

SECTION FOUR  
PROCESSING FACILITIES

DFMP

DETAILED FOREST MANAGEMENT PLAN

TEXT REPORT



BLUE RIDGE LUMBER INC.  
A SUBSIDIARY OF WEST FRASER MILLS LTD.

## 4 Processing Facilities

### 4.1 Economic and Social (Community) Stability

#### 4.1.1 Blue Ridge Lumber Inc. History

The Blue Ridge Lumber Inc., story begins in 1973 when the Province of Alberta advertised for proposals for a 20-year Forest Management Agreement (FMA) covering 4,900 square kilometers of the Whitecourt Forest. The FMA was awarded to Simpson Timber Co. (Alberta) Ltd. who submitted the best development proposal from among four other proposals submitted to the Province. The 20-year renewable FMA commenced on September 1, 1975. The Company then began the construction and operation of a 95 MMFBM per year sawmill and planermill at Blue Ridge, Alberta, supported by the rights of the Whitecourt FMA to grow and harvest timber.

Simpson Timber Co. (Alberta) Ltd. acquired additional timber rights in 1976 with the purchase of Coniferous Timber Quotas from Meunier, Mulyk, McCorkle, and Revelstoke in the W1 and W2 Forest Management Units, and Swan Valley in the S2 Forest Management Unit.

In June 1976 Alberta Energy Company Ltd. acquired 40% of the assets of Simpson Timber Co. (Alberta) Ltd. In 1977 the sawmill capacity was increased to 120 MMFBM per year with the addition of a stud line. A Mechanical Stress Rate (MSR) lumber line was added in 1978. In June 1981 Alberta Energy Company Ltd. acquired 100% ownership of Simpson Timber Co. (Alberta) Ltd. and Blue Ridge Lumber (1981) Ltd. became a wholly owned subsidiary of Alberta Energy Company Ltd. Operating responsibility was assigned to Blue Ridge Lumber Inc., on January 4, 1982. Various projects to upgrade, automate and enhance the sawmilling operations were carried out between 1984 and 1989.

In July 1986 the medium density fiberboard (MDF) plant began operations and was the first of its kind in Canada. The original plant had an annual capacity of 50 million square feet (3/4-inch basis). In 1992 a second refiner was installed which resulted in a capacity increase to 70 million square feet, and the first “dual refined” MDF was produced in the world. The MDF plant was further expanded in 1995 with two additional refiners to increase the annual capacity of the present day operation to 140 million square feet (3/4-inch basis) with a capital expenditure of \$35 million dollars.

On August 25, 1995 West Fraser Timber Co. of Vancouver, British Columbia, purchased the Forest Products Division of Alberta Energy Company Ltd. which included Blue Ridge Lumber and Slave Lake Pulp Corporation. Ranger Board was incorporated on December 17, 1996 to manage and operate the Blue Ridge MDF plant and molding operations.

## 4.1.2 West Fraser Timber History

West Fraser Timber Co. Ltd. originated in 1955 when three brothers, Henry H. Ketchum, Jr., William P. Ketchum and Samuel K. Ketchum acquired a small lumber planer mill at Quesnel, British Columbia.



Today West Fraser is an integrated Canadian forest products company which produces high quality products of dimension lumber, stud lumber, medium density fiberboard (MDF), moldings, specialty wood products, wood chips, bleached chemical-thermal-mechanical pulp (BCTMP), linerboard, Kraft paper and newsprint.

In pulp and paper, West Fraser owns two pulpmills; Eurocan Pulp and Paper Mills and Slave Lake Pulp Corporation, and has a joint interest in two additional facilities; Quesnel River Pulp and ANC Timber Ltd.

The Eurocan Pulp and Paper mill located at Kitimat, BC produces linerboard and Kraft paper. The Slave Lake Pulp Corporation mill at Slave Lake, Alberta is a bleached chemi-thermo-mechanical pulp (BCTMP) mill. Slave Lake Pulp Corporation commenced production in January 1991. The Slave Lake pulp mill was the first mill in the world specifically designed to produce aspen-based high quality bleached CTMP for use in the production of printing, writing, and specialty grade papers.

The joint ownership of pulpmills includes Canada's first bleached chemical-thermal-mechanical (BCTMP) pulp mill in Quesnel, B.C. In 1989 West Fraser acquired 50% interest in ANC Timber Ltd., in Whitecourt, Alberta.

In 1985 West Fraser became a public corporation on the Toronto and Vancouver Stock Exchanges.

On August 25, 1995 West Fraser Timber Co. of Vancouver purchased the Forest Products Division of Alberta Energy Company Ltd. which included Blue Ridge Lumber (1981) Ltd., Ranger Board and Slave Lake Pulp Corporation.

In 1996 West Fraser completed the start-up of West Pine MDF plant in Quesnel, BC and became the largest producer of MDF in Canada.

On November 3, 1999 West Fraser acquired certain forest products assets of Zeidler Forest Industries Ltd., which includes a plywood plant in Edmonton, and a veneer and stud mill in Slave Lake with timber cutting rights. The operation is now known as Alberta Plywood. Alberta Plywood's products are marketed under the trade name Zed ply, primarily to wholesale distributors in Canada.

On October 31, 2000 Seehta Forest Products Ltd. entered into an agreement with Daishowa Marubeni International (DMI) Ltd. to acquire the assets of Brewster Lumber Division of DMI. Seehta Forest Products Ltd. is a joint venture between West Fraser Timber Company Ltd. and the Kee Tas Kee Now Tribal Council. The Seehta Forest Products Ltd. sawmill is a medium sized sawmill, which has been in existence since 1979. The sawmill is located 70 kilometers north of the community of Red Earth, Alberta and situated in the junction of the Loon and Wabasca Rivers.

In December 2000 West Fraser also purchased two sawmills in southeastern U.S. at Huttig, Arkansas and Joyce, Louisiana and entered into a long-term renewable contract to purchase a significant portion of their log requirements with Plum Creek Timber Company Inc.

On February 8, 2001 West Fraser entered into an agreement to purchase a sawmill at Chasm, British Columbia, which includes annual timber harvesting rights.

On May 11, 2001 West Fraser signed an agreement to sell the Revelstoke Home Centre chain to Rona Inc. Rona is a large Quebec based home centre chain. This brings to an end an exciting era in the Company's history during which time West Fraser built one of Canada's largest, fastest growing and most respected retail home center chains. The Revy history began in 1967 when West Fraser acquired three small building supply stores in Quesnel and Williams Lake, British Columbia. Over the next twenty years West Fraser Building Supplies expanded into a chain of twelve stores throughout B.C. In 1988 they acquired the much larger Revelstoke chain based in Calgary, Alberta and renamed the business Revelstoke Home Centres. In 1993 The Revelstoke chain built the first Revy Home and Garden warehouse store in Edmonton. In 1998 Revelstoke acquired Lansing Buildall in Toronto as the first move into the Ontario market.

On January 1, 2002 Blue Ridge Lumber (1981) Ltd. was changed to Blue Ridge Lumber Inc.

On July 21, 2004 West Fraser Timber Co. Ltd. signed an agreement to purchase Weldwood of Canada from International Paper Company. This is the largest acquisition in West Fraser's history making West Fraser the third largest lumber producer in North America.

Additional information on West Fraser Mills Ltd. can be found on the web at [www.westfraser.com](http://www.westfraser.com).

### 4.1.3 Employment and Communities

The forest industry in the Blue Ridge/Whitecourt/Fox Creek area consists of three sawmills, a medium density fiberboard plant, a thermo-mechanical newsprint mill, a chemi-thermo-mechanical pulp mill and an electrical plant which produces power from sawmill waste.

In March 2004, the forest industry in the Blue Ridge/Whitecourt/Fox Creek area employed a total of 1,061 direct employees who worked in production, administration and woodlands/forestry at the seven major manufacturing facilities. Additional people are employed by contractors for projects in woodlands/forestry and plant maintenance.

Annual rated capacity of Blue Ridge Lumber, Millar Western Forest Products – Solid Wood Division, and Mostowich Lumber Ltd. is over 565,000,000 fbm that directly employ approximately 585 people. Sawmill/planer mill by products are used in the manufacture of other forest products. Ranger Board utilizes planer mill shavings, some wood chips and wood chip fines for the production of MDF. Both pulp mills utilize wood chips and Whitecourt Power uses bark, sawdust and other waste material to generate electricity.

Both of the pulp & paper mills in the local area utilize refiners in their pulping process. Annual capacity at ANC Timber Ltd. is 270,000 tonnes of newsprint and Millar Western Forest Products – Pulp Division is 285,000 tonnes of chemi-thermo-mechanical pulp.

Whitecourt Power Ltd. utilizes approximately 300,000 tonnes of sawmill waste to produce 204,000-Megawatts of power.

The following table summarizes the annual manufacturing rated capacities and direct employment of the major forest producing facilities in the Whitecourt/Blue Ridge/Fox Creek area, March 2004.

**Table 7: Manufacturing Capacities and Direct Employment in the Whitecourt Area March 2004**

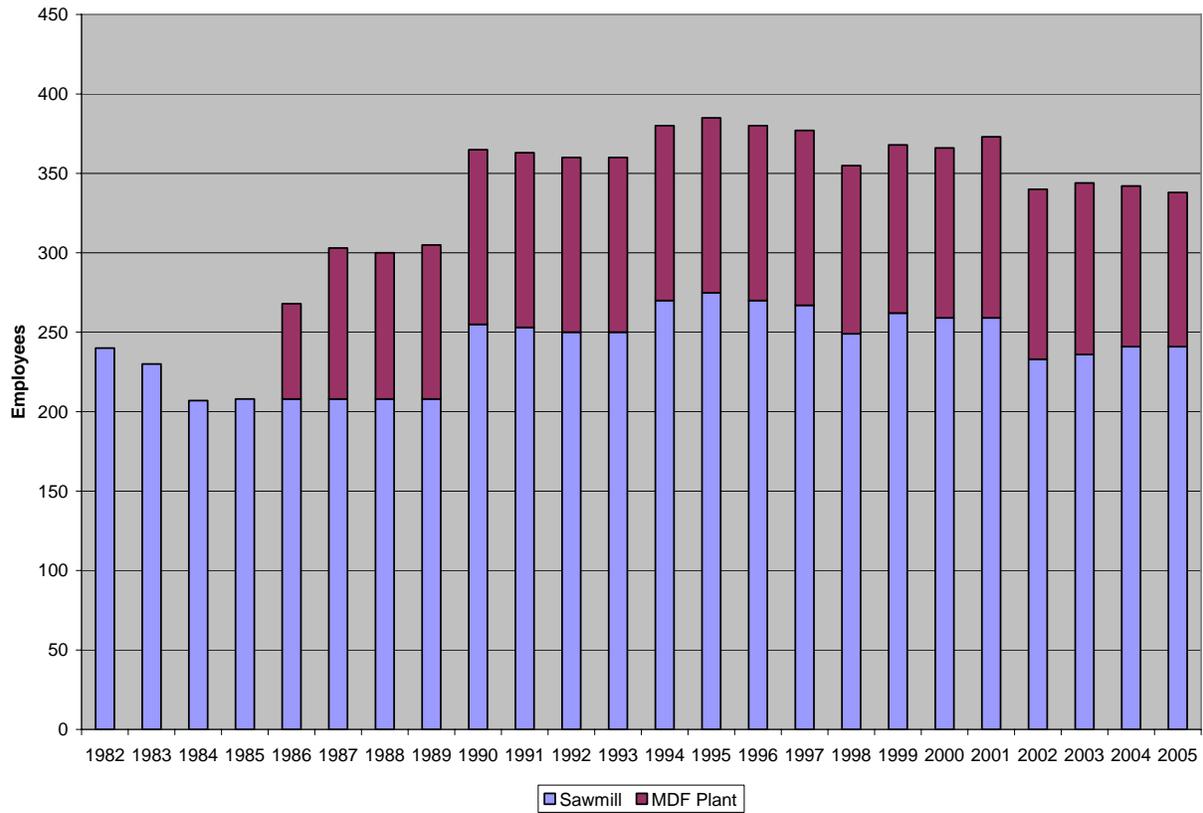
<b>Manufacturing Facility</b>	<b>Annual Rated Capacity</b>	<b>Measurement **</b>	<b>Direct Employment</b>
ANC Timber Ltd.	270,000	tonnes	221
Blue Ridge Lumber Inc.	285,000,000	fbm	236
Ranger Board	160,000,000	sq. ft on a ¾" basis	108
Millar Western Forest Products – Pulp Division	285,000	tonnes	115
Millar Western Forest Products – Solid Wood Division	230,000,000	fbm	274
Mostowich Lumber Ltd.	50,000,000	fbm	75
Whitecourt Power Ltd.	204,000	megawatts	32
<b>Total Employment</b>			<b>1,061</b>

Total present day (2005) employment at Blue Ridge Lumber Inc. and Ranger Board is 338 direct employees. Forestry and woodlands activities are conducted by an additional 60 independent contractors with approximately 125 full time employees. An additional 23 on-site contractors are hired for plant maintenance, equipment maintenance and annual construction improvements at the site as required.

Approximately one third of the people employed by Blue Ridge Lumber live in Whitecourt, one third reside in the Mayerthorpe-Sangudo area and the balance live in the surrounding area on farms and acreages. Company employees and contractors make a significant contribution to the economic, social, and cultural activities of the surrounding local communities.

Increased capital investment to increase operating efficiencies and increased productivity per man day required to remain globally competitive has resulted in a slight decline in employment during the past 10 years.

**Graph 1: Blue Ridge Lumber Inc. & Ranger Board Direct Employees from 1982 to 2005**



## 4.1.4 Maintaining Economic and Social Values

The Blue Ridge Lumber and Ranger Board processing facilities play a major role in maintaining the health and well being related to the economic and social values of the surrounding communities. The Company is committed to maintaining the community economic and social values through its everyday business practices, and maintaining the Company image as a good corporate citizen. Blue Ridge Lumber and Ranger Board are certified members of the Forest Care Program, ISO 14001 and Sustainable Forestry Initiative (SFI).

These programs improve the operations by:

- Improving communications between member companies and local emergency response organizations on how to respond to mill or community emergencies.
- Improving communications with the general public on issues that affect the community.
- Systematic analysis of millsite jobs and tasks to proactively prevent injuries.
- Better training of employees in environmental controls.
- Encouraging the coordination of research in processing natural resources.
- Better protection of the environment through improved ways to reduce spills and emissions.
- Greater job security through improved sustainable forest management practices.
- Greater emphasis on safe operating procedures and improved safety for family, friends and neighbors.
- Continuous improvement program for the woodlands Environmental Management System (ISO 14001).

## 4.2 Processing Facilities

The Blue Ridge Lumber Inc. manufacturing complex and administration offices are located one and a half kilometers north of the hamlet of Blue Ridge. Blue Ridge is located half way between Mayerthorpe and Whitecourt, approximately 150 kilometers northwest of Edmonton on Highway #43 and 8 kilometers north on Secondary Highway #658. The site occupies 280.7 hectares in 36-59-10-W5. The manufacturing complex consists of a modern state-of-the-art sawmill, planermill and a medium density fiberboard plant, which produce high quality products.



### 4.2.1 Sawmill

The sawmill produces high grade spruce, pine and fir random length and stud lumber. An increasing percent of the lumber is being graded for the higher end market; machine stress rated (MSR) for use in structural application, and specialty grades for Japanese markets.

The sawmill is presently the third largest sawmill in Alberta. The sawmill consists of three twin debarker lines, a rosser head debarker, three primary break down lines, and six dry kilns.

The sawmill annual capacity and current production is approximately 285 MM fbm of rough green lumber and 140,000 oven dry tonnes (ODT) of chips.

The sawmill operations are based on three shifts per day operating 250 days a year producing over 1 MM fbm per day. This represents about 12,000 tree length logs sawn daily.

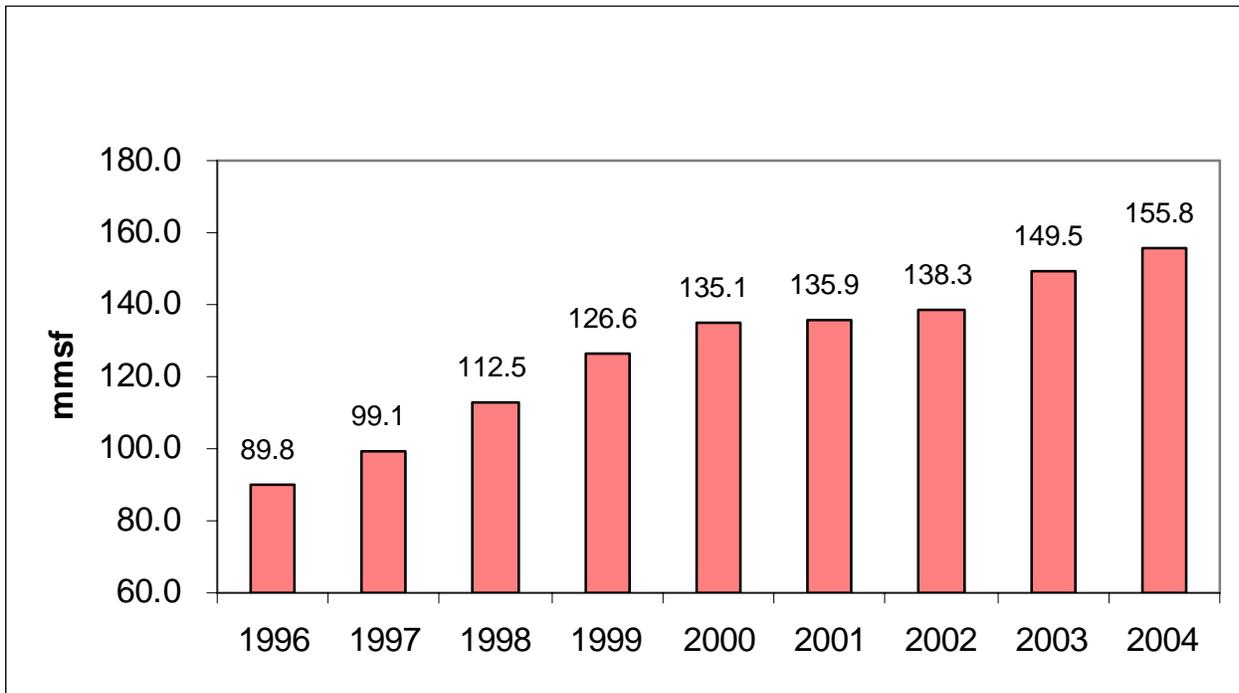
### 4.2.2 Planermill

The planermill consists of a random planer line and a 12 foot planer line. The random line operates on a three shift basis for 250 days of the year. The 12-foot line operates on a single shift for approximately 100 days per year. The two lines have the capability of producing in excess of 260 MM fbm. The planer produces a product from 4 inches to 10 inches wide and from 6 feet to 20 feet long.

### 4.2.3 Medium Density Fiberboard – Value Added

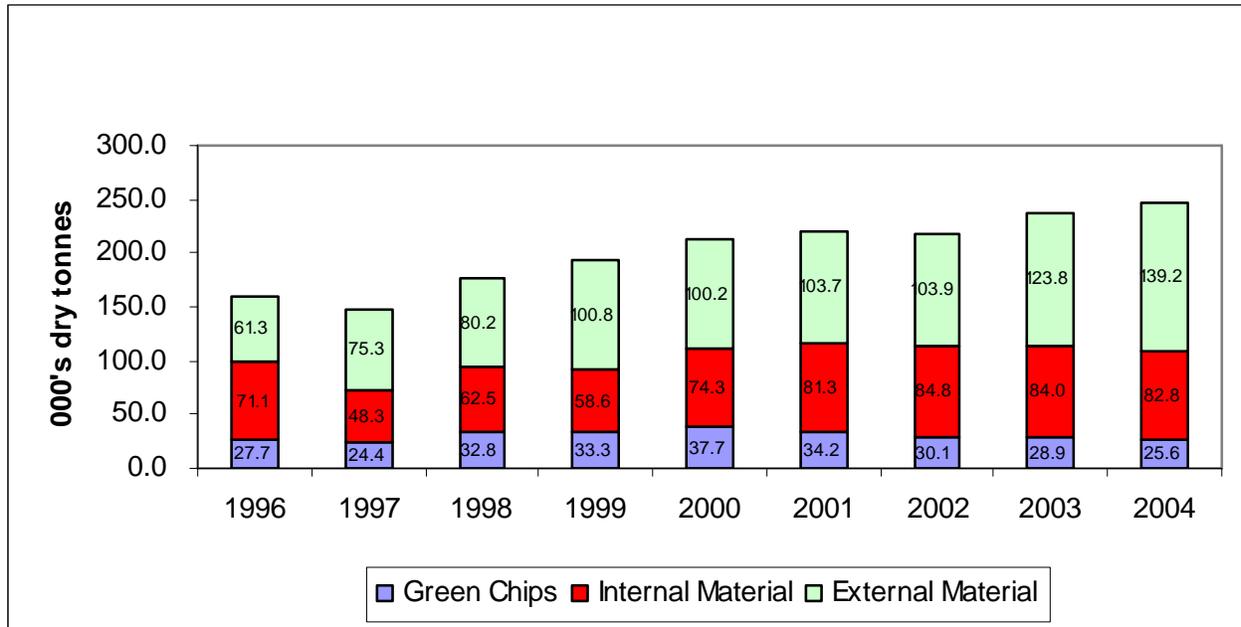
MDF is an engineered wood product used in the furniture, cabinetry, moulding, and laminating industries. Ranger Board Inc., a wholly owned subsidiary of West Fraser Mills Ltd., operates an MDF plant on the Blue Ridge site. This facility, with an initial capacity of 50 million square feet (3/4” equivalent), was the first MDF plant built in Canada when it opened in 1986. Expansions in 1992 and 1995 have increased annual capacity to the current 160 million square feet.

**Graph 2: Ranger Board Production (MMsf)**



MDF is manufactured from lumber residuals generated internally and purchased from third parties. The largest component is planer mill shavings (57%), followed by chip fines and sawdust (27%), green wood chips (10%), and dry planer chips (6%). 44% of the raw materials are generated internally, with the balance purchased from third parties. It is important to note that aside from the 10% green chips, all other raw materials were previously considered waste. The raw materials make MDF a truly value-added secondary product with an aggregate cost of \$6.4 million in 2004 generated gross sales of \$73.7 million, or an added value of \$67.3 million.

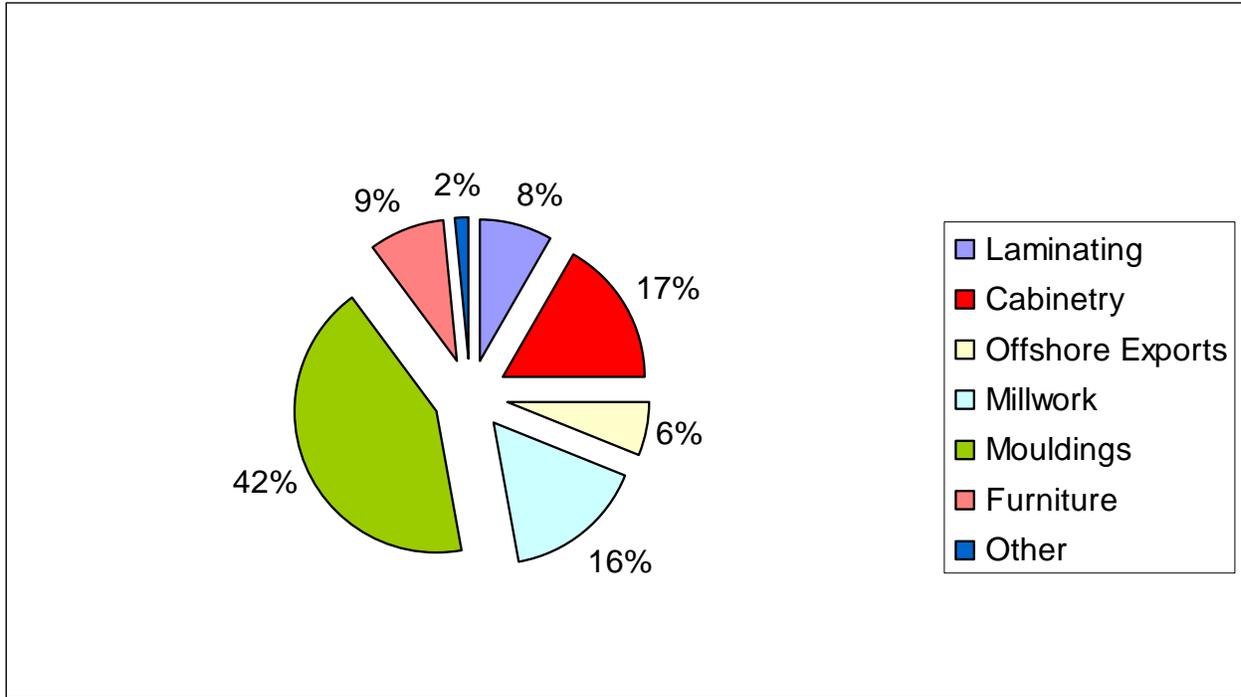
**Graph 3: Ranger Board Raw Material Sources**



MDF is widely used in the furniture, cabinetry, moulding, and laminating industries. Since it is made from refined fiber, it is easily machined and painted. Laminates or veneers are used to create additional value. Product distribution is as follows:

- Western Canada (sheetstock) 26%
- Western Canada (moulding panels) 26%
- United States 25%
- Eastern Canada 12%
- Asia 11%

**Graph 4: Ranger Board End Use Markets**



The MDF process starts off with preconditioning the fiber with steam and heat. The raw materials are then passed through refiners to separate the wood fibers. Ranger Board utilizes a dual refining system which ensures high fiber quality by having all raw materials pass through two refiners in sequence. Once the fiber has been refined, resin, wax, and urea water are added and the mixture is then passed through driers that reduce moisture content from about 50% down to 7%. The fiber and additives are then fed into formers that lay the mixture down as a thick, low-density mat. After passing through a pre-compressor, the mat is cut by a flying cutoff saw into 24 foot lengths. The precut mats are sent to a 14 opening press where heat and pressure create rough panels. The rough panels are sent to the finishing line after cooling, and are then sanded and cut to size. The process requires a great deal of heat for the driers and other thermal fluid heating systems. All available waste (board trim and sandoff) are burned to provide much of this heat. Finished product is shipped by truck or rail in approximately equal proportions.

Due to the location of our plant and the high density of the product, freight is a significant expense, amounting to 18% of revenues.

Ranger Board operations are certified by Scientific Certification Systems, Inc. as a user of 100% pre-consumer recycled wood fiber, on a dry fiber weight basis. As well, products are certified by the Composite Panel Association as an Environmentally Preferable Product under CPA Specification CPA 1-02.

Safety is a key element of our business plan, with our goal being an accident-free workplace.

Ranger Board has business arrangements with Canadian MDF Products (Edmonton) and Sauder Mouldings (Calgary). These two plants utilize moulding panels (long narrow strips that are generated as a byproduct of the manufacturing process). These moulding panels allow us to utilize the full width of the press when sheetstock sizes are less than the full six foot width of the press. This allows Ranger Board to reduce unit costs of production, and maximize plant efficiency. Canadian MDF primarily produces primed mouldings for the homebuilding markets, while Sauder Mouldings produce a combination of paper wrapped mouldings and some primed mouldings. The paper wrapped mouldings are primarily used as picture frame and bathroom cabinet components. Sauder Mouldings is also introducing a line of wood veneer wrapped products to further add value.

Direct employment at Ranger Board including marketing personnel totals 97 people. Payroll costs including benefits exceed \$7.5 million. The ancillary employment at Canadian MDF, Sauder Mouldings, contractors, and transportation employees greatly exceed direct employment, although they are not specifically quantifiable. The impact of value-added manufacturing in Western Canada is often underestimated. Ranger Board is one of the suppliers to three large Western Canadian furniture manufacturers that, in aggregate, employ over eight thousand people.

Ranger Board is recognized by the marketplace as a dependable, high quality provider of MDF. Industry surveys have confirmed that Ranger Board is the lowest cost manufacturer in North America.

#### **4.2.4 Lumber Recovery and Log Input**

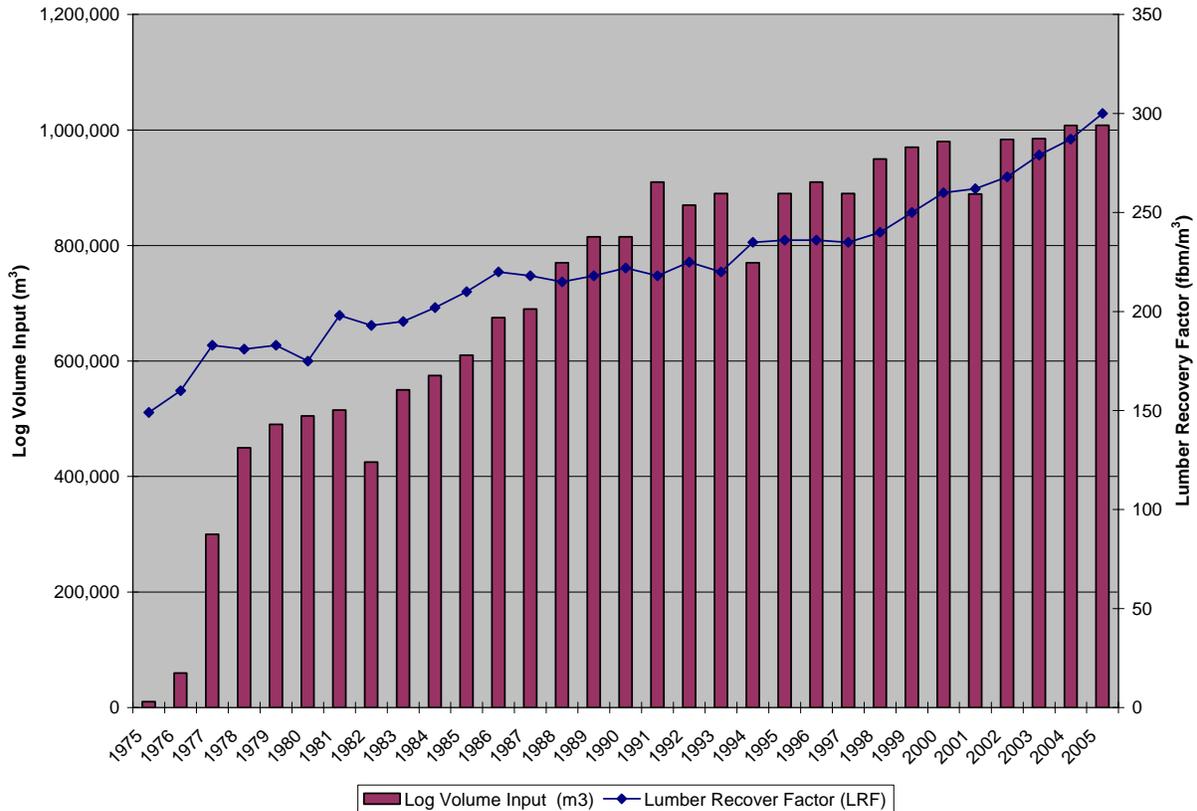
Since 1975 BRL has steadily increased lumber recovery in the sawmill from approximately 150 fbm/m<sup>3</sup> to 300 fbm/m<sup>3</sup>. This is a tremendous increase in wood utilization that reduces the number of logs required in the sawmill by one half. Production in the sawmill has increased steadily from approximately 200 MM fbm in 1995 to 300 MM fbm in 2005. The increase in sawmill utilization and productivity is due to BRL innovation and machine technology.



During the past 10 years of operation, 1995 to 2005, Blue Ridge Lumber Inc., has only lost one month of production due to lumber tariff constraints during the summer and fall of 2001. Ranger Board production has never been curtailed.

Continuous improvements in sawlog quality and sawlog volumes are necessary for improving lumber recovery, improving mill efficiencies, lumber output and maintaining the competitive edge of the sawmill. The following graph shows the increase in log volume input and the lumber recovery factor from 1975 to 2005.

**Graph 5: Blue Ridge Inc. Log Volume Input and Lumber Recover Factor from 1975 to 2005**

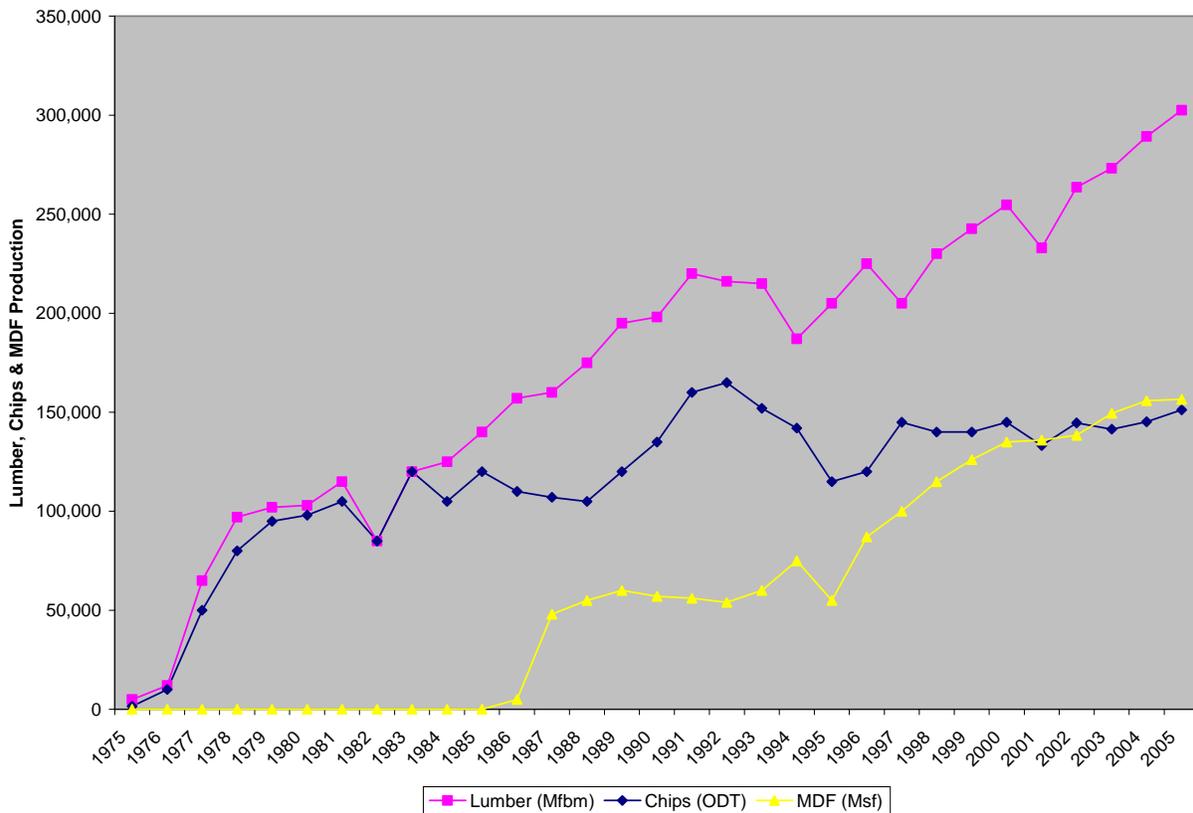


The 2005 sawmill operations are based on three shifts per day, 250 days a year. BRL plans to produce 302.5 MM fbm of lumber and 151,000 oven dry tonnes (ODT) of chips in 2005 for a daily average of 1.2 MM fbm per day.

## 4.2.5 Chips and Other By-Products

The following graph summarizes the lumber, chips and MDF production at Blue Ridge Lumber and Ranger Board from 1975 to 2005.

**Graph 6: Blue Ridge Lumber Inc. Production of Lumber (Mfbm) & Chips (ODT) from 1975 to 2005 and Ranger Board MDF (Msf) Production from 1986 to 2005**



Any residual wood chip that is surplus to the needs of the Ranger Board MDF plant are either sold to local/provincial facilities or are traded for much needed sawlogs.

The following table shows that during the past 10 years, Ranger Board has used 26.7 % of Blue Ridge Lumber residual wood chip production. Local area pulp/newsprint plants consumed 57.3%. Approximately 16.0% of the chips were surplus and were exported out of the province. The largest volume of wood chips exported from Alberta occurred in 1999 & 2000. This was necessitated by the surplus of wood chips in the Province at the time and the reluctance of Alberta pulp mills to purchase chips produced from fire salvaged timber.

**Table 8: Blue Ridge Lumber Wood Chip Production**

<b>Year</b>	<b>Ranger Board Use *</b>	<b>Chips Shipped within Alberta</b>	<b>Export of chips</b>	<b>Total ODT</b>
1995	21,144	111,003	0	132,147
1996	27,485	114,588	0	142,073
1997	31,497	101,139	0	132,636
1998	40,863	87,760	9,542	138,165
1999	42,106	24,411	84,160	150,677
2000	48,217	46,837	51,022	146,076
2001	36,020	66,489	30,730	133,239
2002	44,562	84,681	15,440	144,683
2003	41,530	76,182	23,700	141,412
2004	41,829	92,049	10,806	144,684
<b>Total</b>	<b>375,253</b>	<b>805,139</b>	<b>225,400</b>	<b>1,405,792</b>
<b>% of Total</b>	<b>26.7%</b>	<b>57.3%</b>	<b>16.0%</b>	<b>100%</b>

\*The Ranger Board chip usage includes approximately 35% dry planer chips which are not saleable to pulp mills.

Ranger Board MDF plant uses all of Blue Ridge Lumber sawdust and shavings and also purchases additional volume from the local/area sawmills.

**Table 9: Blue Ridge Lumber By-Product Production (ODT) from 1999 to 2005**

<b>Year</b>	<b>Sawdust</b>	<b>Shavings</b>
1999 *	22,575	28,154
2000	34,570	34,553
2001	24,853	38,375
2002	24,460	43,890
2003	24,913	46,244
2004	21,463	52,002

\* By product information prior to 1999 is not available

## 4.2.6 Capital Investments

Since Blue Ridge Lumber Inc. start up in 1975 and Ranger Board start up in 1986, both facilities have made continuous improvements in safety, people management, quality and production. These improvements help to guarantee the Company's future in a competitive market, insures the stability of the surrounding communities and secures the future of the permanent employees and independent contractors who work for the Company.

The total capital investment by Blue Ridge Lumber and Ranger Board, from 1976 to 2005 was approximately \$331 million dollars measured in actual dollars.

In 1976 to 1980 the initial capital expenditures in the sawmill, planer, kilns and log yard was approximately \$80 million dollars. Woodlands capital expenditure on the main haul road from 1975 to 1980 was approximately \$21 million.

In 1986 the initial capital investment in the medium density fiberboard plant was approximately \$36 million. An additional \$16 million in upgrades to the MDF plant was spent in 1994 and \$8 million was spent in the sawmill/planer mill. The economic impacts continue well beyond these capital expenditures.

In 1994 approximately \$17 million was spent to modernize the sawmill by installing two additional saws; a Hewsaw to saw the smaller sized logs and an optimizing twin band Headrig to saw the larger logs. This increased the annual rated capacity to 220 MM fbm.

In the summer of 1994 an overhead crane was added to the log yard to decrease breakage and to improve log unloading time.

In 1998 & 1999, Blue Ridge Lumber spent \$16.7 million for the installation of three additional ring debarkers to the original three debarking lines, the installation of a rosser head debarker, the replacement of the Headrig with a Jumbo canter, a new chip screening system and modifications to the Mark II. The additional debarkers were added as a result of the need to process large volumes of fire killed timber from the 1998 Virginia Hills Fire and to produce marketable chips for pulp production. A new ventilation system was also added to the sawmill.

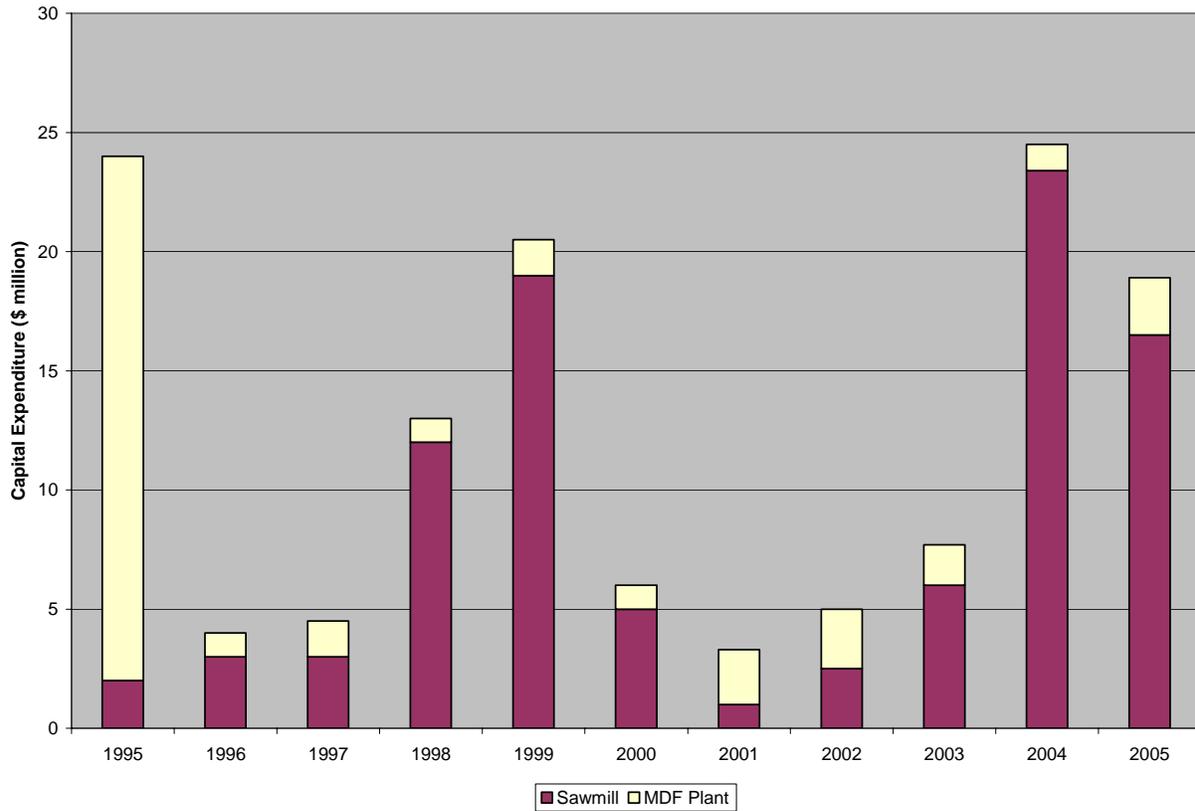
From 1995 to 2005 capital expenditures in the sawmill, planer, kilns and log yard total \$93.4 million. These upgrades include new log infeed and new debarkers, additional optimizing equipment, new canter line and adding a Thermal Fluid Heater that will provide heat to the kilns, sawmill/planer complex and part of Ranger Board. Ranger Board has had additional capital investments and upgrades of \$38.0 million during the same time period for a total capital expenditure of \$131.4 million.

**Table 10: Major Capital Projects Blue Ridge Lumber & Ranger Board**

<b>Year</b>	<b>Sawmill</b>	<b>Planermill</b>	<b>Environmental</b>	<b>MDF</b>
1994	Overhead Crane, Twin Band Headrig and Hew Saw			
1995	Cut off optimizer; Shortwood edger	R/L Stick Stacker		MDF Upgrades
1996	Log wrapper removal station to improve safety for truck drivers		Burner Replacement	
1997		New Kilns		
1998	New canter line; 3 ring debarkers: Rosser head debarker; Headrig and Jumbo Canter; Chip screening system; & dust control to handle burnt wood			
1999	Saw filing room	Dry Kilns		6' Production
2000	Secondary Edger; replace deck crane			Improved Water Softening
2001	Chip system modifications			Book Saw; Fire & Explosion Protection; RMS Loader; Inproheat Baghouse
2002		Modify stud planer line to 10'		Dust Collection System; Transformer
2003	10" VDA with close coupled twin on Jumbo	Lineal high grader		Tie Sander & Saw Lines together; Destoner Lines
2004	Replace log prep section of sawmill; Hog Thermal Fluid Heater; SST on Jumbo Canter and Mark II	Trimmer with 1' saw spacing and infinite fence		Hydraulic Press Upgrade

The following highlights the Blue Ridge Lumber and Ranger Board capital expenditures from 1995 to 2005.

**Graph 7: Blue Ridge Lumber Inc. & Ranger Board Capital Expenditures (\$millions) from 1995 to 2005**



## 4.2.7 Major Pollution and Waste Control Initiatives

### Water

All surface runoff water from the Blue Ridge Lumber site is collected in two Surface Runoff Management Ponds. This water is then used in the plant fire water system as part of the site fire protection systems, or discharged periodically as required to maintain pond levels.

A sanitary sewage lagoon system, permitted under Ranger Board's Alberta Environment Operating Approval, is maintained to collect sanitary sewage and industrial wastewater from both plants. Water from the final sanitary lagoon is released once per year under the terms of the Operating Approval. All terms of the Operating Approval including Biological Oxygen Demand and PH have been consistently met.

Process water is drawn from permitted wells located near the plant site. As far as is possible, this water is recycled and reused in the process. Raw water consumption per unit production in the MDF plant is 18% lower in 2004 than it was in 2000.

### Solid Waste

Blue Ridge Lumber initiated a project in August 2005 to install a Thermal Fluid Heater (TFH). The hot oil generated from the thermal energy system will replace natural gas used to heat the kilns. Sawmill refuse is currently burned in an Olivine silo burner or transported to Whitecourt Power. When the TFH is commissioned, it will be used to incinerate all hog fuel produced on site both from Blue Ridge Lumber and from Ranger Board.

Currently, ash from the Olivine burner is spread on plant site roads and in the logyard storage area. Bottom ash from the new sawmill TFG will also be used in this manner. Blue Ridge Lumber has signed a Letter of Intent with Whitecourt Power to use the fly ash in their agricultural land spreading program.

It is important to note that 90% of the 248,000 tonnes of raw materials used annually in production of MDF are byproducts generated in the production of lumber. These byproducts (planer shavings, sawdust and chip fines) would otherwise be burned.

In the production of MDF, waste materials from board trim and sand-off are generated. These materials are then burned to generate heat for MDF production processes. The material burned (in thermal fluid heating systems) displaces natural gas, which reduces NOx emissions and reduces our dependence on fossil fuels.

Some small amounts of startup fiber are rejected from the MDF process, and have been sent to a local cogeneration facility where they were used as fuel. In the future (2006 Q1) Blue Ridge Lumber intends to utilize this material in the new hot oil system being installed in our lumber operations to replace the natural gas currently used in the dry kilns.

Any unsaleable materials generated in the production process are sawn up and turned into dunnage or protective sheets for finished product.

### **Air**

Air emissions from Ranger Board are regulated under Alberta Environmental Protection and Enhancement Act Approval # 18454-01-00.

The MDF plant employs electrostatic precipitators (ESPs) and baghouses (with filters) on the thermal energy generation systems to reduce airborne particulates below permitted levels. Cyclones are in place on the flash tube dryer stacks to reduce particulate matter emissions.

Air emissions from Blue Ridge Lumber are regulated under Alberta Environmental Protection and Enhancement Act Approval # 18456-01-00. Cyclones on the sawmill and planer mill are used to control particulate emissions from the lumber process.

### **Emission Reductions**

During the last ten years, Blue Ridge Lumber and Ranger Board have consistently reduced consumption of natural gas and power on a per unit basis.

The MDF plant has undertaken capital projects to recover waste heat from stack gasses through air-to-air heat exchangers (thereby further reducing natural gas consumption) and to install on line monitoring of power and natural gas consumption. The MDF plant is currently implementing a capital expenditure project to increase process heat recovery and continue to reduce our reliance on fossil fuels.

A major overhaul of our press in 2002 resulted in a reduction of per unit power consumption of approximately 8%.

The new Blue Ridge Lumber TFH will significantly reduce particulate emissions from hog fuel incineration compared with the current Olivine burner. Energy consumed in the form of gas and oil to transport sawmill wood residues to Whitecourt Power will also be eliminated. Most of the heat energy produced from burning natural gas in the kilns will be replaced with heat energy generated from burning wood residues of the lumber manufacturing process. Combustion related discharges from the dry kilns will decrease as natural gas use is reduced.

Recycling Programs are in place for:

- Office paper
- Scrap metal
- Used oil and filters
- Cardboard
- Computers, monitors, CPU's
- Fluorescent tubes, HID lamps
- Pop bottles, cans
- Batteries and Glycol