MERRITT TSA
SUSTAINABLE FOREST MANAGEMENT PLAN

PUBLIC ADVISORY GROUP FIELD TOUR

ASPEN PLANERS MILL TOUR
October 18, 2007

Hosted by:

ASPEN PLANERS LTD

More information can be obtained by contacting Jerry C Canuel RPF, Woodlands Manager

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Introduction

Welcome to the seventh annual Merritt TSA CSA Sustainable Forest Management Plan public advisory group (PAG) field tour hosted by Aspen Planers Ltd.

The objective this year is to provide the PAG with a tour of a lumber manufacturing facility in order to increase the knowledge and understanding of the forest products sector of the Forest Industry.

Environmental, social and economic performance is assessed according to six (6) defined criteria in the CSA standard. The 6 criteria are; biological diversity, forest ecosystem condition and productivity, soil and water resources, contributions to global ecological cycles, benefits to society and society's responsibility for sustainable development.

This year's tour shall focus on one specific criteria; **benefits to society.** The selected indicators and targets that define and measure performance in achieving this criterion are:

Indicator (19): Total Output of forest products (lumber, chips and other) from sawmills within the TSA.

Target: Report the board feet and chip & (other) volumes produced by sawmills within the TSA.

In 2006 (last year's report) Aspen Planers ltd reported:
Total lumber output _228 million fbm
Total chip, shavings and hog fuel output _214,837_**bdt
Total other: 24,770 m^3 round products. ***Note: measured in bdt's now (Bone dried tonne)*
Total other: 1.5million fbm trim blocks.

Indicator (20): Operating level of timber processing facilities.

Target: Report number of timber processing facility operating days, the average number of shifts for days the mill was in production and the number of mill employees on payroll.

In 2006(last year's report) Aspen Planers ltd reported:
360{200-Post and rail plants}# of timber processing facility operating days
2.2{1.5-Post & rail plants} average # of shifts for days the mill was in production
185{30-Post and rail}# of mill employees on payroll

Please ask any questions you may have during the tour or contact either myself or Joe afterwards if any questions arise following.

Jerry C Canuel RPF
Woodlands Manager
Aspen Planers Ltd.

Joe Facey
Mill Manager
Aspen Planers Ltd.

The following describes the basic processes that occur in breaking down a log into dimension lumber.

Logs are transported and off-loaded in the log-yard. Once the trucks are offloaded, bundles are fed into the sawmill in 3 separate locations and machine centers. The larger logs (10'top and greater) are fed into the Headrig side, log diameters (top) of 6" to 10" are directed into the DDM machine center, and the smallest logs (top logs 4" to 6") are fed into the Chipnsaw .

Headrig -Larger Logs-10" top +

The logs are debarked at the 35" Bradson Debarker and then proceed to the Headrig carriage. Here the logs are individually loaded onto the carriage, turned for best opening face, scanned with the sawing solution displayed to the sawyer. The 2" sidecut pieces are sent out to the board edger for ripping into lumber. The centre cant is sent to the gang edger where it is processed through a series of evenly placed saws. This results in the cant being cut into 2"thick pieces. All 2"boards are then directed to the trim-saws where they are scanned for edge defect and trimmed to grade and length. The lumber is then sorted by length and width at the sorter. From here they are stripped and stacked for kiln drying. Once dried the loads of lumber are sent via truck to the planer mill for finish processing.

DDM- (6"-10" top sizes)

These logs are fed through the 22" Nicholson Debarker, sorted by diameter into three separate log bins. The logs are then fed through the DDM scanner. The information from the scanner sets the chipping heads and saws in the DDM. The result is logs in lumber out, all in one pass at speeds up to 600 fpm. The DDM processes around 1100 pieces per hour. All of the lumber passes a sort operator where pieces requiring remanufacturing because of defect are selected out. These pieces then proceed to the board edger where they are either ripped to a narrower width or chipped to a thinner thickness. As in the Headrig phase, all DDM lumber is then trimmed, sorted, and stacked for kiln drying.

ChipnSaw-Top logs-(4"-6"top sizes)

These logs are debarked in an 18" Cambio Debarker. Any logs that will yield 6" lumber are sent back to the DDM line. This machine processes only logs that will yield 4" lumber. Its process is the same as the DDM.

The following illustrates various phases in the manufacturing process:

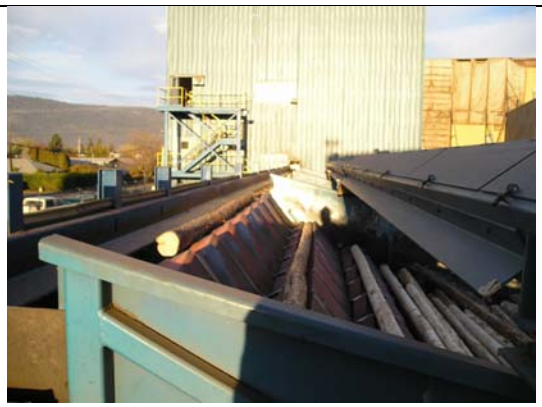
Step #1 – Log Delivery/Off-loading/Inventory/Mill input	
	- Wrapping stations are used to safeguard the driver while a load is wrapped (cabled) for log storage and inventory. - Loose logs are not cabled and are kept in a separate location for ongoing daily inputs into the mill
	- All loads are off-loaded with a 60T Latourneau, which either inventories the load for future use or feeds the mill directly.
	- Logs are inventoried and decked in rows, based on log parameters (size; diameter, species & length) for future use. - Logs are later fed into three separate machine breakdown centers based on log diameters: (CNS-Chipnsaw, 4-6”, DDM:6”-10”, Headrig:10”+) - Log decks are rotated to minimize drying and degrading of logs in storage.
	- Logs fed into the mill in-feed (DDM) based on log dimensions. (4”-10”tops-CNS, DDM, 10”top & greater–HeadRig) - 3 separate machine centers based on log size breakdown the log into lumber. - CNS-small logs - DDM-6”-10”top sizes - H/R-10”+

#2 – DeBarking	
	- Three (3) separate debarkers are used specific to each machine breakdown center - 35" Bradson Debarker barks the Headrig logs which then proceed to the Headrig carriage. - 22" Nicholson Debarker barks all DDM logs. - 18" Cambio Debarker barks all the CNS logs

	- installation of new debarker, one of two new debarkers currently being installed for each machine center breakdown line.

#3 – DDM Machine Centre & In-feed	
	- Logs proceeding from the Debarker are scanned and can be separated or sorted into 3 deep storage bins based on pre-set parameters for lumber products or sizes.

	- Deep storage bins (3) sort logs based on set parameters such as log diameter.

	- Wave-feeder operated from the DDM booth, controls the input (speed & gap between logs) of logs into the DDM breakdown center.
	- DDM input – V-Chain with noise reduction installed (left of photo).
	- The logs are then fed through the DDM scanner. The information from the scanner sets the chipping heads and saws in the DDM, the result is :logs in and lumber out, all in one pass at speeds up to 600 fpm. The DDM processes around 1100 pieces per hour.
#4 – CNS	
	- This machine processes only logs that will yield 4" lumber. Any logs that will yield 6" lumber are sent back to the DDM line. It's process is the same as the DDM.

#5 – Headrig	
	- Here the logs are individually loaded onto the carriage, turned for best opening face, scanned, with the sawing solution displayed to the sawyer. The 2" side-cut pieces are sent out to the board edger for ripping into lumber. The centre cant is sent to the gang edger where it is processed through a series of evenly placed saws.

#6 – Board & Gang Edger	
	- Lumber is inspected for edge defect and selected for edging to a thinner width, chipper or remanufacturing.
	- Board Edger – boards are edge-sawn to increase overall board value.

#7 – Trim Saws	
	- all lumber is individually scanned and trimmed to the most optimum length based on pre-set parameters.

	- laser scanner – analyzes each board for value maximization based on preset algorithmic parameters

	- output of optimizer-trimmer– resultant quality lumber continues on chain to drop sorts; waste removed to chipping lines.

#8 – Bin/Drop Sort	
	- each board scanned and subsequently sorted and dropped into specific bins.

	- dimension lumber sorts based on quality, length, size, etc.

	- rough lumber is stripped and stacked according to dimension sort and sent to the kiln for drying.

#9 – Transport (lifts) for finishing	
	- output of endstacking station – boards placed in 'lift' form for future handling as rough lumber product – may be destined for kilns and planer for finishing.

	- kiln at site 1 using conventional gas fired heat.

#10 – Lumber by-products-Chips, sawdust, hog	
	- wood by-products are routed to chipping facility at rear of mill; hog fuel, sawdust and chips are by-products of the lumber production.

Drying and Finishing Processes

Once the loads of lumber are taken from the sawmill end stacker they are stored in the yard long enough to build up a charge for the dry kilns. Two dry Kilns are present and utilized at site 1, with a third dry kiln located at site 2 adjacent to the Planer mill. A volume of 125,000 bd ft is required for each kiln at site 1 and 250,000 bd ft at site 2. The kilns at site 1 are gas fired while the kiln at site 2 is shavings fired. The kilns reach a temperature of approx. 205 F and the lumber remains in the kiln for 17 to 20 hours depending on the overall lumber moisture content. The dried lumber is then removed from the kiln and stored in the yard long enough to build up a planer run requiring 3-5mm bd ft. The dried loads are set on the planer in-feed where a tilt hoist removes each tier and allows the kiln sticks to be recovered. The lumber then proceeds through the planer itself where 1 sharp knife cutterhead for each side of the piece dresses the lumber to a smooth finish. As the lumber proceeds from the planer it passes through a Moisture Detector which paints any piece that exceeds the “wet” parameters. The average moisture content is 9 to 16%. Wets would be any piece having moisture content over the 19-20% range.
The lumber proceeds through a MSR machine where through a series of rolls, each piece is put under stress to measure its strength. Those pieces achieving a specific stress rating are spray painted. These pieces are used in truss manufacture and command a higher price than the typical dimension lumber. All of the lumber is then passed over the grading table where each piece is graded on appearance. The high grade is sorted out in the form of "J" Grade followed by MSR, 2/btr. #3, and economy. Each piece of lumber is marked by the gradermen, with a code for each grade. This code is scanned and the scanner tells the trimsaws to trim if required. From here the lumber is grade stamped, sorted by grade and length in the sorter and stacked for finish packaging. The lumber is then covered in plastic wrap and strapped tightly for shipping. The lumber packages are then stacked in the yard again by length and grade, ready for shipment.

NOTES/COMMENTS/QUESTIONS: