



BARRY GROUP
INC.

Environmental Assessment

For the proposed

Chitin Plant

To be located in Clarenville, NL

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Clarenville, NL A5A 1N2

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Corner Brook, NL

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Chief Executive Officer
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Table of Contents

Summary / Purpose of Proposal.....	1
Physical Description.....	1
Summary of Operations.....	1
Schedule of Construction.....	2
Approvals.....	3
Funding.....	3
Appendix A – Letter of Support.....	4
Appendix B – Topographic Map.....	5
Appendix C – Site Survey.....	6
Appendix D – Process Flow Chart.....	7
Appendix E – Construction Timeline.....	8

Environmental Assessment

Summary of Proposal

Chitosan is a biopolymer that has nutritional, cosmetic, biomedical, and different industrial applications. Chitin is found in crustacean shells and is the key ingredient in chitosan. Each year there are in excess of 130 million pounds of shrimp harvested and processed in Newfoundland. This translates to almost 40 million pounds of shell, all of which currently is disposed of in landfill sites or barged to sea. Barry Group Inc. proposes to take a portion of this waste and process it into chitin; a marketable, environmentally-friendly product.

Physical Description

The proposed chitin plant will be located adjacent Barry Group's shrimp facility in Clarenville, NL, bordering on Newfoundland Hardwoods to the north and the ocean to the east. Newfoundland Hardwoods is pleased with the proposed operation and have offered their support. (A letter from them is attached as Appendix A.) The land to the west is owned by the Town of Clarenville and is currently used for equipment storage. The land to the south is owned by Barry Group Inc. The applicable topographic map is available in Appendix B, and the site survey is available in Appendix C.

There will be excavation and backfilling required to prepare the site, power will be taken from the nearest utility pole (located approximately 10m from the proposed building), and waterlines can branch from the existing shrimp plant's fresh water supply from Shoal Harbour. There is no wildlife in the immediate area, and vegetation consists largely of alder and small evergreen trees. The land is dry with no streams, ponds, or marshes.

There will be a metal building constructed measuring 60m x 16m and 8m high. There will also be large storage tanks erected on site. Construction is expected to start April 1 with completion about 18 weeks after the start date. This will allow completion by the end of July, thus enabling production to commence well before the end of the 2007 shrimp season. There will be no significant pollutants or emissions resulting from construction and no potential resource conflicts identified.

Summary of Operations

The operation involves processing shrimp shells into a powder, utilizing caustic soda, hydrochloric acid, sodium hypochlorite, and water. The first step in the process is protein separation, followed by rinsing. Next, the shell is demineralized, rinsed again, deacetylated, and rinsed again. Finally, the shell (or chitin, at this point) is dried and packaged for shipping. A flow-chart showing the process is contained in Appendix D.

The facility will operate approximately six months each year. Airborne emissions and solid waste materials are insignificant. Liquid effluents will be dissolved and neutralized to pH6 before being disseminated into the ocean.

The chitin plant will provide eleven permanent, direct jobs. There will be four line-workers and a supervisor per shift for two shifts each day, and a general manager. The line-workers consist of one person in receiving, who ensures the raw material is received in good order, two people inside the plant looking after equipment and conveyors, and one person in packaging and shipping. National Occupational Classifications are as follows:

Supervisor	9213	Supervisors, Food, Beverage, and Tobacco Processing
Receiving	9617	Labourers in Fish Processing
Inside (2)	9461	Process Control & Machine Operators
Shipping	9617	Labours in Fish Processing

The plant will be highly automated, however extensive training in the safe handling of hazardous materials will be provided to all employees prior to start-up.

Schedule of Construction

For a detailed timeline for construction, please refer to Appendix E. Below is a summary of key anticipated dates.

April 1, 2007	Start site preparation and excavation
April 15, 2007	Begin construction of building
May 15, 2007	Extend electrical service to new building
July 1, 2007	Installation of equipment
July 15, 2007	Final preparation and commissioning
August 1, 2007	Commence production

The reason for these dates is to take advantage of part of the 2007 shrimp season in Newfoundland, which generally commences mid-April.

Approvals Required

There are several permits and licenses required prior to start-up:

Town of Clarendville – Town Building Permit

Provincial Government – Government Services Accessibility Permit

Provincial Government – Government Services Electrical Permit

Funding

Funding for this project consists of private investment. Funding from ACOA, in the form of a repayable contribution, will also be requested. Lastly, HRDC may be approached to assist in the cost of employee training. The total cost of the project, including equipment, is approximately \$4 million.

APPENDIX A



2 Hardwoods Road
Clarenville, NL
A5A 1H2

Tel: 709 466-7941 Fax: 709 466-2170

February 12, 2007

Barry Group
Clarenville, NL

Re: Chitin Plant Proposal

To whom it may concern:

This is to advise that Newfoundland Hardwoods supports, in principal, of the proposed project.

NEWFOUNDLAND HARDWOODS

A handwritten signature in cursive script that reads "B. Stewbridge".

Robert Tilley, General Manager

for

APPENDIX B



APPENDIX C

GRID NORTH
Zone 18-S1 West Long

Newfoundland Hardwoods Limited
A Division of IPB-WPI INTERNATIONAL INC.

NEW BOUNDARY LINE
PENDING LEASE AGREEMENT

EXISTING BOUNDARY LINE
Atlantic Shellfish

INC.

17.932

NEW BUILDING

28.07 m

RIGHT - OF - WAY

27.15 m

sheds

Town of Clarendville
volume 252 - folio 38

Town of Clarendville
volume 252 - folio 38

12.2 m

Imperial Oil
Limited

Atlantic
Shellfish
INC

Buildco
Limited

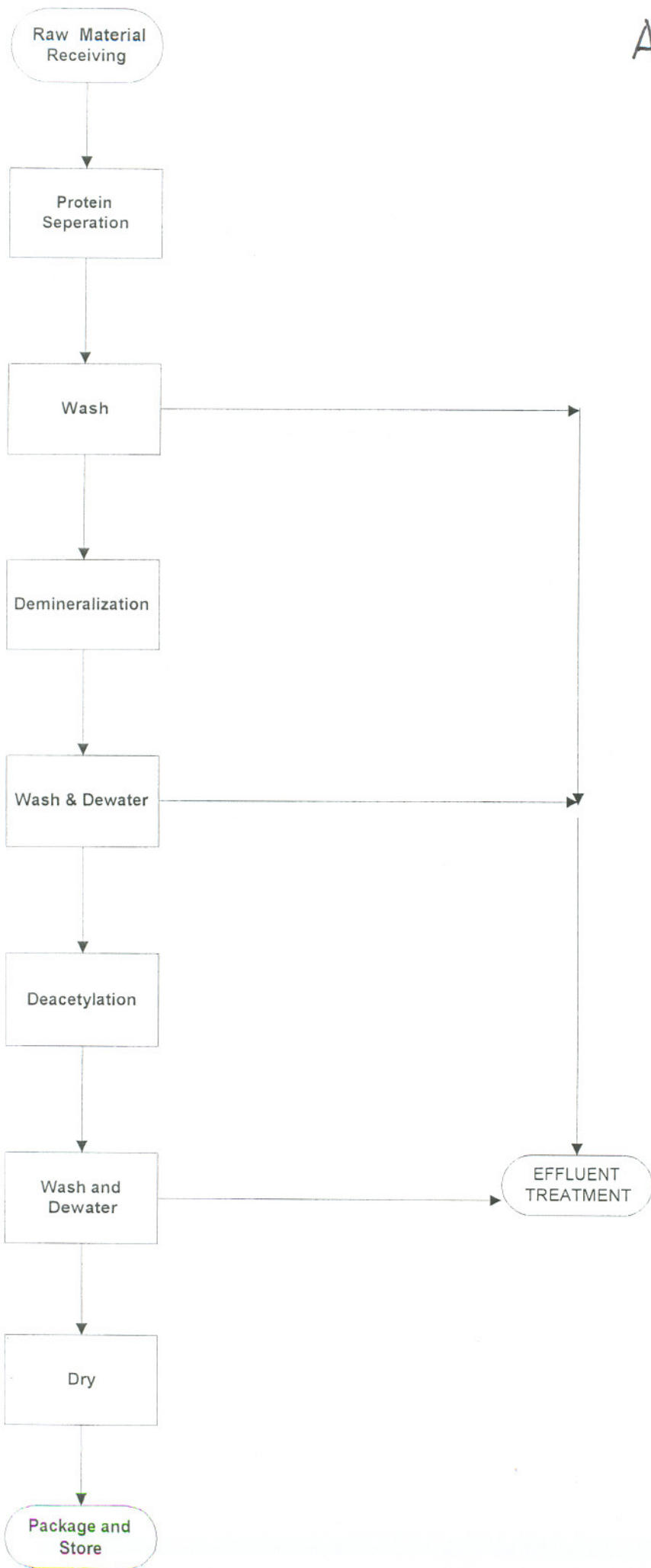
Building

Waste Water Line Easement
(6 metres wide)

Service Line Easement
(7.5 metres wide)

Null-
Professional
Services Inc.

APPENDIX D



PROJECT SCHEDULE

		# OF WEEKS																							
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Pre-Construction																									
1	Planning and Design																								
2	Tender Call																								
3	Tender Award																								
Construction																									
1	Site Preparation																								
2	Excavation																								
3	Erect Footings and Frost Wall																								
4	Erect Structure																								
5	Arcitectual Construction																								
6	Electrical																								
7	Plumbing																								
Post Construction																									
1	Equipment Installation																								
2	Commissioning																								

APPENDIX E