

**Tannery at
30 Lundrigan Drive
Corner Brook, NL**

**Registration Pursuant to Section 38 of
The Environmental Protection Act**

Submitted By:

**Barry Group Inc.
415 Griffin Drive
Corner Brook, NL
A2H 3E9**

Submitted to:

**Environmental Assessment Division
Department of Environment
P.O. Box 8700
St. John's, NL
A1B 4J6**

**TANNERY IN CORNER BROOK
Registration Pursuant to Section 38 of
The Environmental Protection Act**

**Nu Tan Inc.
415 Griffin Drive
Corner Brook, NL
A2H 3E9**

CHIEF EXECUTIVE OFFICER:

Bill Barry
President and CEO Barry Group of Companies Inc.

PRINCIPAL CONTACT FOR PURPOSES OF ENVIRONMENTAL ASSESSMENT:

Dion Dakins
Production Manager
Barry Group Inc.
Phone (709) 785-7387
Fax (709) 785-5646

THE UNDERTAKING

NATURE OF THE UNDERTAKING:

The scope of this report is to outline the steps required of us to establish non-chrome, multi-species, environmentally friendly tannery, at 30 Lundrigan Drive, Corner Brook, NL. This facility will accept primary processed mink, seal, fox, and beaver skins and provide them with a tan and finish for sale to furriers.

PURPOSE/ RATIONALE/ NEED FOR THE UNDERTAKING:

Barry Group Incorporated (BGI), locally owned and operated, has recently established a mink farm in Cox's Cove, NL called Nu Mink Inc. The company has also been processing and tanning seals for eight years at Atlantic Marine Products in Catalina, Trinity Bay, NL.

This farm will grow to produce 50,000 mink pelts annually over the next five years. Currently, mink, fox, beaver, and other farmed and wild trapped species from Atlantic Canada are exported in the raw unfinished form. Supply of material for a local tannery is strong and with our new non-chrome, environmentally friendly process we see Corner Brook as an ideal location for this value added operation.

DESCRIPTION OF THE UNDERTAKING

GEOGRAPHICAL LOCATION:

The proposed site is located at 30 Lundrigan Drive in the industrial park off Country Road in the west side of Corner Brook, NL. See Appendix 1 for a site location map.)

1. North or back of the property is bordered by Mr. Tony Abbott's recreational facility, Family Fun Park.
2. West of the property is bordered by Lundrigan Drive.
3. South or the front of the property is bordered by Lewin Parkway.
4. On the East of the property is 1 acre of land that is owned by Jacol Realty Ltd. and will be purchased with the property.

PHYSICAL FEATURES:

The site is .792 Ha or 1.95 Acres and measures 79m x 94m. 1 Acre is developed and .95 Acre is available for expansion if required. The building is a Commercial Building classed as Group F Division 2 by Mr. Neville Wheaton (Fire Chief, City of Corner Brook) and Mr. David Skanes (Building Inspector, City of Corner Brook). This classification means that the property is appropriate for use as a tannery and does not require a sprinkler system. In accordance with (ODS) Regulations, NR 120-97, approved fire extinguishers will be placed throughout the tannery. The building is 16,000sq/ft measuring 160' x 100' with three loading docks.

CONSTRUCTION:

The building is large enough to accommodate our production requirements and leaves and additional 6,000 square feet for storage. All equipment, finished product, and raw material will be housed within the unit.

No expansion or alterations to the physical structure of the building are required; however, an upgrade from the existing $\frac{3}{4}$ water line to a 2" line will be necessary. Also

the electrical service needs upgrading in order to supply the power demands of the machinery. In observance of building code regulations additional lighting and fire exit signs will be installed. No pollutants are expected during the construction period.

During this phase it is estimated that work will be created for a plumber, an electrician, and a general laborer/assistant.

OPERATION:

The intention is to gradually increase tanning capacity at the facility over a five year period. In the initial start-up we will tan 300 pelts/day to a maximum of 30,000 pelts in the first year. In the first year all mink will be produced on a trial basis to perfect and refine the process on 1000 pelts. In five years we project that we will tan all Nu Mink Inc. supply of 50,000 pelts.

The planned maximum capacity of this tannery at 10,000 square feet is to tan 50,000 seals, 200,000 mink, 10,000 Beaver, and 10,000 fox annually. The tannery will employ five fulltime workers in the first year of operation. Direct employment is expected to reach a high of fifty full and part-time employees in 10years.

In the first year of operation the employment created will consist of a Master Tanner, an Apprentice Tanner, and three Tannery Workers who will be trained in processes of tanning, such as drumming, shaving, stretching, drying, finishing and packaging of skins. As the tannery grows to meet increased demand, we estimate the need to hire an additional two Tanners, five Supervisors trained in the proper application and storage of chemicals and tannery processes, and an additional forty Tannery Workers trained in the same above mentioned aspects of tannery operations. All employees will be trained to deal with emergencies involving tanning chemicals.

Table 1. Occupations Related to Operation of the Tannery and their Associated National Classification.

Occupation	Code	Description	# Positions
Year 1 (2004-2005)			
Manager In Manufacturing and Utilities	091	The Plant Manager will be trained in all aspects of operation and safety concerning tannery operations	1
Central Control and Process Operators in Manufacturing and Processing	923	This person will oversee and report to manager aspects of process operations. Oversee chemical handling machinery safety and tanning processes.	1
Machine Operators and Related Workers in Fabric, Fur and Leather Products Manufacturing	945	These workers will be trained in the operation and basic maintenance of equipment used in tanning	3
Year 2-5 (2005-2009)			
Machine Operators and Related Workers in Fabric, Fur and Leather Products Manufacturing	945	Same as above.	5

Barry Group Inc. is proud to be an equal opportunity employer and we assure that the same attitude and principles toward women in the workplace will apply in this tannery as in all our companies.

Table 2. Approvals Required for the Installment and Operation of Nu Tan Inc. and the Responsible Issuing Body.

Approval/ Certificate / License/ Permit or Inspection	Issuing Agency
Approval to operate tannery	Department of Environment-Pollution Prevention Division
Development Permit	City of Corner Brook
Commercial Permit	Government Services
Occupancy Permit	City of Corner Brook

THE PROCESS:

The following is a brief description of the process flow:

- a. Wash, rinse and soak salt cured skins
- b. Main Tan of skins
- c. Press and Shave skins
- d. Re-tan skins
- e. Stretch and Dry skins
- f. Drum in dry Sawdust
- g. Stretch
- h. Beautification (Buff and Iron)
- i. Measure skins
- j. Grade and Pack for shipment

To prepare skins for sale to furriers they are run through a series of environmentally friendly chemical and mechanical processes. To begin the tanning process, brine cured seal skins are placed in a mixer with fresh water to reduce salt content and soften the pelts (a). After rinsing, new water is added along with chemicals for a period of 72 hrs, at this time the skins receive their main tan (b). A list of chemicals used in the tanning process along with their associated Material Safety Data Sheets (MSDS) can be viewed in Appendix 2. The effluent is then filtered and treated for pH levels and then discarded through the buildings sewer lines.

The skins are then run through a setting out machine or press which squeezes out excess water and stretches the skins. Next to make the skins thinner and easier to work with we shave them with a mechanical shaver (c). This removes a small amount of flesh not taken off by primary processing in the form of shavings and dust like particles which are collected by a shop dust collection system. When a significant amount accumulates it is composted.

From shaving the skins are placed in a drum with chemicals and water for re-tanning (d). This process takes 21 hours. These wet skins are then hung to dry in a room heated to approximately 25 degrees centigrade. Once the skins dry they stiffen and wrinkle. To return their softness, we roll the skins in drums along with wet sawdust for an hour.

It is important to stretch the skins as much as possible, and we accomplish this through a couple of mechanical processes. First the skins are run through a staking machine which mechanically pulls and stretches the skins then a suction machine called a Dynavac provides additional stretch (e). The skins are again hung to dry and tumbled in dry sawdust to return the fabric like softness of the pelt (f). The skins then receive another stretch on the Dynavac machine (g).

Finally before shipment to furriers, the skins are treated with a beautification process. A buffering machine is used to improve the look and texture of the fur and leather of the pelt (h). The skins are vacuum cleaned, measured, and graded for shipment to furriers for garment production (i and j).

WATER SUPPLY:

Water to the building is supplied by the City of Corner Brook and there are no concerns with respect to supply or pressure, with exception to the aforementioned water line upgrade to ensure the speedy filling of equipment. The total estimated requirement is 15,000L per day. Appendix 3 is a copy of a letter from Mr. James Warford, P. Eng. (Coordinator of Engineering Services, Corner Brook, NL), stating that the city's current water supply can meet our demand.

RESOURCE CONFLICT:

Mr. Tony Abbott, Owner/Operator of the Family Fun Park adjacent to 30 Lundrigan Drive has been informed of our intentions and offers his full support and assistance in our endeavor. The City of Corner Brook has been briefed on the project and has granted Approval in Principle for the operation. (See Appendix 4) In addition, the city has presented us with a letter of support in our goal to establish this business. It is

not foreseen that any resource conflicts will exist associated with this operation. See Appendix 5 for a copy of the letters of support from both Mr. Tony Abbott and the City of Corner Brook.

POTENTIAL POLLUTANTS

The four potential sources of pollutants associated with this operation are identified as:

1. Liquid Waste: Dissolved and Suspended Constituents of Effluent;
2. Solid Waste: Shavings
3. Chemicals
4. Noise and Odor

WASTE TREATMENT:

The effluent and solid wastes of the process have been analyzed by an accredited environmental firm in Norway and by the BLC Leather Technology Centre Ltd. in England. This analysis has also been reviewed by Mr. Dan Michielsen from the Department of Environment – Pollution Prevention Division. A copy of this analysis and the English translation is included in Appendix 6.

LIQUID WASTE:

Through initial analysis and conversation with the Department of Environment – Pollution Prevention Division, it is deemed that the effluent from the wash/rinse, main tan, and the re-tan processes pass the provincial standards for chemical composition. During production a maximum of 15,000L/day of waste water will be generated. The effluent requires treatment using a filtering/settling system contained inside the tannery to reduce the B.O.D (biological oxygen demand) and T.S.S. (total suspended solids). The liquid waste of the main tan and re-tan processes will be treated with Sodium Bicarbonate to raise the pH level in compliance with provincial regulation. These treatments are required by the Department of Environment and are easily and effectively implemented at the point of discharge before the effluent reaches the municipal sewer system.

SOLID WASTE:

There are two forms of solid waste generated by this operation, used saw dust from the drumming process, and the flesh dust and shavings from the shaving process. To ensure minimal waste of saw dust it is reused as many times possible, usually three runs through the drums, sometimes as many as four. During this procedure the saw dust will absorb water and oil from the skins but the chemicals used in tanning are not passed from the skins to the saw dust. When the saw dust is no longer usable for drumming, it will be placed under cages at the mink farm in Cox's Cove to absorb urine and spilled water. If there is excess sawdust it will be composted or discarded in compliance with Schedule B for solid waste disposal. One week of production will yield approximately 3 cubic meters of saw dust.

It is estimated that from each seal skin shaved a total of 80-100 grams of flesh will be removed. Mink yield approximately 20 grams, fox 30 grams, and beaver 50 grams. All flesh materials are neatly collected by the shop dust collection system and are safe to be composted in compliance with government regulations (Schedule B). Another option is to give the shavings to farmers for use as fertilizer; this is how the shavings were disposed of at the tannery in Norway. An average week of production will yield approximately 300 kg of shavings.

CHEMICALS:

The following measures will be taken to ensure the safe storage and treatment of chemicals. Chemicals will be stored securely in tightly sealed drums out of the way of moving equipment. The storage area for the chemicals will be dry and have an impermeable floor to keep any spilled chemicals inside the controlled area. Workers will be trained in all relevant aspects of spill response and the equipment to handle such incidents will be stored in an easily accessible location ensuring quick and proper clean-up. All applicable regulations involving transport of chemicals will be closely followed and any persons involved in transport will be qualified to do so. Material Safety Data Sheets (MSDS) for some of the chemicals used in the process are located in appendix 2. The remaining MSDS have been submitted to the Department of Environment - Pollution Prevention Division for review and approval.

NOISE AND ODOR:

Odor and excessive noise from this process are non-existent. It is important to note that this operation has been carried out in a residential district in Skien, Norway for more than forty years. There have been no complaints from neighbors, some living only thirty feet from the tannery. The scheduled work day runs between 8:00am and 5:00pm Monday to Friday and all shipping and receiving will be carried out during these hours.

SCHEDULE

The latest possible start date for this project is July 5, 2004. Approval in principle has been issued by the City of Corner Brook and they have expressed their support of this undertaking in recognition of the numerous resulting socio-economic benefits. Equipment will be arriving soon and delays in setup and installation could prove detrimental to maintaining production schedules.

FUNDING

Funding for startup and operation of the tannery will consist mainly of private investment. Our intention is to avail of financial assistance from the Atlantic Canadian Opportunities Agency (no interest loan) and the Department of Industry Trade and Rural Development (SEED Capital Equity Lending Program). Approval for this funding has not yet been granted.

Bill Barry, CEO, BGI and Nu Tan Inc.

Date

Appendix 1

Site Location/Site Map



Survey 1.doc



Survey 2.doc

Appendix 2

List of Chemicals and MSD Sheets

- a. Hydrogen Peroxide (Hydrogen_Peroxide_MSDS.pdf)
- b. Sulfuric Acid (Sulfuric_Acid_MSDS.pdf)
- c. Sodium Formate (Sodium_Formate_MSDS.pdf)
- d. Sodium Carbonate (Sodium_Carbonate_MSDS.pdf)
- e. Sodium Bicarbonate (Sodium_Bicarbonate_MSDS.pdf)

Appendix 3

Letter Confirming Sufficient Water Supply



May14 from City - CB
Water Supply.doc

Appendix 4

Approval in Principle Document City of Corner Brook, NL



May12 from City -
Request for Approval

Appendix 5

Letters of Support

- a. Mr. Tony Abbott (Owner/Operator – Family Fun Park)



May12 from Family
Adventure Parkl.doc

- b. Priscilla Boutilier (Mayor – City of Corner Brook, NL)



May13 from City -
Proposed Tannery.dc

Appendix 6

Copy of Waste Analysis And English Translation Key



Provincial
Guidelines.doc