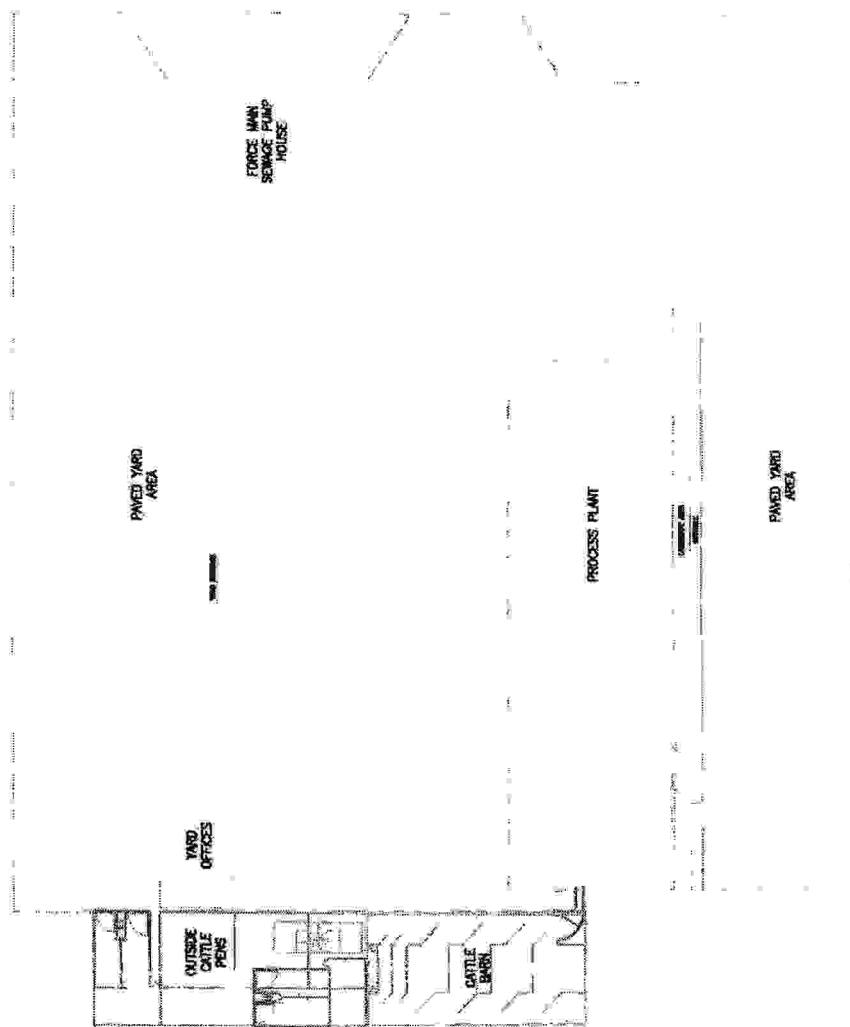
### ALLOCATION

|   | New Equipment      | Used Equipment     |
|---|--------------------|--------------------|
| Building  | \$1,679,600        | \$1,679,600        |
| Design @ 8%                                       | 134,368            | 134,368            |
| Subtotal  | 1,813,968          | 1,813,968          |
| Contingency @ 5%                                  | <u>90,698</u>      | <u>90,698</u>      |
| <b>Total</b>                                      | <b>\$1,904,666</b> | <b>\$1,904,666</b> |
| Equipment   | \$1,300,000        | \$850,000          |
| Contingency @ 5%                                  | <u>65,000</u>      | <u>42,500</u>      |
| <b>Total</b>                                      | <b>\$1,365,000</b> | <b>\$892,500</b>   |
| Infrastructure                                    | \$766,250          | \$766,250          |
| Design on sewage and compost lot (\$625,000) @ 8% | 50,000             | 50,000             |
| Subtotal  | 796,250            | 796,250            |
| Contingency @ 5%                                  | <u>39,812</u>      | <u>39,812</u>      |
| <b>Total</b>                                      | <b>\$836,062</b>   | <b>\$836,062</b>   |
| <b>Total Cost Allocated</b>                       | <b>\$4,105,728</b> | <b>\$3,633,228</b> |









## 6.4 SOURCES

| Grants  | New Equipment      | Used Equipment     |
|---|--------------------|--------------------|
| Hydro One (75% grant for Hydro) (\$22,312 x 0.75)                   | 16,734             | 16,734             |
| Remaining Infrastructure (2/3 Government)                           | 542,771            | 542,771            |
| 25% on Building and Equipment (3,269,666) (used 25% on \$2,797,100) | 817,416            | 699,275            |
| <b>Total Grants</b>   | <b>\$1,376,921</b> | <b>\$1,258,780</b> |
| Equity @ 25% of Total Project                                       | 1,026,432          | 908,307            |
| Sub-total   | \$2,403,353        | 2,167,087          |
| Net To Finance (Capital)  | 1,702,375          | 1,566,141          |
| TCFDC   | 500,000            | 500,000            |
| Bank Loan(s)*   | 1,302,375          | 1,066,141          |
| <b>Total</b>  | <b>\$4,205,728</b> | <b>\$3,733,228</b> |

\* \$100,000 added for working capital

## 7.0 FINANCIAL PROJECTIONS

The first set of projections represent the new equipment scenario based on 100% capture of the market identified in the latest research. These projections also assume a very significant amount of equity and government support, leaving a debt to equity ratio of 43%.

The custom processing pricing assumes all slaughtered animals would also be processed (cut and wrap). Revenue per hog and beef units were assumed at \$125 and \$200 respectively.

In our opinion, obtaining this level of financing from external sources may be challenging. These will need to be a substantial reduction in the project costs in order to provide for a lower level of total investment.

The overall capital cost represents a total investment of \$375 per square foot, which is in line with industry averages for new plants. However, some savings could be obtained if local/regional contractors can provide a lower cost per square foot for the building portion.

The second set of projections is based on obtaining used/refurbished equipment at a cost of 50% of new. These projections show increased profits, due to reduced interest and depreciation costs.

In both cases, achieving the sales levels depicted will depend on the success of the marketing component. There are also inherent risks in the industry since low prices are based on the North American market. In certain instances, lower prices and retail prices can be such that packer/processor margins can be severely reduced. In these situations, the processor will need the financial capacity to survive until the prices change.

| <b>South Temiskaming Abattoir</b><br><b>Income and Expense Projections</b><br><b>New Equipment Option</b><br>Date: January 2006 |               |               |               |               |               |
|---|---------------|---------------|---------------|---------------|---------------|
|   | <u>Year 1</u> | <u>Year 2</u> | <u>Year 3</u> | <u>Year 4</u> | <u>Year 5</u> |
| Revenue   |               |               |               |               |               |
| Total Sales   | \$3,123,350   | \$3,264,293   | \$3,447,084   | \$3,589,344   | \$3,789,462   |
| Less: Direct Costs  | 2,435,727     | 2,558,178     | 2,685,652     | 2,820,375     | 2,961,279     |
| Total Gross Profit  | \$687,623     | \$706,115     | \$761,432     | \$768,969     | \$828,184     |
| Expenses  |               |               |               |               |               |
| Inspection Fees   | \$48,000      | \$48,000      | \$48,000      | \$48,000      | \$48,000      |
| Insurance   | 24,000        | 24,000        | 24,000        | 24,000        | 24,000        |
| Bank Charges  | 600           | 600           | 600           | 600           | 600           |
| Communications  | 6,000         | 6,000         | 6,000         | 6,000         | 6,000         |
| Advertising/Donations   | 31,234        | 32,643        | 34,471        | 35,893        | 37,895        |
| Uniforms  | 2,000         | 2,000         | 2,000         | 2,000         | 2,000         |
| Professional Fees   | 8,000         | 8,000         | 8,000         | 8,000         | 8,000         |
| Sub-Total   | \$119,834     | \$121,243     | \$123,071     | \$124,493     | \$126,495     |
| Staffing  |               |               |               |               |               |
| General Manager   | \$50,000      | \$50,000      | \$50,000      | \$50,000      | \$50,000      |
| Clerical Staff  | 28,000        | 28,000        | 28,000        | 28,000        | 28,000        |
| Accounting Staff  | 24,000        | 28,000        | 28,000        | 28,000        | 28,000        |
| Sub-Total Wages   | 102,000       | 106,000       | 106,000       | 106,000       | 106,000       |
| Add: Benefits (10%)   | 10,200        | 10,600        | 10,600        | 10,600        | 10,600        |
| Total Staffing Costs  | 112,200       | 116,600       | 116,600       | 116,600       | 116,600       |
| Utilities   | 25,000        | 25,000        | 25,000        | 25,000        | 25,000        |
| Repairs/Maintenance   | 15,000        | 15,000        | 15,000        | 15,000        | 15,000        |
|   | \$272,034     | \$277,843     | \$279,671     | \$281,093     | \$283,095     |
| Net Income BDT  | \$415,590     | \$428,272     | \$481,761     | \$487,876     | \$545,089     |
| Less: Interest costs  | 74,887        | 69,138        | 63,059        | 56,630        | 49,832        |
| Net Income BDT  | \$340,703     | \$359,134     | \$418,702     | \$431,245     | \$495,257     |
| Less: Depreciation  | 349,187       | 291,539       | 244,934       | 207,181       | 176,530       |
| Net Income BT   | -\$8,483      | \$67,595      | \$173,768     | \$224,064     | \$318,728     |
| Less: Taxes   |               | 16,899        | 43,442        | 56,016        | 79,682        |
| Net Income  | -\$8,483      | \$50,696      | \$130,326     | \$168,048     | \$239,046     |

**South Temiskaming Abattoir****Cash Flow Projection****New Equipment Option**

Date: January, 2006

|                               | <u>Start-Up</u>    | <u>Year 1</u>    | <u>Year 2</u>    | <u>Year 3</u>    | <u>Year 4</u>      | <u>Year 5</u>      |
|-------------------------------|--------------------|------------------|------------------|------------------|--------------------|--------------------|
| <b>Sources of Funds</b>       |                    |                  |                  |                  |                    |                    |
| <b>Equity</b>                 |                    |                  |                  |                  |                    |                    |
| Owners                        | \$1,026,432        | \$ -             | \$ -             | \$ -             | \$ -               | \$ -               |
| Ontario/Canada/Hydro One      | 1,376,921          | -                | -                | -                | -                  | -                  |
| <b>Total Equity</b>           | <b>\$2,403,353</b> | <b>\$ -</b>      | <b>\$ -</b>      | <b>\$ -</b>      | <b>\$ -</b>        | <b>\$ -</b>        |
| <b>Debt Financing</b>         |                    |                  |                  |                  |                    |                    |
| RRFDC Loan                    | \$500,000          | \$ -             | \$ -             | \$ -             | \$ -               | \$ -               |
| FCC Capital Loan              | 1,302,375          | -                | -                | -                | -                  | -                  |
| <b>Total Debt Financing</b>   | <b>\$1,802,375</b> | <b>\$ -</b>      | <b>\$ -</b>      | <b>\$ -</b>      | <b>\$ -</b>        | <b>\$ -</b>        |
| <b>Net Income</b>             | <b>\$ -</b>        | <b>-\$8,483</b>  | <b>\$50,696</b>  | <b>\$130,326</b> | <b>\$168,048</b>   | <b>\$239,046</b>   |
| <b>Add: Depreciation</b>      |                    | <b>349,187</b>   | <b>291,539</b>   | <b>244,934</b>   | <b>207,181</b>     | <b>176,530</b>     |
| <b>Total Sources of Funds</b> | <b>\$4,205,728</b> | <b>\$340,703</b> | <b>\$342,236</b> | <b>\$375,260</b> | <b>\$375,229</b>   | <b>\$415,575</b>   |
| <b>Uses of Funds</b>          |                    |                  |                  |                  |                    |                    |
| Building Construction         | \$1,904,666        | \$ -             | \$ -             | \$ -             | \$ -               | \$ -               |
| Equipment Purchases           | 1,365,000          | -                | -                | -                | -                  | -                  |
| Infrastructure                | 836,062            | -                | -                | -                | -                  | -                  |
| Loan Repayment (Prin. Only)   | -                  | 99,974           | 105,723          | 111,802          | 118,231            | 125,029            |
| <b>Total Uses</b>             | <b>\$4,105,728</b> | <b>\$99,974</b>  | <b>\$105,723</b> | <b>\$111,802</b> | <b>\$118,231</b>   | <b>\$125,029</b>   |
| <b>Net Cash Flow</b>          | <b>\$100,000</b>   | <b>\$240,729</b> | <b>\$236,513</b> | <b>\$263,458</b> | <b>\$256,999</b>   | <b>\$290,546</b>   |
| <b>Beginning Cash Balance</b> | <b>\$ -</b>        | <b>\$100,000</b> | <b>\$340,729</b> | <b>\$577,242</b> | <b>\$840,699</b>   | <b>\$1,097,698</b> |
| <b>Ending Cash Balance</b>    | <b>\$100,000</b>   | <b>\$340,729</b> | <b>\$577,242</b> | <b>\$840,699</b> | <b>\$1,097,698</b> | <b>\$1,388,244</b> |

**South Temiskaming Abattoir**  
**Balance Sheet Projection**  
**New Equipment Option**  
Date: January, 2006

|                                     | <u>Start-Up</u>    | <u>Year 1</u>      | <u>Year 2</u>      | <u>Year 3</u>      | <u>Year 4</u>      | <u>Year 5</u>      |
|-------------------------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|
| <b>Assets</b>                       |                    |                    |                    |                    |                    |                    |
| <b>Current Assets</b>               |                    |                    |                    |                    |                    |                    |
| Cash                                | \$75,000           | \$190,045          | \$420,147          | \$675,498          | \$925,986          | \$1,207,684        |
| Account Receivables                 | -                  | 124,934            | 130,572            | 137,883            | 143,574            | 151,578            |
| Inventory                           | 25,000             | 25,750             | 26,523             | 27,318             | 28,138             | 28,982             |
| <b>Total Current Assets</b>         | <b>\$100,000</b>   | <b>\$340,729</b>   | <b>\$577,242</b>   | <b>\$840,699</b>   | <b>\$1,097,698</b> | <b>\$1,388,244</b> |
| <b>Long Term Assets</b>             |                    |                    |                    |                    |                    |                    |
| Building                            | \$1,904,666        | \$1,828,479        | \$1,755,340        | \$1,685,127        | \$1,617,722        | \$1,553,013        |
| Equipment                           | 1,365,000          | 1,092,000          | 873,600            | 698,880            | 559,104            | 447,283            |
| Other costs                         | 836,062            | 836,062            | 836,062            | 836,062            | 836,062            | 836,062            |
| <b>Total Long Term Assets</b>       | <b>\$4,105,728</b> | <b>\$3,756,541</b> | <b>\$3,465,002</b> | <b>\$3,220,069</b> | <b>\$3,012,888</b> | <b>\$2,836,358</b> |
| <b>Total Assets</b>                 | <b>\$4,205,728</b> | <b>\$4,097,270</b> | <b>\$4,042,244</b> | <b>\$4,060,768</b> | <b>\$4,110,585</b> | <b>\$4,224,602</b> |
| <b>Liabilities</b>                  |                    |                    |                    |                    |                    |                    |
| STFDC Loan                          | \$500,000          | \$500,000          | \$500,000          | \$500,000          | \$500,000          | \$500,000          |
| FCC Capital Loan                    | 1,302,375          | 1,202,401          | 1,096,678          | 984,876            | 866,645            | 741,616            |
| Incentive grants                    | 1,376,921          | 1,376,921          | 1,376,921          | 1,376,921          | 1,376,921          | 1,376,921          |
| <b>Total Liabilities</b>            | <b>\$3,179,296</b> | <b>\$3,079,322</b> | <b>\$2,973,599</b> | <b>\$2,861,797</b> | <b>\$2,743,566</b> | <b>\$2,618,537</b> |
| <b>Equity</b>                       |                    |                    |                    |                    |                    |                    |
| Start Balance                       | \$1,026,432        | \$1,026,432        | \$1,017,949        | \$1,068,645        | \$1,198,971        | \$1,367,019        |
| Additions                           | -                  | - 8,483            | 50,696             | 130,326            | 168,048            | 239,046            |
| Ending Balance                      | \$1,026,432        | \$1,017,949        | \$1,068,645        | \$1,198,971        | \$1,367,019        | \$1,606,065        |
| <b>Total Equity and Liabilities</b> | <b>\$4,205,728</b> | <b>\$4,097,270</b> | <b>\$4,042,244</b> | <b>\$4,060,768</b> | <b>\$4,110,585</b> | <b>\$4,224,602</b> |

**South Temiskaming Abattoir**  
**Depreciation Schedules**  
**New Equipment Option**  
 Date: January, 2006

**Equipment (20% Declining Balance)**

| <u>Year</u> | <u>Opening Balance</u> | <u>Depreciation</u> | <u>Acc. Depreciation.</u> | <u>End Balance</u> |
|-------------|------------------------|---------------------|---------------------------|--------------------|
| 1           | \$1,365,000            | \$273,000           | \$273,000                 | \$1,092,000        |
| 2           | 1,092,000              | 218,400             | 491,400                   | 873,600            |
| 3           | 873,600                | 174,720             | 666,120                   | 698,880            |
| 4           | 698,880                | 139,776             | 805,896                   | 559,104            |
| 5           | 559,104                | 111,821             | 917,717                   | 447,283            |

**Buildings (4% Declining Balance)**

| <u>Year</u> | <u>Opening Balance</u> | <u>Depreciation</u> | <u>Acc. Depreciation.</u> | <u>End Balance</u> |
|-------------|------------------------|---------------------|---------------------------|--------------------|
| 1           | \$1,904,666            | \$76,187            | \$76,187                  | \$1,828,479        |
| 2           | 1,828,479              | 73,139              | 149,326                   | 1,755,340          |
| 3           | 1,755,340              | 70,214              | 219,539                   | 1,685,127          |
| 4           | 1,685,127              | 67,405              | 286,944                   | 1,617,722          |
| 5           | 1,617,722              | 64,709              | 351,653                   | 1,553,013          |



**South Temiskaming Abattoir****Loan Schedules****New Equipment Option**

Prime Lending Rate: 3.75%

Date: January, 2006

**STFDC Loan**

Details: Interest Only Years 1 to 5, 7.25%, 10 Year Amortization, 7.25% Years 6 to 15, Annual Payment

| <u>Year</u> | <u>Opening Balance</u> | <u>Principle Payment</u> | <u>Interest Payment</u> | <u>Total Payment</u> | <u>End Balance</u> |
|-------------|------------------------|--------------------------|-------------------------|----------------------|--------------------|
| 1           | \$500,000              | \$ -                     | \$36,250                | \$36,250             | \$500,000          |
| 2           | 500,000                | -                        | 36,250                  | 36,250               | 500,000            |
| 3           | 500,000                | -                        | 36,250                  | 36,250               | 500,000            |
| 4           | 500,000                | -                        | 36,250                  | 36,250               | 500,000            |
| 5           | 500,000                | -                        | 36,250                  | 36,250               | 500,000            |
| 6           | 500,000                | 35,764                   | 36,250                  | 72,014               | 464,236            |
| 7           | 464,236                | 38,357                   | 33,657                  | 72,014               | 425,880            |
| 8           | 425,880                | 41,137                   | 30,876                  | 72,014               | 384,742            |
| 9           | 384,742                | 44,120                   | 27,894                  | 72,014               | 340,623            |
| 10          | 340,623                | 47,319                   | 24,695                  | 72,014               | 293,304            |
| 11          | 293,304                | 50,749                   | 21,265                  | 72,014               | 242,555            |
| 12          | 242,555                | 54,428                   | 17,585                  | 72,014               | 188,127            |
| 13          | 188,127                | 58,374                   | 13,639                  | 72,014               | 129,752            |
| 14          | 129,752                | 62,607                   | 9,407                   | 72,014               | 67,146             |
| 15          | 67,146                 | 67,146                   | 4,868                   | 72,014               | 0                  |

**FCC Capital Loan**

Details: 10 Year Amortization, Prime Plus 2% Years 1 to 10, Annual Payment

| <u>Year</u> | <u>Opening Balance</u> | <u>Principle Payment</u> | <u>Interest Payment</u> | <u>Total Payment</u> | <u>End Balance</u> |
|-------------|------------------------|--------------------------|-------------------------|----------------------|--------------------|
| 1           | \$1,302,375            | \$99,974                 | \$74,887                | \$174,861            | \$1,202,401        |
| 2           | 1,202,401              | 105,723                  | 69,138                  | 174,861              | 1,096,678          |
| 3           | 1,096,678              | 111,802                  | 63,059                  | 174,861              | 984,876            |
| 4           | 984,876                | 118,231                  | 56,630                  | 174,861              | 866,645            |
| 5           | 866,645                | 125,029                  | 49,832                  | 174,861              | 741,616            |
| 6           | 741,616                | 132,218                  | 42,643                  | 174,861              | 609,398            |
| 7           | 609,398                | 139,821                  | 35,040                  | 174,861              | 469,577            |
| 8           | 469,577                | 147,860                  | 27,001                  | 174,861              | 321,717            |
| 9           | 321,717                | 156,362                  | 18,499                  | 174,861              | 165,355            |
| 10          | 165,355                | 165,355                  | 9,508                   | 174,863              | 0                  |

| <b>South Temiskaming Abattoir</b>          |                    |                    |                    |                    |                    |
|--|--------------------|--------------------|--------------------|--------------------|--------------------|
| <b>Cost of Sales Projection</b>            |                    |                    |                    |                    |                    |
| <b>New Equipment Option</b>                |                    |                    |                    |                    |                    |
| Date: January, 2006                        |                    |                    |                    |                    |                    |
|  | <u>Year 1</u>      | <u>Year 2</u>      | <u>Year 3</u>      | <u>Year 4</u>      | <u>Year 5</u>      |
| <b>Sales</b>                               |                    |                    |                    |                    |                    |
| Custom Beef & Pork                         | \$449,449          | \$455,914          | \$498,835          | \$493,128          | \$538,414          |
| Fat Stock Meat                             | 1,290,694          | 1,355,849          | 1,423,208          | 1,494,600          | 1,569,097          |
| Cow Meat                                   | 475,979            | 500,007            | 524,848            | 551,175            | 578,648            |
| Pork Meat                                  | 782,457            | 821,484            | 862,612            | 905,992            | 951,654            |
| Hide Sales                                 | 124,770            | 131,040            | 137,580            | 144,450            | 151,650            |
| <b>Total Sales</b>                         | <b>\$3,123,350</b> | <b>\$3,264,293</b> | <b>\$3,447,084</b> | <b>\$3,589,344</b> | <b>\$3,789,462</b> |
| <b>Commissions (5% of Sales)</b>           | <b>\$127,457</b>   | <b>\$133,867</b>   | <b>\$140,533</b>   | <b>\$147,588</b>   | <b>\$154,970</b>   |
| <b>Cost of Animal Purchases</b>            |                    |                    |                    |                    |                    |
| Fat Stock Purchases                        | \$1,032,555        | \$1,084,679        | \$1,138,567        | \$1,195,680        | \$1,255,277        |
| Cow Purchases                              | 309,387            | 325,005            | 341,151            | 358,264            | 376,121            |
| Hog Purchases                              | 586,843            | 616,113            | 646,959            | 679,494            | 713,740            |
| <b>Total Cost of Animal Purchases</b>      | <b>\$1,928,785</b> | <b>\$2,025,796</b> | <b>\$2,126,677</b> | <b>\$2,233,437</b> | <b>\$2,345,139</b> |
| <b>Direct Labour Costs</b>                 |                    |                    |                    |                    |                    |
| Hours/Animal Unit (AU)                     | 2.5                | 2.5                | 2.5                | 2.5                | 2.5                |
| No of AUs                                  | 5,071              | 5,326              | 5,592              | 5,871              | 6,163              |
| Total Hours Worked                         | 12,678             | 13,314             | 13,980             | 14,678             | 15,407             |
| Wage Rate                                  | \$15.00            | \$15.00            | \$15.00            | \$15.00            | \$15.00            |
| Benefits                                   | 10%                | 10%                | 10%                | 10%                | 10%                |
| Total Wage Costs/Hour                      | \$16.50            | \$16.50            | \$16.50            | \$16.50            | \$16.50            |
| <b>Total Direct Labour Costs</b>           | <b>\$209,191</b>   | <b>\$219,681</b>   | <b>\$230,666</b>   | <b>\$242,191</b>   | <b>\$254,220</b>   |
| <b>Water and Waste Disposal Costs</b>      |                    |                    |                    |                    |                    |
| Water Costs/AU                             | \$0.25             | \$0.25             | \$0.25             | \$0.25             | \$0.25             |
| Liquid Disposal Costs/AU                   | 2.00               | 2.00               | 2.00               | 2.00               | 2.00               |
| Solid Disposal Costs/AU                    | 6.33               | 6.33               | 6.33               | 6.33               | 6.33               |
| Total Waste Disposal Costs/AU              | 8.58               | 8.58               | 8.58               | 8.58               | 8.58               |
| <b>Total Waste Disposal Costs</b>          | <b>\$43,512</b>    | <b>\$45,694</b>    | <b>\$47,979</b>    | <b>\$50,376</b>    | <b>\$52,878</b>    |
| <b>Freight Costs</b>                       |                    |                    |                    |                    |                    |
| Freight Out per AU                         | \$15.00            | \$15.00            | \$15.00            | \$15.00            | \$15.00            |
| <b>Total Freight Costs</b>                 | <b>\$76,070</b>    | <b>\$79,884</b>    | <b>\$83,879</b>    | <b>\$88,070</b>    | <b>\$92,444</b>    |
| <b>Materials &amp; Miscellaneous Costs</b> |                    |                    |                    |                    |                    |
| Material and Misc. Cost/AU                 | \$10.00            | \$10.00            | \$10.00            | \$10.00            | \$10.00            |
| <b>Total Material &amp; Misc. Costs</b>    | <b>\$50,713</b>    | <b>\$53,256</b>    | <b>\$55,919</b>    | <b>\$58,713</b>    | <b>\$61,629</b>    |
| <b>Total Direct Costs</b>                  | <b>\$2,435,727</b> | <b>\$2,558,178</b> | <b>\$2,685,652</b> | <b>\$2,820,375</b> | <b>\$2,961,279</b> |
| <b>Gross Profit</b>                        | <b>\$687,623</b>   | <b>\$706,115</b>   | <b>\$761,432</b>   | <b>\$768,969</b>   | <b>\$828,184</b>   |

**South Temiskaming Abattoir**

**Custom Beef and Pork Killing Sales**

Date: January, 2006

**Beef: Cows**

| Month     | Year 1    |             | Year 2     |           | Year 3      |            | Year 4    |             | Year 5     |           |             |            |      |       |           |
|-----------|-----------|-------------|------------|-----------|-------------|------------|-----------|-------------|------------|-----------|-------------|------------|------|-------|-----------|
|           | Cow Units | Killing Fee | Total Fees | Cow Units | Killing Fee | Total Fees | Cow Units | Killing Fee | Total Fees | Cow Units | Killing Fee | Total Fees |      |       |           |
| January   | 60        | \$200       | \$12,000   | 57        | \$200       | \$11,400   | 69        | \$200       | \$13,832   | 59        | \$200       | \$11,800   | 68   | \$200 | \$13,600  |
| February  | 60        | 200         | 12,000     | 57        | 200         | 11,400     | 69        | 200         | 13,832     | 59        | 200         | 11,800     | 68   | 200   | 13,600    |
| March     | 72        | 200         | 14,336     | 65        | 200         | 13,000     | 79        | 200         | 15,808     | 67        | 200         | 13,400     | 87   | 200   | 17,422    |
| April     | 72        | 200         | 14,336     | 65        | 200         | 13,000     | 79        | 200         | 15,808     | 67        | 200         | 13,400     | 87   | 200   | 17,422    |
| May       | 77        | 200         | 15,400     | 73        | 200         | 14,600     | 89        | 200         | 17,784     | 76        | 200         | 15,200     | 88   | 200   | 17,600    |
| June      | 90        | 200         | 17,920     | 94        | 200         | 18,817     | 99        | 200         | 19,760     | 104       | 200         | 20,743     | 98   | 200   | 19,600    |
| July      | 90        | 200         | 17,920     | 94        | 200         | 18,817     | 99        | 200         | 19,760     | 104       | 200         | 20,743     | 98   | 200   | 19,600    |
| August    | 77        | 200         | 15,400     | 73        | 200         | 14,600     | 89        | 200         | 17,784     | 76        | 200         | 15,200     | 88   | 200   | 17,600    |
| September | 72        | 200         | 14,336     | 65        | 200         | 13,000     | 79        | 200         | 15,808     | 67        | 200         | 13,400     | 87   | 200   | 17,422    |
| October   | 72        | 200         | 14,336     | 65        | 200         | 13,000     | 79        | 200         | 15,808     | 67        | 200         | 13,400     | 87   | 200   | 17,422    |
| November  | 72        | 200         | 14,336     | 65        | 200         | 13,000     | 79        | 200         | 15,808     | 67        | 200         | 13,400     | 87   | 200   | 17,422    |
| December  | 72        | 200         | 14,336     | 65        | 200         | 13,000     | 79        | 200         | 15,808     | 67        | 200         | 13,400     | 87   | 200   | 17,422    |
| Total     | 883       |             | \$176,658  | 838       |             | \$167,635  | 988       |             | \$197,602  | 879       |             | \$175,886  | 1031 |       | \$206,129 |

South Temiskaming Abattoir

Custom Beef and Pork Killing Sales

Date: January, 2006

Beef: Fat Cattle

| Month     | Year 1              |             | Year 2     |                     | Year 3      |            | Year 4              |             | Year 5     |                     |             |            |
|-----------|---------------------|-------------|------------|---------------------|-------------|------------|---------------------|-------------|------------|---------------------|-------------|------------|
|           | Fat Cattle<br>Units | Killing Fee | Total Fees | Fat Cattle<br>Units | Killing Fee | Total Fees | Fat Cattle<br>Units | Killing Fee | Total Fees | Fat Cattle<br>Units | Killing Fee | Total Fees |
| January   | 94                  | \$200       | \$18,816   | 99                  | \$200       | \$19,758   | 104                 | \$200       | \$20,748   | 109                 | \$200       | \$21,780   |
| February  | 94                  | 200         | 18,816     | 99                  | 200         | 19,758     | 104                 | 200         | 20,748     | 109                 | 200         | 21,780     |
| March     | 108                 | 200         | 21,504     | 113                 | 200         | 22,581     | 119                 | 200         | 23,712     | 124                 | 200         | 24,892     |
| April     | 108                 | 200         | 21,504     | 113                 | 200         | 22,581     | 119                 | 200         | 23,712     | 124                 | 200         | 24,892     |
| May       | 121                 | 200         | 24,192     | 127                 | 200         | 25,403     | 133                 | 200         | 26,676     | 140                 | 200         | 28,003     |
| June      | 134                 | 200         | 26,880     | 141                 | 200         | 28,226     | 148                 | 200         | 29,640     | 156                 | 200         | 31,115     |
| July      | 134                 | 200         | 26,880     | 141                 | 200         | 28,226     | 148                 | 200         | 29,640     | 156                 | 200         | 31,115     |
| August    | 121                 | 200         | 24,192     | 127                 | 200         | 25,403     | 133                 | 200         | 26,676     | 140                 | 200         | 28,003     |
| September | 108                 | 200         | 21,504     | 113                 | 200         | 22,581     | 119                 | 200         | 23,712     | 124                 | 200         | 24,892     |
| October   | 108                 | 200         | 21,504     | 113                 | 200         | 22,581     | 119                 | 200         | 23,712     | 124                 | 200         | 24,892     |
| November  | 108                 | 200         | 21,504     | 113                 | 200         | 22,581     | 119                 | 200         | 23,712     | 124                 | 200         | 24,892     |
| December  | 108                 | 200         | 21,504     | 113                 | 200         | 22,581     | 119                 | 200         | 23,712     | 124                 | 200         | 24,892     |
| Total     | 1,344               |             | \$268,804  | 1,411               |             | \$282,260  | 1,482               |             | \$296,402  | 1,556               |             | \$311,145  |
|           |                     |             |            |                     |             |            |                     |             |            |                     |             |            |
|           |                     |             |            |                     |             |            |                     |             |            |                     |             | \$326,654  |

South Temiskaming Abattoir

Custom Beef and Pork Killing Sales

Date: January, 2006

Beef: Cows and Fat Cattle

| Month     | Year 1    |            |            | Year 2    |            |            | Year 3    |            |            | Year 4    |            |            | Year 5    |            |            |
|-----------|-----------|------------|------------|-----------|------------|------------|-----------|------------|------------|-----------|------------|------------|-----------|------------|------------|
|           | Cows      | Fat Cattle | Total Fees | Cows      | Fat Cattle | Total Fees | Cows      | Fat Cattle | Total Fees | Cows      | Fat Cattle | Total Fees | Cows      | Fat Cattle | Total Fees |
| January   | \$12,000  | \$18,816   | \$30,816   | \$11,400  | \$19,758   | \$31,158   | \$13,832  | \$20,748   | \$34,580   | \$11,800  | \$21,780   | \$33,580   | \$13,600  | \$22,866   | \$36,466   |
| February  | 12,000    | 18,816     | 30,816     | 11,400    | 19,758     | 31,158     | 13,832    | 20,748     | 34,580     | 11,800    | 21,780     | 33,580     | 13,600    | 22,866     | 36,466     |
| March     | 14,336    | 21,504     | 35,841     | 13,000    | 22,581     | 35,581     | 15,808    | 23,712     | 39,520     | 13,400    | 24,892     | 38,292     | 17,422    | 26,132     | 43,554     |
| April     | 14,336    | 21,504     | 35,841     | 13,000    | 22,581     | 35,581     | 15,808    | 23,712     | 39,520     | 13,400    | 24,892     | 38,292     | 17,422    | 26,132     | 43,554     |
| May       | 15,400    | 24,192     | 39,592     | 14,600    | 25,403     | 40,003     | 17,784    | 26,676     | 44,460     | 15,200    | 28,003     | 43,203     | 17,600    | 29,399     | 46,999     |
| June      | 17,920    | 26,880     | 44,801     | 18,817    | 28,226     | 47,043     | 19,760    | 29,640     | 49,400     | 20,743    | 31,115     | 51,858     | 19,600    | 32,665     | 52,265     |
| July      | 17,920    | 26,880     | 44,801     | 18,817    | 28,226     | 47,043     | 19,760    | 29,640     | 49,400     | 20,743    | 31,115     | 51,858     | 19,600    | 32,665     | 52,265     |
| August    | 15,400    | 24,192     | 39,592     | 14,600    | 25,403     | 40,003     | 17,784    | 26,676     | 44,460     | 15,200    | 28,003     | 43,203     | 17,600    | 29,399     | 46,999     |
| September | 14,336    | 21,504     | 35,841     | 13,000    | 22,581     | 35,581     | 15,808    | 23,712     | 39,520     | 13,400    | 24,892     | 38,292     | 17,422    | 26,132     | 43,554     |
| October   | 14,336    | 21,504     | 35,841     | 13,000    | 22,581     | 35,581     | 15,808    | 23,712     | 39,520     | 13,400    | 24,892     | 38,292     | 17,422    | 26,132     | 43,554     |
| November  | 14,336    | 21,504     | 35,841     | 13,000    | 22,581     | 35,581     | 15,808    | 23,712     | 39,520     | 13,400    | 24,892     | 38,292     | 17,422    | 26,132     | 43,554     |
| December  | 14,336    | 21,504     | 35,841     | 13,000    | 22,581     | 35,581     | 15,808    | 23,712     | 39,520     | 13,400    | 24,892     | 38,292     | 17,422    | 26,132     | 43,554     |
| Total     | \$176,658 | \$268,804  | \$445,463  | \$167,635 | \$282,260  | \$449,895  | \$197,602 | \$296,402  | \$494,004  | \$175,886 | \$311,145  | \$487,031  | \$206,129 | \$326,654  | \$532,783  |

**South Temiskaming Abattoir**

**Custom Beef and Pork Killing Sales**

Date: January, 2006

**Pork: Hogs**

| Month     | Year 1    |             | Year 2    |             | Year 3    |             | Year 4    |             | Year 5    |             |
|-----------|-----------|-------------|-----------|-------------|-----------|-------------|-----------|-------------|-----------|-------------|
|           | Hog Units | Killing Fee | Hog Units | Killing Fee | Hog Units | Killing Fee | Hog Units | Killing Fee | Hog Units | Killing Fee |
| January   | 14        | \$30        | 15        | \$30        | 15        | \$30        | 16        | \$30        | 17        | \$30        |
| February  | 14        | 30          | 14        | 30          | 15        | 30          | 16        | 30          | 17        | 30          |
| March     | 3         | 30          | 16        | 30          | 8         | 30          | 20        | 30          | 12        | 30          |
| April     | 14        | 30          | 16        | 30          | 15        | 30          | 16        | 30          | 17        | 30          |
| May       | 14        | 30          | 18        | 30          | 15        | 30          | 16        | 30          | 17        | 30          |
| June      | 14        | 30          | 20        | 30          | 15        | 30          | 16        | 30          | 17        | 30          |
| July      | 14        | 30          | 20        | 30          | 15        | 30          | 16        | 30          | 17        | 30          |
| August    | 14        | 30          | 18        | 30          | 15        | 30          | 16        | 30          | 17        | 30          |
| September | 14        | 30          | 16        | 30          | 15        | 30          | 16        | 30          | 17        | 30          |
| October   | 2         | 30          | 16        | 30          | 7         | 30          | 18        | 30          | 11        | 30          |
| November  | 14        | 30          | 16        | 30          | 15        | 30          | 16        | 30          | 17        | 30          |
| December  | 2         | 30          | 16        | 30          | 7         | 30          | 18        | 30          | 11        | 30          |
| Total     | 133       | \$3,987     | 201       | \$6,019     | 161       | \$4,832     | 203       | \$6,096     | 188       | \$5,631     |

**South Temiskaming Abattoir**  
**Custom Beef and Pork Killing Sales**  
 Date: January, 2006

**Total Custom Beef and Pork Killing Revenue By Month**

| <u>Month</u> | <u>Year 1</u> | <u>Year 2</u> | <u>Year 3</u> | <u>Year 4</u> | <u>Year 5</u> |
|--------------|---------------|---------------|---------------|---------------|---------------|
| January      | \$31,236      | \$31,597      | \$35,044      | \$34,068      | \$36,978      |
| February     | 31,236        | 31,578        | 35,044        | 34,068        | 36,978        |
| March        | 35,931        | 36,061        | 39,760        | 38,901        | 43,914        |
| April        | 36,260        | 36,061        | 39,984        | 38,779        | 44,066        |
| May          | 40,012        | 40,543        | 44,924        | 43,691        | 47,511        |
| June         | 45,220        | 47,643        | 49,864        | 52,345        | 52,778        |
| July         | 45,220        | 47,643        | 49,864        | 52,345        | 52,778        |
| August       | 40,012        | 40,543        | 44,924        | 43,691        | 47,511        |
| September    | 36,260        | 36,061        | 39,984        | 38,779        | 44,066        |
| October      | 35,901        | 36,061        | 39,730        | 38,840        | 43,884        |
| November     | 36,260        | 36,061        | 39,984        | 38,779        | 44,066        |
| December     | 35,901        | 36,061        | 39,730        | 38,840        | 43,884        |
| Total        | \$449,449     | \$455,914     | \$498,835     | \$493,128     | \$538,414     |

**South Temiskaming Abattoir****Fat Stock Sales**

Date: January, 2006

**Number of Animal Units**

| <u>Month</u> | <u>Year 1</u> | <u>Year 2</u> | <u>Year 3</u> | <u>Year 4</u> | <u>Year 5</u> |
|--------------|---------------|---------------|---------------|---------------|---------------|
| January      | 81            | 85            | 89            | 93            | 98            |
| February     | 81            | 85            | 89            | 93            | 98            |
| March        | 92            | 97            | 102           | 107           | 112           |
| April        | 92            | 97            | 102           | 107           | 112           |
| May          | 104           | 109           | 114           | 120           | 126           |
| June         | 115           | 121           | 127           | 133           | 140           |
| July         | 115           | 121           | 127           | 133           | 140           |
| August       | 104           | 109           | 114           | 120           | 126           |
| September    | 92            | 97            | 102           | 107           | 112           |
| October      | 92            | 97            | 102           | 107           | 112           |
| November     | 92            | 97            | 102           | 107           | 112           |
| December     | 92            | 97            | 102           | 107           | 112           |
| Total        | 1,151         | 1,209         | 1,270         | 1,333         | 1,400         |

**Fat Stock Sale Revenue**

Based on a price of \$1.90/pound  
 Boneless Boxed Beef 590 pounds \$1,121/AU

|           |             |             |             |             |             |
|-----------|-------------|-------------|-------------|-------------|-------------|
| January   | \$90,349    | \$94,909    | \$99,625    | \$104,622   | \$109,837   |
| February  | 90,349      | 94,909      | 99,625      | 104,622     | 109,837     |
| March     | 103,256     | 108,468     | 113,857     | 119,568     | 125,528     |
| April     | 103,256     | 108,468     | 113,857     | 119,568     | 125,528     |
| May       | 116,162     | 122,026     | 128,089     | 134,514     | 141,219     |
| June      | 129,069     | 135,585     | 142,321     | 149,460     | 156,910     |
| July      | 129,069     | 135,585     | 142,321     | 149,460     | 156,910     |
| August    | 116,162     | 122,026     | 128,089     | 134,514     | 141,219     |
| September | 103,256     | 108,468     | 113,857     | 119,568     | 125,528     |
| October   | 103,256     | 108,468     | 113,857     | 119,568     | 125,528     |
| November  | 103,256     | 108,468     | 113,857     | 119,568     | 125,528     |
| December  | 103,256     | 108,468     | 113,857     | 119,568     | 125,528     |
| Total     | \$1,290,694 | \$1,355,849 | \$1,423,208 | \$1,494,600 | \$1,569,097 |



**South Temiskaming Abattoir****Cow Sales**

Date: January, 2006

**Number of Animal Units**

| <u>Month</u> | <u>Year 1</u> | <u>Year 2</u> | <u>Year 3</u> | <u>Year 4</u> | <u>Year 5</u> |
|--------------|---------------|---------------|---------------|---------------|---------------|
| January      | 54            | 56            | 59            | 62            | 65            |
| February     | 54            | 56            | 59            | 62            | 65            |
| March        | 61            | 65            | 68            | 71            | 75            |
| April        | 61            | 65            | 68            | 71            | 75            |
| May          | 69            | 73            | 76            | 80            | 84            |
| June         | 77            | 81            | 85            | 89            | 93            |
| July         | 77            | 81            | 85            | 89            | 93            |
| August       | 69            | 73            | 76            | 80            | 84            |
| September    | 61            | 65            | 68            | 71            | 75            |
| October      | 61            | 65            | 68            | 71            | 75            |
| November     | 61            | 65            | 68            | 71            | 75            |
| December     | 61            | 65            | 68            | 71            | 75            |
| Total        | 768           | 806           | 846           | 889           | 933           |

**Cow Sales Revenue**Based on a price of  
and a carcass weight of\$0.90/pound  
689 pounds

\$620/AU

|           |           |           |           |           |           |
|-----------|-----------|-----------|-----------|-----------|-----------|
| January   | \$33,319  | \$35,000  | \$36,739  | \$38,582  | \$40,505  |
| February  | 33,319    | 35,000    | 36,739    | 38,582    | 40,505    |
| March     | 38,078    | 40,001    | 41,988    | 44,094    | 46,292    |
| April     | 38,078    | 40,001    | 41,988    | 44,094    | 46,292    |
| May       | 42,838    | 45,001    | 47,236    | 49,606    | 52,078    |
| June      | 47,598    | 50,001    | 52,485    | 55,118    | 57,865    |
| July      | 47,598    | 50,001    | 52,485    | 55,118    | 57,865    |
| August    | 42,838    | 45,001    | 47,236    | 49,606    | 52,078    |
| September | 38,078    | 40,001    | 41,988    | 44,094    | 46,292    |
| October   | 38,078    | 40,001    | 41,988    | 44,094    | 46,292    |
| November  | 38,078    | 40,001    | 41,988    | 44,094    | 46,292    |
| December  | 38,078    | 40,001    | 41,988    | 44,094    | 46,292    |
| Total     | \$475,979 | \$500,007 | \$524,848 | \$551,175 | \$578,648 |

**South Temiskaming Abattoir****Pork Meat Sales**

Date: January, 2006

**Number of Animal Units**

| <u>Month</u> | <u>Year 1</u> | <u>Year 2</u> | <u>Year 3</u> | <u>Year 4</u> | <u>Year 5</u> |
|--------------|---------------|---------------|---------------|---------------|---------------|
| January      | 229           | 241           | 253           | 265           | 279           |
| February     | 229           | 241           | 253           | 265           | 279           |
| March        | 287           | 301           | 316           | 332           | 349           |
| April        | 229           | 241           | 253           | 265           | 279           |
| May          | 229           | 241           | 253           | 265           | 279           |
| June         | 229           | 241           | 253           | 265           | 279           |
| July         | 229           | 241           | 253           | 265           | 279           |
| August       | 229           | 241           | 253           | 265           | 279           |
| September    | 229           | 241           | 253           | 265           | 279           |
| October      | 258           | 271           | 284           | 299           | 314           |
| November     | 229           | 241           | 253           | 265           | 279           |
| December     | 258           | 271           | 284           | 299           | 314           |
| Total        | 2866          | 3009          | 3160          | 3319          | 3486          |

**Pork Meat Sales Revenue**Based on a price of  
and a carcass  
weight of

\$1.50/pound

182 pounds

\$273.00/AU

|           |           |           |           |           |           |
|-----------|-----------|-----------|-----------|-----------|-----------|
| January   | \$62,597  | \$65,719  | \$69,009  | \$72,479  | \$76,132  |
| February  | 62,597    | 65,719    | 69,009    | 72,479    | 76,132    |
| March     | 78,246    | 82,148    | 86,261    | 90,599    | 95,165    |
| April     | 62,597    | 65,719    | 69,009    | 72,479    | 76,132    |
| May       | 62,597    | 65,719    | 69,009    | 72,479    | 76,132    |
| June      | 62,597    | 65,719    | 69,009    | 72,479    | 76,132    |
| July      | 62,597    | 65,719    | 69,009    | 72,479    | 76,132    |
| August    | 62,597    | 65,719    | 69,009    | 72,479    | 76,132    |
| September | 62,597    | 65,719    | 69,009    | 72,479    | 76,132    |
| October   | 70,421    | 73,934    | 77,635    | 81,539    | 85,649    |
| November  | 62,597    | 65,719    | 69,009    | 72,479    | 76,132    |
| December  | 70,421    | 73,934    | 77,635    | 81,539    | 85,649    |
| Total     | \$782,457 | \$821,484 | \$862,612 | \$905,992 | \$951,654 |

**South Temiskaming Abattoir****Hide Sales Revenue**

Date: January, 2006

**Number of Animal Units**

| <u>Month</u> |       |       |       |       |       |
|--------------|-------|-------|-------|-------|-------|
| January      | 291   | 306   | 321   | 337   | 354   |
| February     | 291   | 306   | 321   | 337   | 354   |
| March        | 333   | 349   | 367   | 385   | 404   |
| April        | 333   | 349   | 367   | 385   | 404   |
| May          | 374   | 393   | 413   | 433   | 455   |
| June         | 416   | 437   | 459   | 482   | 506   |
| July         | 416   | 437   | 459   | 482   | 506   |
| August       | 374   | 393   | 413   | 433   | 455   |
| September    | 333   | 349   | 367   | 385   | 404   |
| October      | 333   | 349   | 367   | 385   | 404   |
| November     | 333   | 349   | 367   | 385   | 404   |
| December     | 333   | 349   | 367   | 385   | 404   |
| Total        | 4,159 | 4,368 | 4,586 | 4,815 | 5,055 |

**Hide Sales Revenue**

Price per hide \$30.00

|           |           |           |           |           |           |
|-----------|-----------|-----------|-----------|-----------|-----------|
| January   | \$8,734   | \$9,173   | \$9,631   | \$10,112  | \$10,616  |
| February  | 8,734     | 9,173     | 9,631     | 10,112    | 10,616    |
| March     | 9,982     | 10,483    | 11,006    | 11,556    | 12,132    |
| April     | 9,982     | 10,483    | 11,006    | 11,556    | 12,132    |
| May       | 11,229    | 11,794    | 12,382    | 13,001    | 13,649    |
| June      | 12,477    | 13,104    | 13,758    | 14,445    | 15,165    |
| July      | 12,477    | 13,104    | 13,758    | 14,445    | 15,165    |
| August    | 11,229    | 11,794    | 12,382    | 13,001    | 13,649    |
| September | 9,982     | 10,483    | 11,006    | 11,556    | 12,132    |
| October   | 9,982     | 10,483    | 11,006    | 11,556    | 12,132    |
| November  | 9,982     | 10,483    | 11,006    | 11,556    | 12,132    |
| December  | 9,982     | 10,483    | 11,006    | 11,556    | 12,132    |
| Total     | \$124,770 | \$131,040 | \$137,580 | \$144,450 | \$151,650 |

**South Temiskaming Abattoir****Beef Kill Model**

Date: January, 2006

**Total Animal Units**

| <u>Month</u> | <u>%/Month</u> | <u>Year 1</u> | <u>Year 2</u> | <u>Year 3</u> | <u>Year 4</u> | <u>Year 5</u> |
|--------------|----------------|---------------|---------------|---------------|---------------|---------------|
| January      | 7%             | 291           | 306           | 321           | 337           | 354           |
| February     | 7%             | 291           | 306           | 321           | 337           | 354           |
| March        | 8%             | 333           | 349           | 367           | 385           | 404           |
| April        | 8%             | 333           | 349           | 367           | 385           | 404           |
| May          | 9%             | 374           | 393           | 413           | 433           | 455           |
| June         | 10%            | 416           | 437           | 459           | 482           | 506           |
| July         | 10%            | 416           | 437           | 459           | 482           | 506           |
| August       | 9%             | 374           | 393           | 413           | 433           | 455           |
| September    | 8%             | 333           | 349           | 367           | 385           | 404           |
| October      | 8%             | 333           | 349           | 367           | 385           | 404           |
| November     | 8%             | 333           | 349           | 367           | 385           | 404           |
| December     | 8%             | 333           | 349           | 367           | 385           | 404           |
| Total        | 100%           | 4,159         | 4,368         | 4,586         | 4,815         | 5,055         |

**South Temiskaming Abattoir  
Beef Kill Model**

Date: January, 2006

**Owned Meat Versus Custom**

| Month     | Year 1 |        | Year 2 |        | Year 3 |        | Year 4 |        | Year 5 |        |
|-----------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
|           | Owned  | Custom | Owned  | Custom | Owned  | Custom | Owned  | Custom | Owned  | Custom |
| January   | 134    | 157    | 141    | 173    | 148    | 173    | 156    | 182    | 163    | 191    |
| February  | 134    | 157    | 141    | 173    | 148    | 173    | 156    | 182    | 163    | 191    |
| March     | 154    | 179    | 161    | 198    | 169    | 198    | 178    | 207    | 187    | 218    |
| April     | 154    | 179    | 161    | 198    | 169    | 198    | 178    | 207    | 187    | 218    |
| May       | 173    | 202    | 181    | 222    | 190    | 222    | 200    | 233    | 210    | 245    |
| June      | 192    | 224    | 202    | 247    | 212    | 247    | 222    | 259    | 233    | 272    |
| July      | 192    | 224    | 202    | 247    | 212    | 247    | 222    | 259    | 233    | 272    |
| August    | 173    | 202    | 181    | 222    | 190    | 222    | 200    | 233    | 210    | 245    |
| September | 154    | 179    | 161    | 198    | 169    | 198    | 178    | 207    | 187    | 218    |
| October   | 154    | 179    | 161    | 198    | 169    | 198    | 178    | 207    | 187    | 218    |
| November  | 154    | 179    | 161    | 198    | 169    | 198    | 178    | 207    | 187    | 218    |
| December  | 154    | 179    | 161    | 198    | 169    | 198    | 178    | 207    | 187    | 218    |
| Total     | 1,919  | 2,240  | 2,016  | 2,470  | 2,116  | 2,470  | 2,222  | 2,593  | 2,333  | 2,722  |

South Temiskaming Abattoir  
 Beef Kill Model

Date: January, 2006

Cows Versus Fat Cattle

| Month     | Year 1 |       | Year 2 |       | Year 3 |       | Year 4 |       | Year 5 |       |
|-----------|--------|-------|--------|-------|--------|-------|--------|-------|--------|-------|
|           | Cows   | Fats  | Cows   | Fats  | Cows   | Fats  | Cows   | Fats  | Cows   | Fats  |
| January   | 116    | 175   | 122    | 183   | 128    | 193   | 135    | 202   | 142    | 212   |
| February  | 116    | 175   | 122    | 183   | 128    | 193   | 135    | 202   | 142    | 212   |
| March     | 133    | 200   | 140    | 210   | 147    | 220   | 154    | 231   | 162    | 243   |
| April     | 133    | 200   | 140    | 210   | 147    | 220   | 154    | 231   | 162    | 243   |
| May       | 150    | 225   | 157    | 236   | 165    | 248   | 173    | 260   | 182    | 273   |
| June      | 166    | 250   | 175    | 262   | 183    | 275   | 193    | 289   | 202    | 303   |
| July      | 166    | 250   | 175    | 262   | 183    | 275   | 193    | 289   | 202    | 303   |
| August    | 150    | 225   | 157    | 236   | 165    | 248   | 173    | 260   | 182    | 273   |
| September | 133    | 200   | 140    | 210   | 147    | 220   | 154    | 231   | 162    | 243   |
| October   | 133    | 200   | 140    | 210   | 147    | 220   | 154    | 231   | 162    | 243   |
| November  | 133    | 200   | 140    | 210   | 147    | 220   | 154    | 231   | 162    | 243   |
| December  | 133    | 200   | 140    | 210   | 147    | 220   | 154    | 231   | 162    | 243   |
| Total     | 1,664  | 2,495 | 1,747  | 2,621 | 1,834  | 2,752 | 1,926  | 2,889 | 2,022  | 3,033 |

**South Temiskaming Abattoir  
Beef Kill Model**

Date: January, 2006

**Owned Versus Custom Cow Numbers**

| Month           | Year 1 |        | Year 2 |        | Year 3 |        | Year 4 |        | Year 5 |        |
|-----------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
|                 | Owned  | Custom | Owned  | Custom | Owned  | Custom | Owned  | Custom | Owned  | Custom |
| January         | 54     | 63     | 56     | 66     | 59     | 69     | 62     | 73     | 65     | 76     |
| February        | 54     | 63     | 56     | 66     | 59     | 69     | 62     | 73     | 65     | 76     |
| March           | 61     | 72     | 65     | 75     | 68     | 79     | 71     | 83     | 75     | 87     |
| April           | 61     | 72     | 65     | 75     | 68     | 79     | 71     | 83     | 75     | 87     |
| May             | 69     | 81     | 73     | 85     | 76     | 89     | 80     | 93     | 84     | 98     |
| June            | 77     | 90     | 81     | 94     | 85     | 99     | 89     | 104    | 93     | 109    |
| July            | 77     | 90     | 81     | 94     | 85     | 99     | 89     | 104    | 93     | 109    |
| August          | 69     | 81     | 73     | 85     | 76     | 89     | 80     | 93     | 84     | 98     |
| September       | 61     | 72     | 65     | 75     | 68     | 79     | 71     | 83     | 75     | 87     |
| October         | 61     | 72     | 65     | 75     | 68     | 79     | 71     | 83     | 75     | 87     |
| November        | 61     | 72     | 65     | 75     | 68     | 79     | 71     | 83     | 75     | 87     |
| December        | 61     | 72     | 65     | 75     | 68     | 79     | 71     | 83     | 75     | 87     |
| Total           | 768    | 896    | 806    | 941    | 846    | 988    | 889    | 1,037  | 933    | 1,089  |
| Total Cows/Year | 1,664  |        | 1,747  |        | 1,834  |        | 1,926  |        | 2,022  |        |

**South Temiskaming Abattoir  
Beef Kill Model**

Date: January, 2006

**Owned Versus Custom Fat Cattle Numbers**

| Month                  | Year 1       |        | Year 2       |        | Year 3       |        | Year 4       |        | Year 5       |        |
|------------------------|--------------|--------|--------------|--------|--------------|--------|--------------|--------|--------------|--------|
|                        | Owned        | Custom | Owned        | Custom | Owned        | Custom | Owned        | Custom | Owned        | Custom |
| January                | 81           | 94     | 85           | 99     | 89           | 104    | 93           | 109    | 98           | 114    |
| February               | 81           | 94     | 85           | 99     | 89           | 104    | 93           | 109    | 98           | 114    |
| March                  | 92           | 108    | 97           | 113    | 102          | 119    | 107          | 124    | 112          | 131    |
| April                  | 92           | 108    | 97           | 113    | 102          | 119    | 107          | 124    | 112          | 131    |
| May                    | 104          | 121    | 109          | 127    | 114          | 133    | 120          | 140    | 126          | 147    |
| June                   | 115          | 134    | 121          | 141    | 127          | 148    | 133          | 156    | 140          | 163    |
| July                   | 115          | 134    | 121          | 141    | 127          | 148    | 133          | 156    | 140          | 163    |
| August                 | 104          | 121    | 109          | 127    | 114          | 133    | 120          | 140    | 126          | 147    |
| September              | 92           | 108    | 97           | 113    | 102          | 119    | 107          | 124    | 112          | 131    |
| October                | 92           | 108    | 97           | 113    | 102          | 119    | 107          | 124    | 112          | 131    |
| November               | 92           | 108    | 97           | 113    | 102          | 119    | 107          | 124    | 112          | 131    |
| December               | 92           | 108    | 97           | 113    | 102          | 119    | 107          | 124    | 112          | 131    |
| Total                  | 1,151        | 1,344  | 1,209        | 1,411  | 1,270        | 1,482  | 1,333        | 1,556  | 1,400        | 1,633  |
| <b>Total Fats/Year</b> | <b>2,495</b> |        | <b>2,621</b> |        | <b>2,752</b> |        | <b>2,889</b> |        | <b>3,033</b> |        |
| <b>Total Beef</b>      | <b>4,159</b> |        | <b>4,368</b> |        | <b>4,586</b> |        | <b>4,815</b> |        | <b>5,055</b> |        |



**South Temiskaming Abattoir****Pork Kill Model**

Date: January, 2006

**Total Animal Units**

| <u>Month</u> | <u>%/Month</u> | <u>Year 1</u> | <u>Year 2</u> | <u>Year 3</u> | <u>Year 4</u> | <u>Year 5</u> |
|--------------|----------------|---------------|---------------|---------------|---------------|---------------|
| January      | 8%             | 243           | 255           | 268           | 282           | 296           |
| February     | 8%             | 243           | 255           | 268           | 282           | 296           |
| March        | 10%            | 304           | 319           | 335           | 352           | 370           |
| April        | 8%             | 243           | 255           | 268           | 282           | 296           |
| May          | 8%             | 243           | 255           | 268           | 282           | 296           |
| June         | 8%             | 243           | 255           | 268           | 282           | 296           |
| July         | 8%             | 243           | 255           | 268           | 282           | 296           |
| August       | 8%             | 243           | 255           | 268           | 282           | 296           |
| September    | 8%             | 243           | 255           | 268           | 282           | 296           |
| October      | 9%             | 274           | 287           | 302           | 317           | 333           |
| November     | 8%             | 243           | 255           | 268           | 282           | 296           |
| December     | 9%             | 274           | 287           | 302           | 317           | 333           |
| Total        | 100%           | 3,041         | 3,192         | 3,353         | 3,521         | 3,693         |

South Temiskaming Abattoir  
Pork Kill Model  
Date: January, 2006

**Owned Meat Versus Custom**

| Month     | Year 1 |        | Year 2 |        | Year 3 |        | Year 4 |        | Year 5 |        |
|-----------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
|           | Owned  | Custom | Owned  | Custom | Owned  | Custom | Owned  | Custom | Owned  | Custom |
| January   | 229    | 14     | 241    | 15     | 253    | 15     | 265    | 16     | 279    | 17     |
| February  | 229    | 14     | 241    | 15     | 253    | 15     | 265    | 16     | 279    | 17     |
| March     | 287    | 17     | 301    | 18     | 316    | 19     | 332    | 20     | 349    | 21     |
| April     | 229    | 14     | 241    | 15     | 253    | 15     | 265    | 16     | 279    | 17     |
| May       | 229    | 14     | 241    | 15     | 253    | 15     | 265    | 16     | 279    | 17     |
| June      | 229    | 14     | 241    | 15     | 253    | 15     | 265    | 16     | 279    | 17     |
| July      | 229    | 14     | 241    | 15     | 253    | 15     | 265    | 16     | 279    | 17     |
| August    | 229    | 14     | 241    | 15     | 253    | 15     | 265    | 16     | 279    | 17     |
| September | 229    | 14     | 241    | 15     | 253    | 15     | 265    | 16     | 279    | 17     |
| October   | 258    | 16     | 271    | 16     | 284    | 17     | 299    | 18     | 314    | 19     |
| November  | 229    | 14     | 241    | 15     | 253    | 15     | 265    | 16     | 279    | 17     |
| December  | 258    | 16     | 271    | 16     | 284    | 17     | 299    | 18     | 314    | 19     |
| Total     | 2,866  | 175    | 3,009  | 183    | 3,160  | 193    | 3,319  | 203    | 3,486  | 213    |

**South Temiskaming Abattoir  
Income and Expense Projections  
Used Equipment Option**

Date: January 2006

|                       | <u>Year 1</u> | <u>Year 2</u> | <u>Year 3</u> | <u>Year 4</u> | <u>Year 5</u> |
|-----------------------|---------------|---------------|---------------|---------------|---------------|
| <b>Revenue</b>        |               |               |               |               |               |
| Total Sales           | \$3,123,350   | \$3,264,293   | \$3,447,084   | \$3,589,344   | \$3,789,462   |
| Less: Direct Costs    | 2,435,727     | 2,558,178     | 2,685,652     | 2,820,375     | 2,961,279     |
| Total Gross Profit    | \$687,623     | \$706,115     | \$761,432     | \$768,969     | \$828,184     |
| <b>Expenses</b>       |               |               |               |               |               |
| Inspection Fees       | \$48,000      | \$48,000      | \$48,000      | \$48,000      | \$48,000      |
| Insurance             | 24,000        | 24,000        | 24,000        | 24,000        | 24,000        |
| Bank Charges          | 600           | 600           | 600           | 600           | 600           |
| Communications        | 6,000         | 6,000         | 6,000         | 6,000         | 6,000         |
| Advertising/Donations | 31,234        | 32,643        | 34,471        | 35,893        | 37,895        |
| Uniforms              | 2,000         | 2,000         | 2,000         | 2,000         | 2,000         |
| Professional Fees     | 8,000         | 8,000         | 8,000         | 8,000         | 8,000         |
| Sub-Total             | \$119,834     | \$121,243     | \$123,071     | \$124,493     | \$126,495     |
| <b>Staffing</b>       |               |               |               |               |               |
| General Manager       | \$50,000      | \$50,000      | \$50,000      | \$50,000      | \$50,000      |
| Clerical Staff        | 28,000        | 28,000        | 28,000        | 28,000        | 28,000        |
| Accounting Staff      | 24,000        | 28,000        | 28,000        | 28,000        | 28,000        |
| Sub-Total Wages       | 102,000       | 106,000       | 106,000       | 106,000       | 106,000       |
| Add: Benefits (10%)   | 10,200        | 10,600        | 10,600        | 10,600        | 10,600        |
| Total Staffing Costs  | 112,200       | 116,600       | 116,600       | 116,600       | 116,600       |
| Utilities             | 25,000        | 25,000        | 25,000        | 25,000        | 25,000        |
| Repairs/Maintenance   | 15,000        | 15,000        | 15,000        | 15,000        | 15,000        |
|                       | \$272,034     | \$277,843     | \$279,671     | \$281,093     | \$283,095     |
| Net Income BDIT       | \$415,590     | \$428,272     | \$481,761     | \$487,876     | \$545,089     |
| Less: Interest costs  | 61,303        | 56,597        | 51,621        | 46,358        | 40,793        |
| Net Income BDT        | \$354,287     | \$371,675     | \$430,140     | \$441,517     | \$504,296     |
| Less: Depreciation    | 254,687       | 215,939       | 184,454       | 158,797       | 137,822       |
| Net Income BT         | \$99,600      | \$155,736     | \$245,686     | \$282,720     | \$366,474     |
| Less: Taxes           |               | 38,934        | 61,422        | 70,680        | 91,618        |
| Net Income            | \$99,600      | \$116,802     | \$184,265     | \$212,040     | \$274,855     |

**South Temiskaming Abattoir**
**Cash Flow Projection**
**Used Equipment Option**

Date: January, 2006

|                             | <u>Start-Up</u> | <u>Year 1</u> | <u>Year 2</u> | <u>Year 3</u> | <u>Year 4</u> | <u>Year 5</u> |
|-----------------------------|-----------------|---------------|---------------|---------------|---------------|---------------|
| <b>Sources of Funds</b>     |                 |               |               |               |               |               |
| Equity                      |                 |               |               |               |               |               |
| Owners                      | \$908,307       | \$ -          | \$ -          | \$ -          | \$ -          | \$ -          |
| Ontario/Canada/Hydro One    | 1,258,780       | -             | -             | -             | -             | -             |
| Total Equity                | \$2,167,087     | \$ -          | \$ -          | \$ -          | \$ -          | \$ -          |
| Debt Financing              |                 |               |               |               |               |               |
| RRFDC Loan                  | \$500,000       | \$ -          | \$ -          | \$ -          | \$ -          | \$ -          |
| FCC Capital Loan            | 1,066,141       | -             | -             | -             | -             | -             |
| Total Debt Financing        | \$1,566,141     | \$ -          | \$ -          | \$ -          | \$ -          | \$ -          |
| Net Income                  | \$ -            | \$99,600      | \$116,802     | \$184,265     | \$212,040     | \$274,855     |
| Add: Depreciation           |                 | 254,687       | 215,939       | 184,454       | 158,797       | 137,822       |
| Total Sources of Funds      | \$3,733,228     | \$354,287     | \$332,741     | \$368,718     | \$370,837     | \$412,678     |
| <b>Uses of Funds</b>        |                 |               |               |               |               |               |
| Building Construction       | \$1,904,666     | \$ -          | \$ -          | \$ -          | \$ -          | \$ -          |
| Equipment Purchases         | 892,500         | -             | -             | -             | -             | -             |
| Infrastructure              | 836,062         | -             | -             | -             | -             | -             |
| Loan Repayment (Prin. Only) | -               | 81,840        | 86,546        | 91,523        | 96,785        | 102,350       |
| Total Uses                  | \$3,633,228     | \$81,840      | \$86,546      | \$91,523      | \$96,785      | \$102,350     |
| Net Cash Flow               | \$100,000       | \$272,446     | \$246,195     | \$277,196     | \$274,052     | \$310,327     |
| Beginning Cash Balance      | \$ -            | \$100,000     | \$372,446     | \$618,641     | \$895,837     | \$1,169,889   |
| Ending Cash Balance         | \$100,000       | \$372,446     | \$618,641     | \$895,837     | \$1,169,889   | \$1,480,216   |

**South Temiskaming Abattoir  
Balance Sheet Projection  
Used Equipment Option**

Date: January, 2006

|                                     | <u>Start-Up</u>    | <u>Year 1</u>      | <u>Year 2</u>      | <u>Year 3</u>      | <u>Year 4</u>      | <u>Year 5</u>      |
|-------------------------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|
| <b>Assets</b>                       |                    |                    |                    |                    |                    |                    |
| <b>Current Assets</b>               |                    |                    |                    |                    |                    |                    |
| Cash                                | \$75,000           | \$221,762          | \$461,547          | \$730,635          | \$998,177          | \$1,299,656        |
| Account Receivables                 | -                  | 124,934            | 130,572            | 137,883            | 143,574            | 151,578            |
| Inventory                           | 25,000             | 25,750             | 26,523             | 27,318             | 28,138             | 28,982             |
| <b>Total Current Assets</b>         | <b>\$100,000</b>   | <b>\$372,446</b>   | <b>\$618,641</b>   | <b>\$895,837</b>   | <b>\$1,169,889</b> | <b>\$1,480,216</b> |
| <b>Long Term Assets</b>             |                    |                    |                    |                    |                    |                    |
| Building                            | \$1,904,666        | \$1,828,479        | \$1,755,340        | \$1,685,127        | \$1,617,722        | \$1,553,013        |
| Equipment                           | 892,500            | 714,000            | 571,200            | 456,960            | 365,568            | 292,454            |
| Other costs                         | 836,062            | 836,062            | 836,062            | 836,062            | 836,062            | 836,062            |
| <b>Total Long Term Assets</b>       | <b>\$3,633,228</b> | <b>\$3,378,541</b> | <b>\$3,162,602</b> | <b>\$2,978,149</b> | <b>\$2,819,352</b> | <b>\$2,681,529</b> |
| <b>Total Assets</b>                 | <b>\$3,733,228</b> | <b>\$3,750,988</b> | <b>\$3,781,243</b> | <b>\$3,873,985</b> | <b>\$3,989,240</b> | <b>\$4,161,745</b> |
| <b>Liabilities</b>                  |                    |                    |                    |                    |                    |                    |
| STFDC Loan                          | \$500,000          | \$500,000          | \$500,000          | \$500,000          | \$500,000          | \$500,000          |
| FCC Capital Loan                    | 1,066,141          | 984,301            | 897,754            | 806,232            | 709,446            | 607,096            |
| Incentive grants                    | 1,258,780          | 1,258,780          | 1,258,780          | 1,258,780          | 1,258,780          | 1,258,780          |
| <b>Total Liabilities</b>            | <b>\$2,824,921</b> | <b>\$2,743,081</b> | <b>\$2,656,534</b> | <b>\$2,565,012</b> | <b>\$2,468,226</b> | <b>\$2,365,876</b> |
| <b>Equity</b>                       |                    |                    |                    |                    |                    |                    |
| Start Balance                       | \$908,4307         | \$908,307          | \$1,007,907        | \$1,124,709        | \$1,308,974        | \$1,521,014        |
| Additions                           | -                  | 99,600             | 116,802            | 184,265            | 212,040            | 274,855            |
| Ending Balance                      | \$908,307          | \$1,007,907        | \$1,124,709        | \$1,308,974        | \$1,521,014        | \$1,795,869        |
| <b>Total Equity and Liabilities</b> | <b>\$3,733,228</b> | <b>\$3,750,988</b> | <b>\$3,781,243</b> | <b>\$3,873,985</b> | <b>\$3,989,240</b> | <b>\$4,161,745</b> |

| <b>South Temiskaming Abattoir</b>          |                    |                    |                    |                    |                    |
|--|--------------------|--------------------|--------------------|--------------------|--------------------|
| <b>Cost of Sales Projection</b>            |                    |                    |                    |                    |                    |
| <b>Used Equipment Option</b>               |                    |                    |                    |                    |                    |
| Date: January, 2006                        |                    |                    |                    |                    |                    |
|  | <u>Year 1</u>      | <u>Year 2</u>      | <u>Year 3</u>      | <u>Year 4</u>      | <u>Year 5</u>      |
| <b>Sales</b>                               |                    |                    |                    |                    |                    |
| Custom Beef & Pork                         | \$449,449          | \$455,914          | \$498,835          | \$493,128          | \$538,414          |
| Fat Stock Meat                             | 1,290,694          | 1,355,849          | 1,423,208          | 1,494,600          | 1,569,097          |
| Cow Meat                                   | 475,979            | 500,007            | 524,848            | 551,175            | 578,648            |
| Pork Meat                                  | 782,457            | 821,484            | 862,612            | 905,992            | 951,654            |
| Hide Sales                                 | 124,770            | 131,040            | 137,580            | 144,450            | 151,650            |
| <b>Total Sales</b>                         | <b>\$3,123,350</b> | <b>\$3,264,293</b> | <b>\$3,447,084</b> | <b>\$3,589,344</b> | <b>\$3,789,462</b> |
| Commissions (5% of Sales)                  | \$127,457          | \$133,867          | \$140,533          | \$147,588          | \$154,970          |
| <b>Cost of Animal Purchases</b>            |                    |                    |                    |                    |                    |
| Fat Stock Purchases                        | \$1,032,555        | \$1,084,679        | \$1,138,567        | \$1,195,680        | \$1,255,277        |
| Cow Purchases                              | 309,387            | 325,005            | 341,151            | 358,264            | 376,121            |
| Hog Purchases                              | 586,843            | 616,113            | 646,959            | 679,494            | 713,740            |
| <b>Total Cost of Animal Purchases</b>      | <b>\$1,928,785</b> | <b>\$2,025,796</b> | <b>\$2,126,677</b> | <b>\$2,233,437</b> | <b>\$2,345,139</b> |
| <b>Direct Labour Costs</b>                 |                    |                    |                    |                    |                    |
| Hours/Animal Unit (AU)                     | 2.5                | 2.5                | 2.5                | 2.5                | 2.5                |
| No of AUs                                  | 5,071              | 5,326              | 5,592              | 5,871              | 6,163              |
| Total Hours Worked                         | 12,678             | 13,314             | 13,980             | 14,678             | 15,407             |
| Wage Rate                                  | \$15.00            | \$15.00            | \$15.00            | \$15.00            | \$15.00            |
| Benefits                                   | 10%                | 10%                | 10%                | 10%                | 10%                |
| Total Wage Costs/Hour                      | \$16.50            | \$16.50            | \$16.50            | \$16.50            | \$16.50            |
| <b>Total Direct Labour Costs</b>           | <b>\$209,191</b>   | <b>\$219,681</b>   | <b>\$230,666</b>   | <b>\$242,191</b>   | <b>\$254,220</b>   |
| <b>Water and Waste Disposal Costs</b>      |                    |                    |                    |                    |                    |
| Water Costs/AU                             | \$0.25             | \$0.25             | \$0.25             | \$0.25             | \$0.25             |
| Liquid Disposal Costs/AU                   | 2.00               | 2.00               | 2.00               | 2.00               | 2.00               |
| Solid Disposal Costs/AU                    | 6.33               | 6.33               | 6.33               | 6.33               | 6.33               |
| Total Waste Disposal Costs/AU              | 8.58               | 8.58               | 8.58               | 8.58               | 8.58               |
| <b>Total Waste Disposal Costs</b>          | <b>\$43,512</b>    | <b>\$45,694</b>    | <b>\$47,979</b>    | <b>\$50,376</b>    | <b>\$52,878</b>    |
| <b>Freight Costs</b>                       |                    |                    |                    |                    |                    |
| Freight Out per AU                         | \$15.00            | \$15.00            | \$15.00            | \$15.00            | \$15.00            |
| <b>Total Freight Costs</b>                 | <b>\$76,070</b>    | <b>\$79,884</b>    | <b>\$83,879</b>    | <b>\$88,070</b>    | <b>\$92,444</b>    |
| <b>Materials &amp; Miscellaneous Costs</b> |                    |                    |                    |                    |                    |
| Material and Misc. Cost/AU                 | \$10.00            | \$10.00            | \$10.00            | \$10.00            | \$10.00            |
| <b>Total Material &amp; Misc. Costs</b>    | <b>\$50,713</b>    | <b>\$53,256</b>    | <b>\$55,919</b>    | <b>\$58,713</b>    | <b>\$61,629</b>    |
| <b>Total Direct Costs</b>                  | <b>\$2,435,727</b> | <b>\$2,558,178</b> | <b>\$2,685,652</b> | <b>\$2,820,375</b> | <b>\$2,961,279</b> |
| <b>Gross Profit</b>                        | <b>\$687,623</b>   | <b>\$706,115</b>   | <b>\$761,432</b>   | <b>\$768,969</b>   | <b>\$828,184</b>   |

**South Temiskaming Abattoir****Depreciation Schedules****Used Equipment Option**

Date: January, 2006

**Equipment (20% Declining Balance)**

| <u>Year</u> | <u>Opening Balance</u> | <u>Depreciation</u> | <u>Acc. Depreciation.</u> | <u>End Balance</u> |
|-------------|------------------------|---------------------|---------------------------|--------------------|
| 1           | \$892,000              | \$178,500           | \$178,500                 | \$714,000          |
| 2           | 714,000                | 142,800             | 321,300                   | 571,200            |
| 3           | 571,200                | 114,240             | 435,540                   | 456,960            |
| 4           | 456,960                | 91,392              | 526,932                   | 365,568            |
| 5           | 365,568                | 73,114              | 600,046                   | 292,454            |

**Buildings (4% Declining Balance)**

| <u>Year</u> | <u>Opening Balance</u> | <u>Depreciation</u> | <u>Acc. Depreciation.</u> | <u>End Balance</u> |
|-------------|------------------------|---------------------|---------------------------|--------------------|
| 1           | \$1,904,666            | \$76,187            | \$76,187                  | \$1,828,479        |
| 2           | 1,828,479              | 73,139              | 149,326                   | 1,755,340          |
| 3           | 1,755,340              | 70,214              | 219,539                   | 1,685,127          |
| 4           | 1,685,127              | 67,405              | 286,944                   | 1,617,722          |
| 5           | 1,617,722              | 64,709              | 351,653                   | 1,553,013          |

**South Temiskaming Abattoir****Loan Schedules**

Prime Lending Rate: 3.75%

**Used Equipment Option**

Date: January, 2006

**STFDC Loan**

Details: Interest Only Years 1 to 5, 7.25%, 10 Year Amortization, 7.25% Years 6 to 15, Annual Payment

| <u>Year</u> | <u>Opening Balance</u> | <u>Principle Payment</u> | <u>Interest Payment</u> | <u>Total Payment</u> | <u>End Balance</u> |
|-------------|------------------------|--------------------------|-------------------------|----------------------|--------------------|
| 1           | \$500,000              | \$ -                     | \$36,250                | \$36,250             | \$500,000          |
| 2           | 500,000                | -                        | 36,250                  | 36,250               | 500,000            |
| 3           | 500,000                | -                        | 36,250                  | 36,250               | 500,000            |
| 4           | 500,000                | -                        | 36,250                  | 36,250               | 500,000            |
| 5           | 500,000                | -                        | 36,250                  | 36,250               | 500,000            |
| 6           | 500,000                | 35,764                   | 36,250                  | 72,014               | 464,236            |
| 7           | 464,236                | 38,357                   | 33,657                  | 72,014               | 425,880            |
| 8           | 425,880                | 41,137                   | 30,876                  | 72,014               | 384,742            |
| 9           | 384,742                | 44,120                   | 27,894                  | 72,014               | 340,623            |
| 10          | 340,623                | 47,319                   | 24,695                  | 72,014               | 293,304            |
| 11          | 293,304                | 50,749                   | 21,265                  | 72,014               | 242,555            |
| 12          | 242,555                | 54,428                   | 17,585                  | 72,014               | 188,127            |
| 13          | 188,127                | 58,374                   | 13,639                  | 72,014               | 129,752            |
| 14          | 129,752                | 62,607                   | 9,407                   | 72,014               | 67,146             |
| 15          | 67,146                 | 67,146                   | 4,868                   | 72,014               | 0                  |

**FCC Capital Loan**

Details: 10 Year Amortization, Prime Plus 2% Years 1 to 10, Annual Payment

| <u>Year</u> | <u>Opening Balance</u> | <u>Principle Payment</u> | <u>Interest Payment</u> | <u>Total Payment</u> | <u>End Balance</u> |
|-------------|------------------------|--------------------------|-------------------------|----------------------|--------------------|
| 1           | \$1,066,141            | \$81,840                 | \$61,303                | \$143,144            | \$984,301          |
| 2           | 984,301                | 86,546                   | 56,597                  | 143,144              | 897,754            |
| 3           | 897,754                | 91,523                   | 51,621                  | 143,144              | 806,232            |
| 4           | 806,232                | 96,785                   | 46,358                  | 143,144              | 709,446            |
| 5           | 709,446                | 102,350                  | 40,793                  | 143,144              | 607,096            |
| 6           | 607,096                | 108,236                  | 34,908                  | 143,144              | 498,860            |
| 7           | 498,860                | 114,459                  | 28,684                  | 143,144              | 384,401            |
| 8           | 384,401                | 121,040                  | 22,103                  | 143,144              | 263,361            |
| 9           | 263,361                | 128,000                  | 15,143                  | 143,144              | 135,361            |
| 10          | 135,361                | 135,360                  | 7,783                   | 143,144              | 0                  |



## **8.0 MANAGEMENT AND STAFFING**

### **8.1 OVERVIEW**

For the purposes of analysis, it is assumed that a new for-profit company would be established to own and operate the proposed abattoir business. (A retail operation was not included at this time.

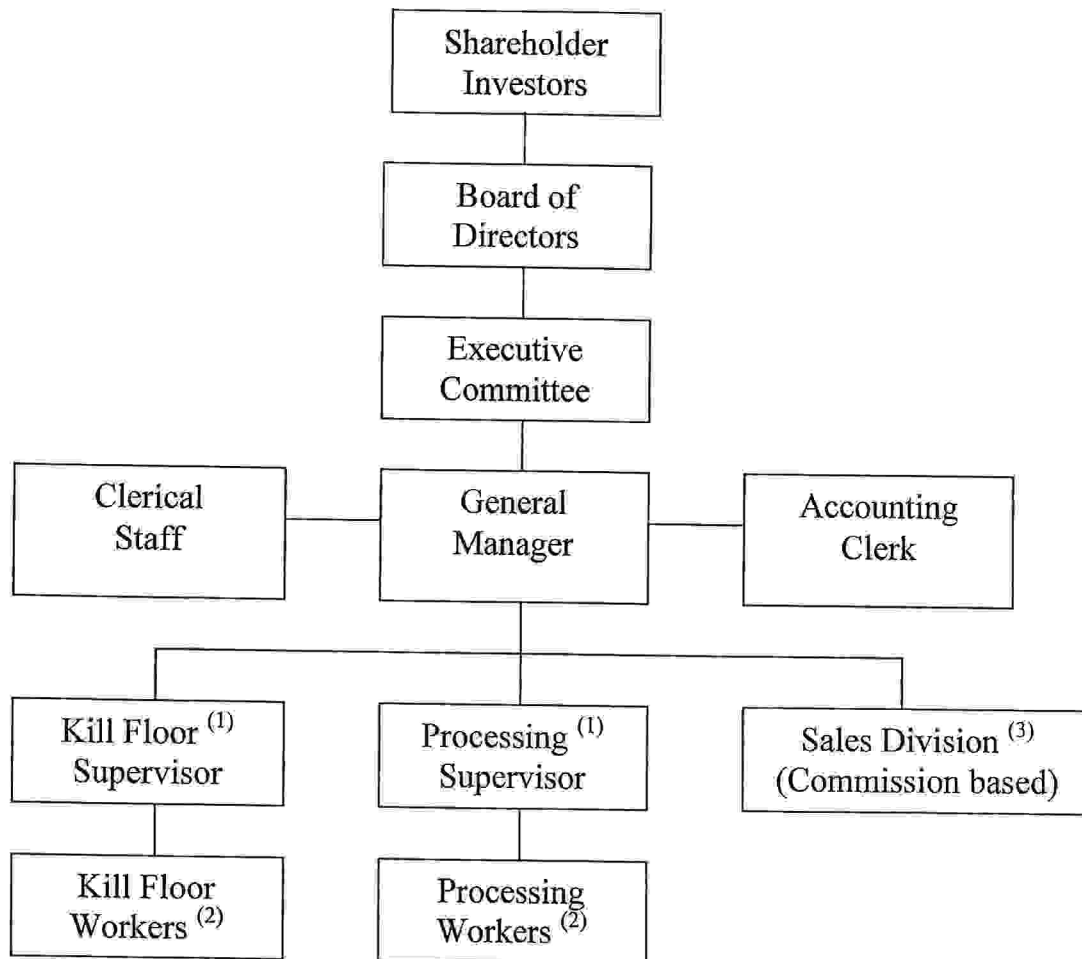
There are several other structures which could be considered, including not-for-profit, limited partnership, new generation cooperative, etc. Choosing one of the various options could be influenced by the following:

- 1) Funding source criteria
- 2) Who is prepared to invest and under what conditions?
- 3) Proponent preferences

The for-profit company approach assumes investors would purchase shares. A Board of Directors would govern the company.

These will need to be detailed in the business plan if and when a decision is made to proceed.

## 8.2 STRUCTURE (TYPICAL)



- (1) Kill floor workers and processing workers are all charged to direct labour (including supervision).
- (2) The kill floor and processing workers may be the same people in initial years.
- (3) Sales division costs are shown in the financial projections as part of the 5% commission.

## 8.3 MANAGEMENT

### A. Executive Committee

The Board would elect officers include Board Chair, Secretary and Treasurer to act as the Executive Committee in respect of activities no requiring the attention of the full Board. The Executive Committee members are the officers of the corporation and are in direct contact with the General Manager.

### B. General Manager

The Board would then hire a competent and effective General Manager who will assume responsibility implementing the strategic plan in order to meet the corporate objectives. This will include coordinating the development phase and project start-up, as well as overseeing day to day operations once the plant opens.

The General Manager will need to have a proven industry track record and be able to provide leadership to this venture. He/she will need to be team builder, as well as having the ability to deal with producers who supply the live animals. He/she will also need a good understanding of marketing.

### C. Production Supervisors

#### **Kill Floor Supervisor (KFS)**

The direct labour force will include a kill floor supervisor who will have specific slaughterhouse experience and the ability to train kill floor staff. The KFS would report to the General Manager.

### **Processing Supervisor**

The direct labour force will also include a cut and wrap (processing) supervisor with meat cutting experience and the ability to train and supervise staff in the processing of meat. This person will also report to the General Manager.

### **D. Sales Manager**

The sales manager would typically be commission based and would be responsible for marketing and sales. He/she will need to have specific experience in the marketing of meat to independent retailers, restaurants, etc.

## 9.0 MARKETING

The following key factors will be important to the proposed Temiskaming area abattoir.

### (1) Local Support

Producers will naturally sell to maximize their revenues. As a result, the purchase of live animals must be at prevailing market prices.

A critical loyalty factor will be at the consumer end. There will need to be a determined effort to cultivate support to buy local meat. The marketing effort should focus on this.

- (2) Quality and consistent supply producers will need to work closely with the proposed plant to provide year round consistent supplies of market animals. The plant will not be able to establish long-term customer relationship unless the supply of live animals meets the needs of the marketplace.

### (3) Whole Animal Utilization

Prime cuts are generally easier to market than less valuable items such as chuck, trim, etc. The plant will need to look at innovative ways to market cheaper cuts, including value added processing (sausage, etc.).

### (4) Competitiveness

Most local abattoir projects are promoted by producers as a means to assure competitive live prices. However, the abattoir will need to pay attention to

market prices and will not be in a position to pay premiums for local market animals. The abattoir will also need to be competitive with other meat suppliers in terms of quality, food safety, distribution/freight costs as well as being technically up to date.

**(5) Branding**

As per item (1), the abattoir will need to develop loyalty to a locally branded meat product line. Retailers will expect advertising support for this approach - i.e. Temiskaming meat produced locally, etc.

The abattoir should also support producers who want to direct market their animals to consumers.

Operating a retail outlet could be an option. However, it could also alienate existing meat shop owners who would normally be potential wholesale customers.

The first part of the document discusses the importance of maintaining accurate records of all transactions. It emphasizes that every entry, no matter how small, should be recorded to ensure the integrity of the financial statements. This includes not only sales and purchases but also expenses, income, and transfers.

The second part of the document provides a detailed breakdown of the accounting cycle. It outlines the ten steps involved in the process, from identifying the accounting entity to preparing financial statements. Each step is explained in detail, with examples provided to illustrate the concepts.

The third part of the document discusses the various types of accounts used in accounting. It categorizes them into assets, liabilities, equity, revenue, and expense accounts. It also explains how these accounts are used to record transactions and how they are balanced at the end of each period.

The fourth part of the document discusses the importance of adjusting entries. It explains how these entries are used to ensure that the financial statements reflect the true financial position of the company at the end of the period. Examples are provided to show how adjusting entries are recorded and how they affect the accounts.

The fifth part of the document discusses the preparation of financial statements. It outlines the steps involved in preparing the balance sheet, income statement, and statement of equity. It also discusses the importance of providing a clear and concise explanation of the results of the financial statements.

The sixth part of the document discusses the importance of internal controls. It explains how these controls are used to prevent and detect errors and fraud. It also discusses the various types of internal controls that can be implemented in a business.

The seventh part of the document discusses the importance of ethics in accounting. It explains how accountants are expected to act in a fair and honest manner and to follow the principles of professional conduct. It also discusses the consequences of unethical behavior in the accounting profession.

The eighth part of the document discusses the importance of communication in accounting. It explains how accountants must be able to communicate effectively with their clients and colleagues. It also discusses the various ways in which accountants can improve their communication skills.

The ninth part of the document discusses the importance of technology in accounting. It explains how the use of computers and software has revolutionized the accounting profession. It also discusses the various ways in which accountants can use technology to improve their work.

The tenth part of the document discusses the importance of continuing education in accounting. It explains how accountants must stay up-to-date on the latest developments in the field. It also discusses the various ways in which accountants can pursue continuing education.

**APPENDIX A**  
**QUEBEC LIVESTOCK STATISTICS**



**Year-end Inventory, livestock sector, Outaouais and all of Québec, 2001-2004**

|                      | 2001      | 2002      | 2003      | 2004      |
|----------------------|-----------|-----------|-----------|-----------|
| <b>Outaouais</b>     |           |           |           |           |
| Cattle <sup>1</sup>  | 53,976    | 40,420    | 60,694    | 60,532    |
| Calves               | 16,437    | 16,895    | 18,534    | 19,261    |
| Hogs                 | 13,116    | 13,483    | 10,578    | 313       |
| Sheep <sup>2</sup>   | 8,865     | 3,884     | 8,709     | 7,986     |
| Lambs <sup>3</sup>   | 3,129     | 4,301     | 2,866     | 2,918     |
| <b>All of Québec</b> |           |           |           |           |
| Cattle <sup>1</sup>  | 940,000   | 922,000   | 963,000   | 1,003,500 |
| Calves               | 346,000   | 381,000   | 457,000   | 411,500   |
| Hogs                 | 4,290,800 | 4,280,200 | 4,250,000 | 4,280,000 |
| Sheep <sup>2</sup>   | 164,900   | 166,100   | 175,900   | 171,000   |
| Lambs <sup>3</sup>   | 60,300    | 63,900    | 74,100    | 74,000    |

Note: For further information on livestock, see the "Regional Statistics" section of the ISQ website.

1. Includes heifers, bulls, dairy cows, beef cows and steers.

- 2. Includes rams and ewes.
  - 3. Includes replacement lambs and market lambs.
- Source: Statistics Canada, *Livestock Survey, 2005*.  
Compilation: Institut de la statistique du Québec, Direction des statistiques économiques et sociales.

June 22, 2005

Statistiques Canada



Ministère de l'Agriculture, des Pêcheries  
et de l'Alimentation

Year-end inventory, livestock sector, Abitibi-Témiscamingue and all of Québec, 2001-2004

|                              | 2001      | 2002      | 2003      | 2004      |
|------------------------------|-----------|-----------|-----------|-----------|
| <b>Abitibi-Témiscamingue</b> |           |           |           |           |
| Cattle <sup>1</sup>          | 45,569    | 39,741    | 50,205    | 53,432    |
| Calves                       | 17,344    | 20,374    | 23,319    | 19,033    |
| Hogs                         | 9,428     | -         | 2,993     | 4,416     |
| Sheep <sup>2</sup>           | 11,389    | 19,130    | 19,556    | 18,673    |
| Lambs <sup>3</sup>           | 5,332     | 3,562     | 5,456     | 6,734     |
| <b>All of Québec</b>         |           |           |           |           |
| Cattle <sup>1</sup>          | 940,000   | 922,000   | 963,000   | 1,003,500 |
| Calves                       | 346,000   | 381,000   | 457,000   | 411,500   |
| Hogs                         | 4,290,800 | 4,280,200 | 4,250,000 | 4,280,000 |
| Sheep <sup>2</sup>           | 164,900   | 166,100   | 175,900   | 171,000   |
| Lambs <sup>3</sup>           | 60,300    | 63,900    | 74,100    | 74,000    |

Note: For further information on livestock, see the "Biosécurité Santé" section of the ISQ website.

1. Includes heifers, bulls, dairy cows, beef cows and steers.

- 2. Includes rams and ewes.
  - 3. Includes replacement lambs and market lambs.
- Source: Statistics Canada, *Livestock Survey, 2005*.  
Compilation: Institut de la statistique du Québec, Direction des statistiques économiques et sociales.

June 22, 2005

Symptoms used in tables

**Québec**

Gouvernement du Québec  
Information Integrity | Privacy Office

**APPENDIX B**  
**LIST OF STORES &**  
**MEAT MARKETS SURVEYED**

| <b>Town/City</b> | <b>Business Name</b>                          | <b>Phone</b> |
|------------------|---|--------------|
| Alban            | Dawson Country Food & Deli                    | 705-857-2305 |
| Alban            | Lemieux Meat & Grocery                        | 705-857-2027 |
| Astorville       | Perron's Freshmart                            | 705-752-1930 |
| Bear Island      | Mel's Market                                  | 705-237-8933 |
| Callander        | Danny's Food Market                           | 705-752-3090 |
| Callander        | The Produce Store                             | 705-752-4445 |
| Capreol          | Kirkwood's Freshmart                          | 705-858-1540 |
| Chelmsford       | Chelmsford Your Independent Grocer            | 705-855-4588 |
| Chelmsford       | Loeb Canada Inc.                              | 705-855-4328 |
| Chelmsford       | Tina's Bulk Foods                             | 705-855-7700 |
| Cobalt           | Silver City Grocery                           | 705-679-5915 |
| Dowling          | Dowling Valu-Mart                             | 705-855-5121 |
| Dymond           | Loeb Canada Inc. - Magasin                    | 705-647-7649 |
| Earlton          | Earlton Food Town                             | 705-563-2260 |
| Earlton          | Town & Country Mini Mart                      | 705-563-2777 |
| Englehart        | Thib's Valu Mart                              | 705-544-2201 |
| Field            | Riverview Market                              | 705-758-6200 |
| Garson           | Garson Foodland                               | 705-693-7971 |
| Hagar            | Hagar General Store                           | 705-967-2610 |
| Haileybury       | Haileybury General Store                      | 705-672-2323 |
| Haileybury       | Mike's One Stop                               | 705-672-3667 |
| Haileybury       | Trottier's Valu Mart                          | 705-672-2121 |
| Iroquois Falls   | Iroquois Falls Valu-Mart                      | 705-232-5153 |
| Iroquois Falls   | Morrisette's Loeb                             | 705-232-4071 |
| Kenabeek         | Kenabeek General Store                        | 705-563-2772 |
| Kirkland Lake    | Dave's Independent Grocer                     | 705-567-4939 |
| Kirkland Lake    | Pronto Store                                  | 705-567-7070 |
| Kirkland Lake    | The Grocery Depot                             | 705-567-7207 |
| Lively           | Battistelli's Your Independent Grocer         | 705-692-3514 |
| Matheson         | A & G Fresh Mart                              | 705-273-1661 |
| Mattawa          | Food Friends                                  | 705-744-5535 |
| Mattawa          | Huard's Freshmart                             | 705-744-2498 |
| New Liskeard     | Chartrand Independent Grocer                  | 705-647-8844 |
| New Liskeard     | Quality Meats                                 | 705-647-8646 |
| New Liskeard     | The Pantry (Bulk Foods)                       | 705-647-5777 |
| Noelville        | Co-Operative Regionale Nipissing-Sudbury Ltd. | 705-898-2226 |
| North Bay        | A & P Food Store                              | 705-840-2424 |
| North Bay        | Dollar's Your Independent Grocer              | 705-472-8866 |
| North Bay        | Food Basics                                   | 705-472-8031 |
| North Bay        | Gormanville Grocery                           | 705-497-0300 |
| North Bay        | Mike & Lori's No Frills                       | 705-495-4884 |
| North Bay        | Price Chopper                                 | 705-495-4221 |
| North Bay        | TNG Grocery & Deli                            | 705-472-6900 |
| Powassan         | Oshell's Valu Mart                            | 705-724-2917 |
| South Porcupine  | Loeb Canada Inc.                              | 705-235-3535 |
| St. Charles      | Co-Operative Regionale Nipissing-Sudbury Ltd. | 705-867-2000 |
| Sturgeon Falls   | Don's Loeb                                    | 705-753-1742 |
| Sudbury          | Dumas' Your Independent Grocer                | 705-671-3051 |
| Sudbury          | Food Basics                                   | 705-566-8464 |
| Sudbury          | Food Basics                                   | 705-675-5845 |
| Sudbury          | Loeb Canada Inc.                              | 705-671-9770 |

|             |   |              |
|-------------|---|--------------|
| Sudbury     | Northland Grocers                             | 705-675-5541 |
| Sudbury     | Northwind Foods                               | 705-524-5794 |
| Sudbury     | Ramsey Lake Food Mart                         | 705-674-4622 |
| Sudbury     | Super C                                       | 705-560-9500 |
| Sudbury     | The Marketplace                               | 705-671-3112 |
| Sudbury     | Your Independent Grocer                       | 705-560-4961 |
| Temagami    | Dad's Outdoor & Convenience Store             | 705-569-3895 |
| Temagami    | Temagami Co-operative Food Town               | 705-569-2732 |
| Temiscaming | Provigo                                       | 819-627-3391 |
| Timmins     | A & P Food Store                              | 705-268-5481 |
| Timmins     | Fleury's Independent Grocer                   | 705-264-8233 |
| Timmins     | Foodlands                                     | 705-264-5237 |
| Timmins     | Hill Top Confectionary                        | 705-264-2423 |
| Timmins     | Levis' Loeb                                   | 705-268-5020 |
| Timmins     | Pick of the Crop                              | 705-268-3635 |
| Timmins     | Super C Timmins                               | 705-268-9922 |
| Timmins     | Zudel's Ltd. Fresh Mart                       | 705-267-5555 |
| Val Caron   | Loeb Canada Inc.                              | 705-897-4958 |
| Verner      | Chez St Pierre                                | 705-594-2433 |
| Verner      | Co-Operative Regionale Nipissing-Sudbury Ltd. | 705-594-2354 |

| <b>Town/City</b> | <b>Business Name</b>                     | <b>Phone</b> |
|------------------|--|--------------|
| Astorville       | Giroux Meats and Abattoir                | 705-752-1269 |
| Earlton          | Eric's Clay Belt Abattoir                | 705-563-8131 |
| Kenabeek         | Rheal's Abattoir and Meat Market         | 705-647-7419 |
| New Liskeard     | Temiskaming Livestock Exchange Ltd. 1992 | 705-647-5415 |
| Powassan         | D & K Poultry                            | 705-724-5999 |
| Ramore           | Bennett Abattoir                         | 705-236-4498 |
| Sturgeon Falls   | Abattoir Simon & Fils                    | 705-753-1112 |
| Trout Creek      | Northern Meat Packers and Abattoir Ltd.  | 705-723-5573 |



| <b>Town/City</b> | <b>Business Name</b>                  | <b>Phone</b> |
|------------------|---------------------------------------|--------------|
| Garson           | Daoust Quality Meats                  | 705-693-4766 |
| Kirkland Lake    | Claude's Meat Market                  | 705-568-8435 |
| Lively           | G & H Quality Meats                   | 705-692-3100 |
| New Liskeard     | Quality Meats                         | 705-647-8646 |
| North Bay        | Gravelle Farmer's Meat Market         | 705-472-0491 |
| North Bay        | Ken's Fresh Cut Meats                 | 705-476-1830 |
| North Bay        | McIntyre Butcher Shop & Grocery Store | 705-474-3920 |
| North Bay        | North Ontario Food Sales              | 705-476-5353 |
| North Bay        | Paul's Superior Meats                 | 705-495-6444 |
| North Bay        | Picadilly Fine Foods By Churchills    | 705-472-0030 |
| Sudbury          | Sunbeam Meat Market                   | 705-674-5209 |
| Timmins          | Dabrowski's Smoked Meats Ltd.         | 705-268-1955 |
| Timmins          | The Butcher Shop                      | 705-268-0226 |

| <b>Town/City</b>  | <b>Business Name</b>        | <b>Phone</b> | <b>Email</b> |
|-------------------|-----------------------------|--------------|--------------|
| Cochrane          | Chatrand's Valu Mart        | 705-272-4238 |              |
| Cochrane          | Fasano C Food Market        | 705-272-4251 |              |
| Hearst            | Fortier Valu Mart           | 705-372-1551 |              |
| Hearst            | Supermarche de Hearst (Loi  | 705-362-4423 |              |
| Iroquois Falls    | Iroquois Falls Valu-Mart    | 705-232-5153 |              |
| Iroquois Falls    | Morrisette's LOEB           | 705-232-4071 |              |
| Kapuskasing       | Campbell Geo F Ltd.         | 705-335-2211 |              |
| Kapuskasing       | Landriault's Your Independe | 705-337-4909 |              |
| Mattice           | Mattice Supermarket         | 705-364-3121 |              |
| Moonbeam          | Leonard L E Epicerie Inc.   | 705-367-2163 |              |
| Opasatika         | Martel Leo Gen Store        | 705-369-3301 |              |
| Smooth Rock Falls | Blanchette Freshmart        | 705-338-2708 |              |
| Valrita           | Epicerie Murray Grocers     | 705-335-5881 |              |

| <b>Town/City</b>      | <b>Business Name</b>                 | <b>Phone</b> | <b>Email</b> |
|-----------------------|--------------------------------------|--------------|--------------|
| Amos                  | Coop Metro D'Amos                    | 89-732-5281  |              |
| Amos                  | Deshaies Ben Inc.                    | 819-732-6466 |              |
| Barraute              | Inter Marche Barraute                | 819-734-5644 |              |
| Belcourt              | Goulet Brigitte                      | 819-737-4422 |              |
| Bellecombe            | Epicerie Pomerleau                   | 819-797-8300 |              |
| Cadillac              | Marche Richelieu Gelinas             | 819-759-3676 |              |
| Chisasibi             | Chisasibi Coop                       | 819-855-2828 |              |
| Cloutier              | Epicerie Michel Et Noella Parker Enr | 819-797-5806 |              |
| Eastmain              | Eastmain Grocery Store Reg           | 819-977-083  |              |
| Evain                 | Boucherie Donal Gelinas Enr          | 819-768-3346 |              |
| La Morandiere         | Epicerie Genest Enr                  | 819-734-6129 |              |
| La Motte              | Epicerie Chez Flo                    | 819-732-8795 |              |
| La Sarre              | Aliments En Vrac Chez Lucie          | 819-333-9053 |              |
| La Sarre              | Consommation Plus Enr                | 819-333-3008 |              |
| La Sarre              | L'entrepot Deschesnes                | 819-333-5020 |              |
| La Sarre              | Metro Plourde                        | 819-333-5598 |              |
| La Sarre              | Provigo                              | 819-333-2337 |              |
| Lacorne               | Epicerie Charland C                  | 819-799-2222 |              |
| Macamic               | Inter Marche Macamic                 | 819-782-4245 |              |
| Malartic              | Depanneur de Grandpre Inc.           | 819-757-3400 |              |
| Malartic              | Inter Marche G L                     | 819-757-3054 |              |
| Malartic              | Marche Richelieu S Fortin            | 819-757-3641 |              |
| Miquelon              | Epicerie Caron                       | 819-753-2317 |              |
| Palmarolle            | Epicerie Ayotee Enr                  | 819-787-2301 |              |
| Palmarolle            | Epicerie Marion & Fils               | 819-787-3280 |              |
| Palmarolle            | Epicerie Palmarolle Inc.             | 819-787-2191 |              |
| Radisson              | Distribution Rradis-Nord Inc.        | 819-638-7255 |              |
| Riviere Heva          | Epicerie Chez Lise Enr               | 819-735-3171 |              |
| Rouyn-Noranda         | A De La Chevrotiere Ltee             | 819-797-1900 |              |
| Rouyn-Noranda         | Depanneur Gendron Enr                | 819-762-3597 |              |
| Rouyn-Noranda         | Epicerie Leo Enr                     | 819-762-4031 |              |
| Rouyn-Noranda         | Epicerie Windsor Enr                 | 819-762-4813 |              |
| Rouyn-Noranda         | Groleau Gerard                       | 819-762-4112 |              |
| Rouyn-Noranda         | Supermarche Roy                      | 819-762-7739 |              |
| St. Felix de Dalquier | Epicerie Carigan Georges Inc.        | 819-732-3855 |              |
| Taschereau            | Marche Axep                          | 819-796-3343 |              |
| Val d'or              | Aliments M & M (Les)                 | 819-824-6189 |              |
| Val d'Or              | Depanneur Jacob Enr                  | 819-825-5504 |              |
| Val d'Or              | Depanneur Lemoyne Inc.               | 819-825-4262 |              |
| Val d'Or              | Epicerie Des Pins 2004               | 819-825-2619 |              |
| Val d'Or              | Epicerie Du Lac                      | 819-732-5281 |              |
| Val d'Or              | Epicerie Pierret Enr 1995            | 819-824-4932 |              |
| Val d'Or              | Epicerie Rejean Ringuette Inc.       | 819-824-2518 |              |
| Val-Paradis           | Epicerie GMC                         | 819-941-2604 |              |
| Val-St-Gilles         | Epicerie Dicaire                     | 819-333-3221 |              |
| Vassan                | Epicerie Vassan Enr                  | 819-824-3146 |              |
| Waskaganish           | Epicerie Diamond                     | 819-895-8858 |              |

**Town/City**  
Rouyn-Noranda

**Business Name**  
Delicana

**Phone**  
819-762-3555

**APPENDIX C**  
**SPECIFIED RISK MATERIALS**

Canadian Food  
Inspection AgencyAgence canadienne  
d'inspection des aliments

Canada

|          |            |      |        |             |
|----------|------------|------|--------|-------------|
| Français | Contact Us | Help | Search | Canada Site |
|----------|------------|------|--------|-------------|

 Quick Pick By Commodity / Key Topic 

- Main Page - Animal Products
- Main Page - Animal Health
- BSE in North America
  - BSE Disease Information
  - BSE Safeguards
  - International Activities / Trade

## Canadian Food Inspection Agency Industry Fact Sheet

# SPECIFIED RISK MATERIALS

### Specified Risk Materials (SRM)

In Canada, the following tissues are defined in regulation as SRM: skull, brain, trigeminal ganglia (clusters of nerve cells connect to the brain and closely apposed to the exterior of the skull), eyes, tonsils, spinal cord, and dorsal root ganglia (clusters of nerve cells connected to the spinal cord and closely apposed to the vertebral column) of cattle aged 30 months or older, and the distal ileum (part of the small intestine) of cattle of all ages. Specified risk materials, with the exception of the skull, are tissues that, in BSE-infected cattle, have been shown to contain the infective agent and transmit the disease. The skull has been designated because of the high probability of it becoming contaminated at the time of stunning and during manipulation of the other tissues if their separate removal was permitted. The SRM must be removed at slaughter or, in the case of the dorsal root ganglia, during the cutting/boning process, and disposed of along with other inedible material from the establishment.

In order to ensure complete removal of the dorsal root ganglia, operators are required to remove the vertebral column from cattle aged 30 months and older. For the purposes of this policy, the definition of the vertebral column excludes the vertebrae of the tail, the transverse processes of the lumbar and thoracic vertebrae, and the wings of the sacrum. The CFIA and Health Canada will entertain proposals from industry on possible changes to this definition that would increase economic return while still providing the necessary assurance of complete removal of the dorsal root ganglia. In any case, the vertebral column of cattle over 30 months of age cannot be used as raw material in the preparation of mechanically separated meat or finely textured meat.

Similarly, in order to ensure removal of the distal ileum in a manner that can be verified by inspection staff, operators are required to remove the entire small intestine from cattle of all ages. This requirement may be modified when procedures are identified that would enable removal of the distal ileum in a manner that is visually verifiable by inspection staff.

### Implementation

In accordance with Meat Hygiene Directive 2003-18, the effective date for implementation of the SRM removal policy in federally registered establishments is July 24, 2003.

As of August 23, 2003, the requirement to remove the SRM will apply by

regulation to all businesses and individuals who slaughter cattle in Canada and, in the case of the vertebral column, to all businesses and individuals who cut up or debone carcasses or quarters of cattle over 30 months of age to produce beef or beef products for human consumption.

Directive 2003-18 describes requirements for the removal, identification, control and disposition of SRM. While the Directive was developed for application in federally registered establishments it can also serve as a guide or reference document for other jurisdictions.

### Background

While BSE is a cattle disease, the human disease called variant Creutzfeldt-Jacob Disease (vCJD) has been associated with the consumption of products derived from BSE-infected cattle. Cattle tissues identified as SRM are not generally consumed as food. However, during processing, SRM could be unintentionally included in meat products destined for human consumption.

The SRM policy is being introduced to prevent tissues that may contain BSE infectivity from entering the human food chain and thereby further enhance public health protection. The detection of the one case of BSE has not compromised the safety of Canada's food supply. Although only one animal has been found to date to be infected with BSE, taking action to remove SRM from cattle at slaughter will further enhance the safety of the food supply in Canada. Canada's food supply is also protected from BSE by the CFIA's feed ban, import restrictions and routine animal surveillance. The development of this new policy on SRM removal reflects the government's commitment to strengthening Canada's BSE measures and to protecting the health of Canadians.

### Where Can I Find More Information?

#### *Policy Information*

- Policy on Specified Risk Materials of Bovine Origin in the Food Supply  
<http://www.hc-sc.gc.ca/english/diseases/bse/index.html>
- Removal of Specified Risk Materials from Cattle Slaughtered in Establishments Inspected Under the *Meat Inspection Regulations*  
<http://www.inspection.gc.ca/english/anima/meavia/mmopmmhv/direct/2003/direct18e.shtml>

#### *Background Information*

- Canadian Food Inspection Agency's BSE Investigation  
<http://www.inspection.gc.ca/english/anima/heasan/disemala/bseesb/bseesbindexe.shtml>
- Variant Creutzfeldt-Jacob Disease  
<http://www.hc-sc.gc.ca/english/diseases/cjd/bg4.html>



2003-08-07

Top of Page



**APPENDIX D**  
**ROTHSAY – PRESS RELEASE**

# Rothsay biodiesel plant to utilize Ontario deadstock, slaughter waste

The Montreal-based plant will have a capacity of 35 million litres a year when it's in full production.

BY FRANCES ANDERSON  
Ontario Farmer staff

The first commercial biodiesel plant was commissioned in Montreal last week, but it will benefit Ontario farmers because it's using Ontario by-products and supplying Ontario customers.

The plant on the south shore of Montreal is owned by Rothsay, a member of Maple Leaf. Ron Wardrop, the director of marketing and plant development, said the new biodiesel facility was developed at a cost of just \$12 million because Rothsay was able to renovate a former rendering plant.

"A lot of the infrastructure is common: waste water treatment, boiler and steam facilities, tanks

for fat and oils and finished product. And the land was there. It's on the water...it's an ideal facility. However, it's in the wrong province."

The plant itself is "very automated. It doesn't create a whole bunch of jobs - probably eight," said Wardrop.

So Ontario hasn't lost a lot of jobs. And Rothsay Biodiesel will benefit Ontario farmers and packers who are supplying dead stock and rendering waste to the Rothsay plant in Dundas, which is shipping tallow to Montreal.

By providing a value-added market for the tallow, the biodiesel plant "diversifies our portfolio," said Wardrop.

"This could become more important, down the road," if rendered material becomes

beamed from all livestock nations. In addition to animal fat and oils, Rothsay collects used restaurant grease from across Canada.

So the feed stock for the plant is "all recycled products."

"We're looking at this as a pilot commercialization plant," said Wardrop. The capacity will be 35 million litres a year.

production when it's ramped up to full production sometime in October. "That's rather small on a world scale."

However, if the Montreal plant becomes feasible, it will be the first of several biodiesel plants. Wardrop said location is critical. "You have to be close to farmers for these plants to work."

About half the feed stock is coming from Ontario; the rest from Quebec and the Maritimes.

Within the year, Canada's biodiesel production is expected to increase from five to 120 million litres when two more Ontario plants are commissioned.

Biox Corp. is scheduled to start up its \$24 million plant in Hamilton this fall. Output will be 60 million litres of biodiesel annually.

Topia Energy Inc. of Okanawa is in the permitting stage of building, said Govin Jayaraman. "We're still targeting to be open late fall of this year."

Topia's 53.8 million plant in Sudbury will have capacity of 20 million litres. Production is based on canola oil, but the plant will be able to accommodate oil from the forestry industry, as well as tallow and spent cooking oil.

Biodiesel is still priced at a slight premium to petroleum diesel "because it's a little more expensive to make," said Wardrop.

In Ontario, the government takes off the provincial road tax of 14 cents/litre, and the federal government, four cents in excise tax. So they do support it very well," said Wardrop.

"It isn't cheaper than petroleum diesel," said Brian MacDonald, the vice-president of sales for Canada Clean Fuels, which buys, blends and delivers fuel.

Fuels station in the Greater Toronto Area are offering a B20 blend of 20 per cent biodiesel and 80 per cent petroleum diesel for 90 cents a litre.

The greatest environmental benefit comes from using pure biodiesel, but "the most economic blend for us is B20 because you get very good reduction in carcinogenic material and greenhouse gases and pricing compares favourably with petroleum diesel."

The federal government has

anticipates using 500 million litres of biodiesel by 2010, in its Climate Change Action Plan, but Ontario alone would require two billion litres of biodiesel production if all diesel used in Ontario was a B20 blend.

Ontario farm use of biodiesel is difficult to gauge, but appears to be very limited.

Bob Peden, director of members services for UPI Energy LP, said they deliver dyed biodiesel to six Co-ops in the Guelph area where their bulk plant is located. It serves 21 co-ops altogether, but the others are too distant for delivery to be feasible.

Peden estimated each co-op might deliver biodiesel to five to ten farms. UPI sells B2, B5 and B10, but B2 is the most popular because it's the most economic.

Peden expects the biodiesel market will grow as the local plants come into production and the cost

of transportation drops, so the price can be more competitive than biodiesel imported from the United States.

"We found it in ethanol too. As long as the price is the same (as petroleum fuel) you can sell the product. But even a penny difference creates resistance."

**APPENDIX E**  
**BEST MANAGEMENT PRACTICES**

# Best Management Practices

for

## Nitrogen and Phosphorus Control

in

### Red Meat and Poultry Slaughter Plants

October 11, 2001 Partial Draft, prepared by J. Willis Speed of EDR, Inc

- I. Introduction
- II. Discussion of various slaughter plant types
- III. Description of production-related activities
- IV. Typical nitrogen and phosphorus levels
- V. Nitrogen and phosphorus sources
- VI. Best management practices for nitrogen and phosphorus control
- VII. BMP monitoring
- Appendix
- References

## I. Introduction

This document is intended to provide guidance for plant and corporate personnel in voluntarily establishing Best Management Practices (BMP) to control nitrogen and phosphorus in the wastewater from red meat and poultry slaughter plants. These nutrient control practices solely address in-plant waste minimization practices and do not include wastewater pretreatment or treatment methods.

This is one part of a three-part set of documents. This part addressed BMP for the slaughter operations. The other two documents discuss BMP for cutting up the carcasses, further processing the meat, and rendering. Therefore it may be appropriate for some packing plants to use two or all three of these documents if they also cut up the carcasses, further process the meat, or render.

## II. Discussion of various slaughter plant types

In the mid-1970s, the U.S. Environmental Protection Agency (EPA) divided red meat and slaughter plants into the following Segments and Subcategories:

- Simple Slaughterhouse
- Complex Slaughterhouse
- Low-Processing Packinghouse
- High-Processing Packinghouse

The plants were divided as follows

## BMPs for Slaughter Plants

- **Slaughterhouse.** A plant that slaughters animals and has as its main product fresh meat as whole, half or quarter carcasses or smaller fresh meat cuts.
- **Packinghouse.** A plant that both slaughters and processes fresh meat to cured, smoked, canned, and other prepared meat products. **Processed meat products** are limited to: chopped beef, meat stew, canned meats, bacon, hams (boneless, picnic, water added), franks, wieners, bologna, hamburger, luncheon meat loaves, sausages.

Both slaughterhouses and packinghouses are further subdivided into two subcategories, depending on the amount of by-product processing. By-product operations include: rendering, paunch and viscera handling, blood processing, or hide or hair processing.

- **Simple Slaughterhouse.** A slaughterhouse that does very limited, if any, by-product processing; usually no more than two operations.
- **Complex Slaughterhouse.** A slaughterhouse that does extensive by-product processing; usually at least three operations.
- **Low-Processing Packinghouse.** A packinghouse that processed no more than the total animals killed at the plant and normally processing less than the total kill.
- **High-Processing Packinghouse.** A packinghouse that processed both animals slaughtered at the site and additional carcasses from outside sources.

The BMPs contained in this document are applicable to the slaughter portion of each of these plants. Many of these plants will also need to refer to BMPs for Further Processing Plants and BMPs for Rendering.

Although categorical limits were never promulgated for the poultry industry so no legal subcategorization exists in current regulations, in the mid-1970s, the U.S. Environmental Protection Agency (EPA) divided poultry plants into the following subcategories:

- Chickens
- Turkeys
- Fowl
- Ducks

These subcategories are obvious with the exception of the term "fowl", which are breeder-spent hens (heavy fowl), a few roosters, and laying hens (light fowl). From a wastewater perspective, the key difference is the presence of immature eggs in the hens, which can increase loadings from these birds.

More recently poultry plants are commonly split into the following three types of facilities:

- **Slaughter/First Processing:** A facility that simply slaughters birds and packages fresh and frozen whole birds and parts.
- **Slaughter/Second processing:** A facility that, in addition to performing the operations of first processing, also performs operations such as deboning, marinating, tumbling, IQF.
- **Slaughter/Third Processing:** A facility, which in addition to performing the operations of first and second processing, also produces a parfried or fully-cooked product. Parfried product is product that is not fully cooked. It is often done to "set" batter on a formed meat product.

The BMPs contained in this document are applicable to the slaughter portion of each of these plants. Second and Third Processing plants also need to refer to BMPs for Further Processing Plants.

## III. Description of production-related activities

[pending]

## IV. Typical nitrogen and phosphorus levels

In the 1974, the Environmental Protection Agency (EPA) published a Development Documents for Red Meat Processing. Included within that document are tables showing waste characteristics for each slaughter plant subcategory. Table I shows data for total Kjeldahl nitrogen (TKN) from that Development Document.

**TABLE I**  
**RED MEAT SLAUGHTER PLANT EFFLUENT TKN LEVELS**  
**FROM 1974 DEVELOPMENT DOCUMENT**

| PLANT TYPE                   | AVERAGE         | STD. DEVIATION  | RANGE           | NO. OF PLANTS |
|------------------------------|-----------------|-----------------|-----------------|---------------|
| RED MEAT                     | lb/1000 lb LWK* | lb/1000 lb LWK* | lb/1000 lb LWK* |               |
| Simple Slaughterhouse        | 0.68            | 0.46            | 0.23-1.36       | 5             |
| Complex Slaughterhouse       | 0.84            | 0.66            | 0.13-2.1        | 12            |
| Low-Processing Packinghouse  | 0.53            | 0.44            | 0.04-1.3        | 6             |
| High-Processing Packinghouse | 1.3             | 0.92            | 0.65-2.7        | 3             |

\* Live Weight Killed

In the 1975, a similar Development Documents for Poultry was published. That document included tables showing waste characteristics for effluent from each slaughter plant subcategory. Table II shows data for the various forms of nitrogen from the Development Document.

**TABLE II**  
**POULTRY SLAUGHTER PLANT EFFLUENT NITROGEN LEVELS**  
**FROM 1975 DEVELOPMENT DOCUMENT**

| PLANT TYPE | AVERAGE         | RANGE           | NO. OF PLANTS |
|------------|-----------------|-----------------|---------------|
|            | lb/1000 lb LWK* | lb/1000 lb LWK* |               |
| Chicken    |                 |                 |               |
| TKN        | 1.84            | 0.15-12.16      | 22            |
| Ammonia-N  | 0.23            | 0.005-0.73      | 19            |
| Nitrate-N  | 0.0078          | 0.0-0.14        | 12            |
| Nitrite-N  | 0.0069          | 0.0-0.037       | 14            |
| Turkey     |                 |                 |               |
| TKN        | 0.94            | 0.038-1.89      | 5             |
| Ammonia-N  | 0.15            | 0.064-0.37      | 5             |
| Nitrate-N  | 0.037           | 0.005-0.092     | 3             |
| Nitrite-N  | 0.0013          | 0.001-0.002     | 3             |
| Fowl       |                 |                 |               |
| TKN        | 0.28            | ----            | 1             |
| Ammonia-N  | 0.1             | ----            | 1             |
| Nitrate-N  | 0.0044          | ----            | 1             |
| Nitrite-N  | 0.00053         | ----            | 1             |

## BMPs for Slaughter Plants

| Duck      |        |              |   |
|-----------|--------|--------------|---|
| TKN       | 1.4    | 0.80-2.00    | 2 |
| Ammonia-N | 0.79   | 0.062-2.52   | 2 |
| Nitrate-N | 0.03   | 0.018-0.043  | 2 |
| Nitrite-N | 0.0097 | 0.0014-0.018 | 2 |

\* Live Weight Killed

Table III shows effluent phosphorus levels for both Red Meat and Poultry slaughter plants.

**TABLE III**  
**SLAUGHTER PLANT TOTAL PHOSPHORUS LEVELS**  
**FROM 1970s DEVELOPMENT DOCUMENTS**

| PLANT TYPE                   | AVERAGE         | STD. DEVIATION  | RANGE           | NO. OF PLANTS |
|------------------------------|-----------------|-----------------|-----------------|---------------|
|                              | lb/1000 lb LWK* | lb/1000 lb LWK* | lb/1000 lb LWK* |               |
| <b>RED MEAT</b>              |                 |                 |                 |               |
| Simple Slaughterhouse        | 0.05            | 0.03            | 0.014-0.086     | 5             |
| Complex Slaughterhouse       | 0.33            | 0.49            | 0.05-1.2        | 5             |
| Low-Processing Packinghouse  | 0.13            | 0.16            | 0.03-0.43       | 4             |
| High-Processing Packinghouse | 0.38            | 0.22            | 0.2-0.63        | 3             |
| <b>POULTRY</b>               |                 |                 |                 |               |
| Chicken                      | 0.39            | ----            | 0.054-2.46      | 22            |
| Turkey                       | 0.98            | ----            | 0.034-0.18      | 4             |
| Fowl                         | 0.29            | ----            | 0.27-0.31       | 2             |
| Duck                         | 0.084           | ----            | 0.073-0.096     | 2             |

\* Live Weight Killed

All data in Table Nos. I-III represents plant effluents after physical pretreatment, i.e. no chemically-enhanced pretreatment. However pretreatment facilities were generally less extensive in the early 1970s than is presently typical.

## V. Nitrogen and phosphorus sources

### A. Nitrogen

Total nitrogen is comprised of TKN, nitrate nitrogen and nitrite nitrogen. TKN is the combination of organic nitrogen and ammonia nitrogen. Table II shows that essentially all of the nitrogen in poultry slaughter plant effluents is in the form of TKN, with very little nitrate or nitrite nitrogen present. Although no effluent nitrate or nitrite data is presented in Table I for Red Meat slaughter plants, nitrate and nitrites are similarly low for these effluents as well. By far the major source of nitrogen is from the protein in the meat particles and blood in the

wastewater from slaughter plants. Protein contains about 16 percent organic nitrogen. Other sources of nitrogen are the manure and partially-digested feeds from stomachs and gizzards and intestines, as well as urine. Fat contains no nitrogen, nor is any contained in carbohydrates such as sugars, starches and cellulose. The primary source of the small amount of carbohydrates in packing plant wastewater is from the animal feeds.

As protein is utilized by both aerobic and anaerobic saprophytic bacteria, organic nitrogen is broken down to ammonia. The longer the meat particles and blood are in contact with wastewater, the more the organic nitrogen will be converted to ammonia nitrogen. This is significant because organic nitrogen can be removed from the wastewater by physical pretreatment; such as fine screening, settling or flotation; but ammonia cannot because it is in solution. The longer feeds have been inside the animals, the more the proteins within the feeds will have been broken down into ammonia. All the organic nitrogen in urine has been broken down to urea,  $\text{CO}(\text{NH}_2)_2$ . Although ammonia is often used in the refrigeration systems at packing plants, it is not a significant source of nitrogen in the wastewater.

## B. Phosphorus

A significant source of phosphorus in packing plant wastewater is also the proteins in the meat particles and blood. Lean meat contains approximately two percent (verify) organic phosphorus. Carbohydrates and fat contain small amounts of phosphorus. The manure and partially-digested feeds from stomachs and gizzards and intestines contribute to phosphorus in packing plant wastewaters. Since the general phosphorus contents in poultry plants shown in Table III were determined in the early 1970s, the use of trisodium phosphate (TSP) as a microbial agent to wash the animals has become common in poultry plants and, occasionally, in pork plants. This use of TSP can cause an appreciable increase in the phosphorus content of the wastewater from these plants. If phosphate-bearing detergents are used for cleaning, these can be a source of phosphorus in the wastewater. Boiler-water additives only contribute minor amounts of phosphorus in the wastewater.

## VI. Best management practices for nitrogen and phosphorus control

The following is a list of items for consideration when establishing best management practices nitrogen and phosphorus control at slaughter plants. This list should not be considered as all-inclusive, nor are all of these methodologies necessarily appropriate for every plant. This list should be viewed as a starting point for establishing BMPs specific to each facility.

- A. Blood Collection/Blood Handling
- B. Manure Management
- C. Inedible Material Management
- D. Cleaning Chemical Management
- E. Solids Removal
- F. Dry Cleanup
- G. Egg Harvesting from Hens
- H. Water Conservation
- I. Product Loss Prevention
- J. Pollution Prevention Team
- K. Environmental Awards Program

**A. Blood Collection/Blood Handling:** Whole blood contains about 27,000 mg/l of organic nitrogen and 300-400 mg/l (verify) phosphorus.

- **Maximize Blood Collection:**

1. Ensure stunning devices are properly functioning to maximize rapid bleed-out of the animal.
2. Ensure the animals are properly stuck so they are thoroughly bled out before leaving the



blood collection area. In poultry plants, maintain sharp blades, and adjust blade cut depth on killers to ensure clean cuts that allow maximum bleed out.

3. Check that adequate hang time is available so that the carcass is only dripping an occasional drop of blood when it leaves the blood collection area. If necessary, provide drip pans past the blood trough to prevent blood accumulation on kill room floor. In poultry plants, strive for minimum bleed times of 45 seconds for broilers and light fowl, 60 seconds for heavy fowl, 90 seconds for turkey hens, and 120 seconds for turkey toms
4. The blood collection pit and blood troughs need to be wide enough to avoid blood splashing outside these collection devices. At corners where the animals may swing outward, it may be necessary to add splash shields to contain the blood. The blood collection system needs to be of sufficient size to hold the blood during extended shifts.
5. Dry clean blood troughs and drip pans with a squeegee, or other appropriate tool, during sanitation and, if necessary, between shifts.
6. Collect and transfer to rendering, the "first rinse" water from blood trough sanitation.
7. Where possible, avoid the use of grating and other materials and areas within the blood collection pit that pack full of blood that cannot be removed during dry cleanup.
8. Electrical stimulation of beef carcasses maximizes blood recovery from the carcasses where it can be collected. This same concept may be possible in other plants as well.

Impacts:

1. Minimizes the loss of blood to the wastewater, thereby reducing nitrogen, phosphorus and BOD in the wastewater. This is particularly important since blood is not removed in physical pretreatment devices like screens, clarifiers and flotation systems.
  2. Maximizes the capture of valuable blood.
- Consider Saving Blood Plasma for Sale: Add citric acid to raw blood and centrifuge to separate out most of the plasma for sale to off-site drying operations.

Impacts:

1. Minimizes the discharge of blood plasma from blood processing/drying, thereby affecting nitrogen, phosphorus and BOD reductions.
  2. The sale of plasma is profitable.
- Consider establishing a program of routine maintenance to reduce leaks and spills of whole blood or plasma.
    1. Where possible, dry clean up blood spills.
    2. Repair or replace pump and valve seals as required to minimize or eliminate leaks of whole blood or plasma.
    3. Strive to continuously eliminate pipe and equipment blood/plasma leaks and spills.

Impacts:

1. Reduction in total P, nitrite and BOD in the wastewater.
2. Maximizes the capture of valuable blood and plasma.

**B. Manure Management:** The nutrient content of animal manure and urine is quite high, as shown in Tables IV and V:

**TABLE IV  
NUTRIENT CONTENT OF RED MEAT MANURE AND URINE**

| Species           | Nitrogen |           | Phosphorus |           |
|-------------------|----------|-----------|------------|-----------|
|                   | mg/l     | lb/hd/day | mg/l       | lb/hd/day |
| Beef - 1125 lb/hd | 5,770    | 0.385     | 1850       | 0.123     |
| Hogs - 260 lb/hog | 6,630    | 0.115     | 2,020      | 0.035     |

Total P in the wastewater from hog pens has been measured at 106 mg/l, which was 3.5 times higher than the total packing plant flow.

**TABLE V**  
**NUTRIENT CONTENT OF POULTRY MANURE**

| Species             | Nitrogen    | Phosphorus  |
|---------------------|-------------|-------------|
|                     | lb/bird/day | lb/bird/day |
| Broiler (5lb/bird)  | .005        | .0017       |
| Turkey ( 20lb/bird) | .015        | .006        |
| Duck ( 8lb/bird)    | .006        | .0024       |
| Fowl ( 6lb/bird)    | .005        | .0019       |

- Less manure is deposited in the livestock trailers and pens, cages, live holding sheds, live receiving areas and less partially-digested feeds are lost to the slaughter plant sewers from the paunch/stomach/gizzard and intestines if livestock or poultry are taken off feed before they are sent to slaughter.

**Impacts:**

1. Reduction of total P, TKN, BOD, and TSS in the wastewater.
2. Results in a minor reduction in feed costs.
3. Reduces potential product contamination with manure.

**Comment:**

1. This may not be feasible if the animals are hauled long distances.
  2. This is particularly important in pork plants where there is a current trend to rest the hogs longer in the pens before slaughter.
- To the extent practical, dry clean livestock trailers, cages, pens, live holding sheds and live receiving areas before the initial hose down. Vacuums may be used to assist in this effort. This recovered material should then be land applied at agronomic rates, or landfilled if appropriate.

Impact: Reduction of total P, TKN, BOD, and TSS in the wastewater.

Comments: This is easier in beef plants and live poultry receiving and holding areas, than pork.

- Consider dry bedding cattle pens. The manure and bedding material should be land applied at agronomic rates.

Impact: Reduction of total P, TKN, BOD, and TSS in the wastewater.

- Investigate dry dumping beef paunch and hog stomachs and, to the extent possible, shake out beef pecks

## BMPs for Slaughter Plants

(omesum). This recovered material should then be land applied at agronomic rates.

Impact: Reduction of total P, TKN, BOD, and TSS in the wastewater.

## Comments:

1. It is difficult to shake much manure out of the pecks.
  2. Dry dumping beef paunches is far more common than dry dumping hog stomachs.
- Eliminate hashing and washing of intestines and render whole.

Impact: Reduction of total P, TKN, BOD, and TSS in the wastewater.

Comments: The cost of rendering manure in the intestines exceeds any value in the recovered product.

**C. Inedible Material Management**

- Red Meat: Try to eliminate the use of water to sluice meat scraps to inedible rendering or rendering trailers. This water must be drained from the raw materials before the inedible material is rendered. This leaches blood and other soluble materials out of the inedible material and sends them to the sewer. Alternatives to sluicing include screw and belt conveyors, ram-type and other solids-handling pumps, blow tanks and vacuum systems.

## Impact:

1. Reduction of TKN, total P, BOD, TSS and fat, oil and grease (FOG) in the wastewater.
2. More recovery of inedible material for rendering.

## • Poultry

1. Where practical, utilize vacuum system to transport lungs to inedible rendering or rendering trailers.
2. Consider usage, on a plant specific basis, of vacuum systems for hearts, giblets, paws and /or leaf fat.

## Impact:

1. Reduction of TKN, total P, BOD, TSS and FOG in the wastewater.
2. More recovery of inedible material for rendering.

**D. Cleaning Chemical Management:** Consider switching to low-phosphorus or non-phosphorus cleaning compounds. Phosphorous-based cleaners can often be replaced with organic surfactants (butoxyethanol) and caustic cleaners (NaOH or KOH).

Impact: This step alone reduced phosphorus in the effluent from a pork low-processing packinghouse by approximately 2 mg/l for a six percent reduction.

## Comment:

1. Consider food safety concerns when evaluating a switch to a low-phosphorus or non-

- phosphorus product
2. Non-phosphate cleaning compounds may be less effective and more costly.
  3. Caustic cleaners can harm aluminum and copper equipment.

**E. Solids Removal:** Improve in-plant practices to physically remove solids from wastewater.

- **Red Meat Drain Management.** Consider a two-tier screening system using the drain covers for coarse solids removal and drain basket screens with finer openings.

Impact:

1. Reduction of TKN, total P, BOD, TSS and FOG in the wastewater. Rapid removal of meat scraps and blood from the floors prevents the breakdown of organic nitrogen to the ammonia form, which cannot be removed through pretreatment.
2. More recovery of inedible material for rendering.

Comment: This may not be practical where large amounts of solids would quickly plug the baskets and require constant attention. In other areas, occasional plugging may force more frequent cleaning of the drains and baskets. Removal of the baskets or emptying them into the open drain must be prohibited for this to be effective.

- **Poultry Solids Removal.** Investigate improving screenings practices to include both primary (coarse) and secondary (fine) screening.

Impacts:

1. Reduction of TKN, total P, BOD, TSS and FOG in the wastewater. Rapid removal of meat scraps and blood from the floors prevents the breakdown of organic nitrogen to the ammonia form, which cannot be removed through pretreatment.
2. More recovery of inedible material for rendering.

**F. Dry Cleanup:** A meat particle on the floor is probably at least four percent nitrogen.

- a. Review the design of equipment to avoid creating difficulties with dry cleanup. For example, try to minimize numerous legs on equipment that inhibit use of a squeegee or shovel for dry cleanup.
- b. Assign workers during the production shift(s), at breaks and lunch to dry cleanup materials from the floors for rendering.
- c. Provide tools for dry cleanup, such as squeegees, shovels, dump carts, vacuums, etc. Adapt squeegees to fit within blood troughs.
- d. Consider establishing and enforcing written standard operating procedures for dry cleanup, either at the end of the production shift or at the start of the sanitation shift.

Impacts:

1. Reduction of TKN, total P, BOD, TSS and FOG in the wastewater. Rapid removal of meat scraps and blood from the floors prevents the breakdown of organic nitrogen to the ammonia form, which cannot be removed through pretreatment.
2. More recovery of inedible material for rendering.

**G. Egg Harvesting from Hens.** Harvest eggs from hens before evisceration.

Impacts: Reduction of TKN, total P, and BOD in the wastewater from the broken eggs.

Comments: Foaming caused by the egg whites (like a meringue) prevents  
The use of dissolved air flotation (DAF) for pretreatment.

**H. Water Conservation:** Although there is no readily-apparent reason why water conservation would result in nitrogen and phosphorus reductions, the Development Documents for these industries all contain graphs showing that plants with lower water use per animal also had lower waste loads, on a total mass basis. Obviously less water is used, however, if a scrap of meat is picked up during dry cleaning than if it is hosed to a floor drain during sanitation, for example. This may also simply be an indication that better-run plants use less water and discharge less wastes versus poorer-managed plants in general.

- Use the appropriate pressure and volume of water for sanitation according to each application.

Impact: Reduced water requirements for sanitation.

- Consider installation of "electronic eyes", foot valves or other devices on spray cabinets, carcass washers, eviscerating machines, chill tanks and other large water users to shut off the water when no animals are present.
- Evaluate installing water meters and monitoring potable water usage for: 1) each department within the plant, 2) each shift, and 3) individual machines that use large quantities of water, such as carcass washers, chitterling machines and stomach machines.
  1. Monitoring water use on a day-to-day, month-to-month, and year-to-year basis can detect daily excursions, as well as long-term trends. Gradually increasing water use for an individual piece of equipment may indicate spray nozzle openings are slowly wearing larger. Significant water flow during idle shifts and weekends may indicate water leaks.
  2. Consider establishing baseline quantities and holding each department manager responsible for water usage for his department. Reward usage under budgeted amounts and condemn usage over budgeted quantities.
  3. Encourage competition for water reductions between shifts and between different departments
- Consider establishing a program to inspect all hose nozzles and equipment spray nozzles and measure flow rates, where possible, at least annually. Replace nozzles discharging excessive flow.

Impact: Less water usage; hence less pollutant discharge.

- Use push-to-open nozzles on hoses.

Impact: Reduced water requirements for sanitation.

**I. Product Loss Prevention:** Consider establishing procedures to monitor wastewater pollutant loadings (TKN, total P, BOD, TSS, and FOG).

- Monitoring pollutant loads on a shift-by-shift, week-to-week, month-to-month, and year-to-year basis will reveal daily excursions, as well as long-term trends.
- Consider establishing baseline quantities and holding each department manager responsible for loads from his department. Reward quantities under budgeted amounts and condemn discharge of excessive quantities.
- Encourage competition for waste reductions between shifts and between different departments.

Impacts:

1. Reduced loadings for wastewater treatment, hence reduced waste treatment costs.

2. Problem areas are identified and corrected.
3. Allows measurement of the impact of waste reduction projects within the plant.

**J. Pollution Prevention Team:** Investigate establishing teams to identify methods to reduce water usage and plant waste, set goals, and monitor progress.

Impacts:

1. Reduced water usage and waste loads.
2. Recognition for employee efforts.

**K. Environmental Awards Program:** Consider participating in an industry-sponsored awards program or establishing corporate sponsorship of awards to plants, departments or individuals for both water and waste reduction. Plants could compete for awards with winners recognized by the industry or company management with a trophy or plaque.

Impacts: Annual savings over a \$1 million/year were attributed to these projects, plus energy reduction, by one red meat corporation.

## VII. BMP monitoring

[remainder pending]

## Appendix

## References

**APPENDIX F**  
**K. SMART ASSOCIATES LTD.**



**K. SMART ASSOCIATES LIMITED**  
CONSULTING ENGINEERS AND PLANNERS

KITCHENER • SUDBURY • ENGLEHART • RAINY RIVER

85 McIntyre Drive  
Kitchener, Ontario N2R 1H6

Tel: (519) 748-1199  
Fax: (519) 748-6100

August 3, 2005

Job Num: 05-175

Murray Coates, P.Eng.  
P.M Associates Ltd.  
65 Dewdney Avenue  
Winnipeg, Manitoba  
R3B 0E1

Regarding: New Liskeard Abattoir

Dear Sir:

As requested we are writing this letter to provide a proposal for the wastewater treatment for the Abattoir in New Liskeard.

The Project Manager for this project will be Mr. David Harsch, P.Eng. . Mr. Harsch is a principal with K. Smart Associates Limited and has been involved in civil engineering projects, buildings, water supply and wastewater treatment/disposal for the past 23 years with the company. Mr. Don Lacko (Englehart office) will assist in the field work and liaison with the local municipality and approval authorities. Mr. Brian Whitehead (Rural Development Consultants) will provide specialist consulting services.

This proposal deals with the issue of wastewater treatment only. We can provide other engineering services for the project.

We understand that Sutcliffe Rody Quesnel Inc has conducted a soils exploration program and based on the information provided to us to date the native soils are sandy and gravelly sand with high permeability.

The wastewater treatment system will consist of two systems. The smaller system will collect and treat wastewater generated by humans. The larger system will treat wastewater from abattoir operation itself.

Based on the assumption of 10,000 AU's per year and 200 imp gallons of water per AU and assuming 50 working weeks of 4 day weeks the estimated daily wastewater flow from the abattoir is in the magnitude of 10,000 imp gallons/day (45,000 litre/day).



The treatment process for this size of plant will need to be evaluated to determine the best combination of technology to provide the required treatment and disposal of wastewater to protect groundwater resources since the soils have high permeability. If a facultative lagoon were to be used it would require an impermeable liner (clay or HDPE liner) with leak detection system. The plant size is however large enough so that one may consider using a mechanical treatment system and treat the wastewater on a daily basis as it is produced by the abattoir. The mechanical plant would most likely need to be constructed as a two stage treatment process in order to treat the water so that it can be disposed of in-ground and provide protection to the ground water.

Regardless of the treatment process selected, if in-ground disposal is used for effluent disposal a hydrologic study will be required in order to obtain MOE approvals for effluent discharge to subsurface.

### **Estimated Capital Cost of Treatment Process**

If we assume that the treatment system consists of a mechanical system the estimated capital cost of the treatment process is estimated at \$600,000 to \$700,000.

### **Estimated Engineering Cost**

It is difficult to estimate the engineering cost for the treatment system at this time.

Possible work tasks that need to be complete are as follows:

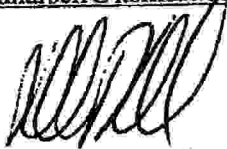
- a) Topographic survey
- b) Site Review and Evaluation
- c) Meeting with MOE
- d) Hydro geological Investigation
- e) Evaluation of treatment options
- f) Preliminary Design
- g) Consultation meeting(s) with MOE
- h) Process selection and final design/drafting
- i) Final meeting with local MOE to review design.
- j) MOE application and submission of design for approval.
- k) Co-ordinate other municipal approvals.

At this time we recommend that a budget allowance for Engineering be \$35,000 to \$40,000. We will be better able to estimate the Engineering costs after site evaluation and the first meeting with MOE. There may be a need to complete a more extensive hydro-geological investigation which we have not allowed for. We will obtain a quotation for such work prior to moving forward.

In order to determine the specific site issues and local concerns it would be prudent for us to review the site and meet with the MOE prior to any other engineering tasks. The initial site review and meeting with the MOE will cost \$2,450. This includes travel time and mileage.

If you have any questions please feel free to call.

David Harsch, P.Eng.  
[dharsch@ksmart.on.ca](mailto:dharsch@ksmart.on.ca)

A handwritten signature in black ink, appearing to read 'DHarsch', written over the email address.

K. Smart Associates Limited

**APPENDIX G**  
**HYDRO ONE ESTIMATE**

**murray coates**

**From:** <cloutier.roger@HydroOne.com>  
**To:** <murray@pmgroup.ca>  
**Cc:** <greg.towns@HydroOne.com>; <jacques.violette@HydroOne.com>; <cloutier.roger@HydroOne.com>  
**Sent:** Thursday, June 02, 2005 4:10 PM  
**Attach:** Map.doc  
**Subject:** Coleman 3 Phase site

Hello Murray,

I completed site visits to all three sites indicated on map. Site #1 appears to be the nearest and has been ballparked in at approx. 500 M from a 3 phase line. Site #2 is approx. 900-1000 M. Site #3 has an existing abandoned line along an existing roadway, I measured the distance from the end of it back to HWY 11 (3 phase at highway) it is approx. 800 M. All above lengths are ballparks.

Sites # 1&2 will require major forestry work and all line work will involved off road equipment. Site #3 is along an existing road way and it will require brushing along with minor forestry work.

Site #1 Ballpark of \$18000.00, excluding staking fees of \$1750.00 + GST & Forestry (major).

Site #2 Ballpark of \$40000.00, excluding staking fees of \$3500.00 + GST & Forestry (major) & Highway crossing permit of \$450.00.

Site #3 Ballpark of \$22000.00, excluding staking fees of \$2800.00 + GST & Forestry (minor)

#### Note

\* above Ballparks are +/- 50 %.

\* if it is required to cross private property this may have an impact on the path chosen for the Primary line

If you decide to follow up and proceed with a site, your next step is to contact me and I will have our local office send out a request for staking fees letter to you. These fees are for Staking the proposed path for the Primary line, Searching property ownership, Staking data for Primary line design standards and commissioning.

It would also be advantageous to have a final building location staked out. If you have any questions please fell free to contact me as per numbers below.

Thanks

Roger Cloutier CET  
 Distribution Engineering Technician Supervisor  
 New Liskeard, North Bay, Kirkland Lake  
 Bell 705-647-3901  
 Cell 705-648-1239  
 <cloutier.roger@hydroone.com>  
 <roger.cloutier@hydroone.com>

**murray coates**

**From:** <cloutier.roger@HydroOne.com>  
**To:** <murray@pmgroup.ca>  
**Cc:** <jacques.violette@HydroOne.com>; <greg.towns@HydroOne.com>  
**Sent:** Friday, June 03, 2005 7:09 AM  
**Subject:** RE: Coleman 3 Phase site

Murray,  
The required clearing width is 11M. As for the Forestry estimate I would need to contact a Forestry Tech for a ballpark.  
It should be noted the maximum service size allowed on this Primary line is 347/600V 600A disconnect at a Primary line voltage of 12.5kV phase to phase. This project may qualify for Hydro One support with regards to connection.  
Thanks

Roger Cloutier CET  
Distribution Engineering Technician Supervisor  
New Liskeard, North Bay, Kirkland Lake  
Bell 705-647-3901  
Cell 705-648-1239  
<mailto:roger.cloutier@hydroone.com>

-----Original Message-----

**From:** murray coates [mailto:murray@pmgroup.ca]  
**Sent:** Thursday, June 02, 2005 6:52 PM  
**To:** <cloutier.roger@hydroone.com>; <greg.towns@hydroone.com>  
**Cc:** linda cote  
**Subject:** Re: Coleman 3 Phase site

Roger

Would you have a guess what the right of way clearing costs would be- Would it be a 10 meter width?-If so, we would need to clear about 5000 m2??

I think site 1 will prove to be the best but will need to check on soil conditions etc first

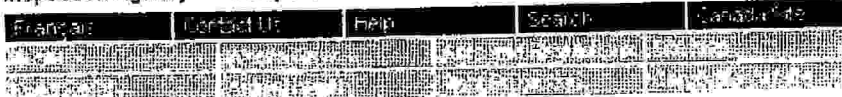
Thanks again

----- Original Message -----

**From:** <cloutier.roger@hydroone.com>  
**To:** <murray@pmgroup.ca>  
**Cc:** <jacques.violette@hydroone.com>; <greg.towns@hydroone.com>; <cloutier.roger@hydroone.com>  
**Sent:** Thursday, June 02, 2005 4:10 PM  
**Subject:** Coleman 3 Phase site

- > Hello Murray,
- > I completed site visits to all three sites indicated on map. Site #1
- > appears

**APPENDIX H**  
**MEAT INSPECTION FEES**



Quick Pick By Commodity / Key Topic    Go

- Main Page -
- Acts and Regulations
- Canadian Food Inspection Agency Act
- Canadian Food Inspection Agency Fees Notice

Acts and Regulations > Canadian Food Inspection Agency Fees Notice

## PART 10

### MEAT PRODUCTS INSPECTION FEES

#### *Interpretation*

1. (1) The definitions in this subsection apply in this Part.

"Act" means the *Meat Inspection Act*. (*Loi*)

"Regulations" means the *Meat Inspection Regulations, 1990*. (*Règlement*)

(2) Unless otherwise provided in this Part, other words and expressions have the same meaning as in the Act and the Regulations.

#### *Payment*

2. (1) The fees set out in items 3 to 7 of table 1 and in table 3 shall be paid on receipt of an invoice from the Agency.

(2) Subject to subsection (3), the fees set out in items 1 and 2 of table 1 and in table 2 are payable as follows:

(a) 25 per cent of the amount, on receipt of an invoice from the Agency; and

(b) the remainder of the amount, in three equal instalments at equal time intervals within the period covered by the licence.

(3) If the fees set out in items 1 and 2 of table 1 and in table 2 are less than \$1,000, they shall be paid in full on receipt of an invoice from the Agency.

3. (1) Subject to subsection (4), if the Director has re-determined a number of hours of inspection or a number of inspection stations in accordance with subsection 128(6) of the Regulations, the amount of the fee set out in item 2 of table 1 or in table 2, as the case may be, is adjusted.

(2) If the fee is adjusted upward, the adjustment of the fee is effective on the day on which the applicable situation referred to in subsection 128(5) of the Regulations occurs.

(3) If the fee is adjusted downward, the adjustment of the fee is effective

(a) on the day on which the applicable situation referred to in subsection 128(5) of the Regulations occurs, if the Director is notified in accordance with that subsection at least one month before that day;

(b) on the day that is one month after the day on which the Director is notified in accordance with subsection 128(5) of the Regulations, if the Director is notified less than one month before the day on which the situation occurs; and

(c) on the day that is one month after the day on which the situation referred to in subsection 128(5) of the Regulations occurs, in any other case.

(4) In the case referred to in paragraph (3)(b) or (c), the fee shall not be adjusted if the situation is no longer in effect on the day on which the adjustment would otherwise have been effective.

Table 1

|   | Column 1   | Column 2          |
|---|--|-------------------|
| Item                                    | Service, Right, Product, Privilege or Use  | Fee               |
| inspection at registered establishments |  |                   |
| 1.                                      | (1) Subject to subitem (2), for the inspection of a registered establishment and the meat products in it, if that establishment is registered for one or more of the following activities:                               | \$300 per year    |
|   | (a) the inspection of imported or detained meat products requiring refrigeration or freezing   |                   |
|   | (b) the inspection of imported or detained meat products not requiring refrigeration or freezing   |                   |
|   | (c) the refrigeration, freezing and storage of refrigerated and frozen meat products   |                   |
|   | (d) the storage of meat products not requiring refrigeration or freezing   |                   |
|   | (2) The fees referred to in subitem (1) are set out for a 12-month period and shall be reduced proportionally on a daily basis if the licence to operate the registered establishment is issued for less than 12 months. |                   |
| 2.                                      | (1) Subject to subitem (2), for the inspection of a registered establishment and the animals and meat products in it, if the establishment is registered for the slaughter of food animals:                              | \$16,218 per year |
|   | (a) in respect of each inspection station referred to in subsection 128(2) of the Regulations  |                   |
|   | (i) for the slaughter of poultry other than ostriches, emus and rheas  |                   |



|                    |  |  |
|--------------------|--|--|
|                    | (ii) for the slaughter of other food animals   | \$9,855 per year                                 |
|                    | (b) in respect of each additional inspection station provided pursuant to subsection 128(3) of the Regulations   | \$24,657 per year                                |
|                    | (2) The fees referred to in subitem (1) are set out for a scheduled work shift of five days in a work week, for a 12-month period, and shall be reduced proportionally on a daily basis if the scheduled work shift is less than five days in a work week or covers less than 12 months or if the licence to operate the registered establishment is issued for less than 12 months. |  |
| 3.                 | In addition to the fee set out in item 2, in the case of an establishment registered for the slaughter of food animals for the inspection of that registered establishment and the animals and meat products in it, in respect of each additional inspection station provided pursuant to subsection 128(4) of the Regulations   | \$53 per hour, subject to a minimum fee of \$159 |
| export             |  |  |
| 4.                 | For a certificate authorizing the export of meat products issued under paragraph 7(c) of the Act   | \$15   |
| import             |  |  |
| 5.                 | For the verification of import documents in respect of a meat product, carried out under subsection 9(2) of the Act and subsection 3(6) of the Regulations,  | \$68   |
| re-inspections     |  |  |
| 6.                 | For an inspection carried out to ensure that a contravention of the Regulations has been corrected   | \$53 per hour                                    |
| labels and recipes |  |  |
| 7.                 | (1) Subject to subitems (3) to (5), for the registration of a label or recipe submitted pursuant to paragraph 110(1)(a) of the Regulations   | \$100  |
|                    | (2) Subject to subitems (3) to (5), to change a label that is already registered, to register a new label with a recipe that is already registered or to review a label for a meat product that is not a prepared meat product   | \$45   |
|                    | (3) If a change made to a registered label does not affect the information required by the Regulations to be on the label, no fee is payable for the registration of the changed label.  |  |
|                    | (4) If a change is made to a registered label or recipe as a result of an amendment to the Regulations, no fee is payable for the registration of the changed label or recipe.   |  |
|                    | (5) No fee is payable for the registration of a label or recipe  |  |

|  |   |  |
|--|---|--|
|  | for the following meat products:  |  |
|  | (a) casings;  |  |
|  | (b) lard, leaf lard, suet, tallow, shortening and other rendered animal fat; and                                |  |
|  | (c) prepared meat products that have not been dehydrated, fermented, smoked or submitted to any heat treatment. |  |

4.(1) Subject to subsection (2), if an establishment is registered for the processing or packaging and labelling of meat products, the annual fee payable for the inspection of that registered establishment and the meat products in it, in respect of each scheduled work shift, is the amount set out in table 2 of this Part.

(2) The fees referred to in subsection (1) are set out for a 12-month period and shall be reduced proportionally on a daily basis if the licence to operate the registered establishment is issued for less than 12 months or if the scheduled work shift covers less than 12 months.

Table 2

Annual Fees per Scheduled Work Shift

|      | Column 1  | Column 2  |
|------|---|---|
| Item | Minimum number of hours of inspection required per year for the scheduled work shift, as determined in accordance with subsection 128(1) of the Regulations | Annual fee payable for the scheduled work shift |
|      |   |   |
| 1.   | 0 - 373.4   | \$2,450   |
| 2.   | 373.5 - 746.9   | \$3,700   |
| 3.   | 747 - 1,120.4   | \$4,510   |
| 4.   | 1,120.5 - 1,493.9   | \$5,750   |
| 5.   | 1,494 or more   | \$7,225   |

Table 3

Analyses and Tests

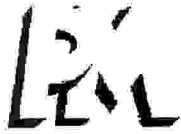
|      | Column 1                         | Column 2 |
|------|----------------------------------|----------|
| Item | Analysis or test                 | Fee      |
|      |                                  |          |
| 1.   | Antibiotic screening (STOP Test) | \$30     |
| 2.   | Sulfonamides (TLC)               | \$51     |
| 3.   | Chloramphenicol (Card)           | \$22     |
| 4.   | Chloramphenicol (LCMS)           | \$227    |

|     |  |         |
|-----|--|---------|
| 5.  | LCMS Confirmation  | \$364   |
| 6.  | Penicillin (LC)  | \$55    |
| 7.  | Tetracycline (LC)  | \$80    |
| 8.  | Macrolide (Charm II)   | \$24    |
| 9.  | Streptomycin (LC)  | \$154   |
| 10. | Streptomycin (Charm II)  | \$24    |
| 11. | Trichinella - swine  | \$0.71  |
| 12. | Trichinella - horses and other species   | \$3.53  |
| 13. | Sulfa-on-site (amended: Canada Gazette Part I, February 1, 2003, Vol 137, no. 5, p. 210) | \$14.25 |

Date Modified:  
2003-04-09

  
Top of Page

Important Notices



**P.M. ASSOCIATES LTD.**

Management, Financial, Engineering and Design Consultants

---

January 16, 2006

Ms. Linda Cote  
South Temiskaming Community Futures Development Corporation  
467 Ferguson Avenue  
P.O. Box 339  
Haileybury, ON POJ 1P0

Dear Linda:

We have now completed a final draft of the report based on the model shown previously. An additional option is the use of refurbished equipment and we have also developed a set of financial projections for this.

With respect to the recent email, we have a plant here in Manitoba which does about 3,800 hogs and 3,000-4,000 beef per year. It is provincially licensed but no longer has a federal license. They plan to regain their federal license and will do an expansion.

Their plant is about 8,000 sq. ft. now and they are going to need to do an expansion to allow for pork and beef separations in the refrigeration section which is currently required by the CFIA for federal plants.

A 6,000 sq. ft. plant could be adequate if only one species was being done or it was provincially licensed. I think 6,000 sq. ft. might be tight for a new species federal plant.

I spoke with Russ Nicolajsen of Sperling Boss and he noted that existing federal plants may be smaller in size due to "grandfathering" than would be the case for a new project.

Yours truly,

P.M. ASSOCIATES LTD.

Murray Coates  
Senior Consultant