

McDonald, Jim

From: Brian Storey [bstorey@jonesedmunds.com]
Sent: Thursday, October 13, 2005 10:00 AM
To: McDonald, Jim
Subject: Robbins Sawmill

Mr. McDonald:

Attached is the additional information we have discussed. Specifically the pdf file contains the new pages 56 and 63 of the application regarding the sawmill and planer mill production, and the most recent month of records. I have included the boiler numbers, sawmill number, planer mill numbers, and kiln numbers. The sawmill and planer mill numbers were calculated using the new production rates suggested on pages 56 and 63.

I will be out of the office until later this afternoon when we can discuss any calculation you have questions about.

Thank you for your cooperation,

Brian Storey

352-376-6533

804 3238

Emissions Unit Control Equipment

1. Control Equipment/Method Description (limit to 200 characters per device or method):
2. Control Device or Method Code(s): 075

Emissions Unit Details

1. Package Unit:		
Manufacturer:		Model Number:
2. Generator Nameplate Rating:		MW
3. Incinerator Information:		
Dwell Temperature:		°F
Dwell Time:		seconds
Incinerator Afterburner Temperature:		°F

Emissions Unit Operating Capacity and Schedule

1. Maximum Heat Input Rate:	
2. Maximum Incineration Rate:	
3. Maximum Process or Throughput Rate: 331.68 tpd, 13.82 tph sawdust produced at sawmill	
4. Maximum Production Rate: 130 Mbf processed at the Sawmill	
5. Requested Maximum Operating Schedule:	
24 hours/day	7 days/week
52 weeks/year	8,760 hours/year
6. Operating Capacity/Schedule Comment (limit to 200 characters):	
Maximum board feet processed at Sawmill per day = 130 Mbf/day	
Approximate Sawdust Storage Silo volume = 628 cu yd	
Weight of sawdust 1 cu yd = 220 lbs	
Time to fill Sawdust Storage Silo = 5 hours	
Quantity of sawdust in full silo = (628 cu yd) x (220 lb/cu yd) x (ton/2,000 lb) = 69.08 tons	
Hourly Sawdust Storage Silo filling rate = (69.08 tons)/(5 hours) = 13.82 tph	
Daily Sawdust Storage Silo filling rate = (13.82 tph) x (24 hr/day) = 331.58 tpd	
Conversion factor = (331.58 tpd) / (130 Mbf/day) = 2.55 tons sawdust/Mbf produced	

Emissions Unit Control Equipment

1. Control Equipment/Method Description (limit to 200 characters per device or method):
2. Control Device or Method Code(s): 075

Emissions Unit Details

1. Package Unit: Manufacturer:	Model Number:
2. Generator Nameplate Rating:	MW
3. Incinerator Information: Dwell Temperature:	°F
Dwell Time:	seconds
Incinerator Afterburner Temperature:	°F

Emissions Unit Operating Capacity and Schedule

1. Maximum Heat Input Rate:	
2. Maximum Incineration Rate: tons/day	
3. Maximum Process or Throughput Rate: 134.4 tons per day, 5.60 tons per hour	
4. Maximum Production Rate:	
5. Requested Maximum Operating Schedule:	
24 hours/day	7 days/week
52 weeks/year	8,760 hours/year
6. Operating Capacity/Schedule Comment (limit to 200 characters): <p>From the records for the month of June, the Planer Mill is known to produce approximately 200 yards of shavings per storage bin. The weight of 100 yards of sawdust is 23 tons; therefore the rate of shavings produced is 56 tons per one bin. The filling of one storage bin with shavings is accomplished in a 10-hour shift; therefore the facility could potentially fill two storage bins in a 20-hr period (approximately one day). The filling rate is calculated as:</p> <p>$(112 \text{ tons}/2 \text{ fills}) * (2 \text{ fills}/20 \text{ hours}) = 5.6 \text{ tph}$</p> <p>Maximum quantity generated in a 24-hr period = $(5.6 \text{ tph}) * (24 \text{ hrs}) = 134.4 \text{ tpd}$</p> <p>In addition, the Planer Mill can process a maximum of 250 Mbf per day. A conversion factor from board feet processed to sawdust generated is calculated to be:</p> <p>$(134.4 \text{ tons}/\text{day}) * (\text{day}/250 \text{ Mbf}) = 0.5376 \text{ tons}/\text{Mbf}$</p>	

Robbins Sawmill Daily Boiler Fuel Usage
Sep-05 EMISSION UNIT NO. 001 ABCO BOILER

Boiler 1	Hrs. Combustible Fuel in Boiler			Auger Revolutions				Combustible Fuel Used		Daily Avg. Hourly Heat Input Rate (13.1)
	Day	Schd.	Down	Run	Beginning	Ending	Total	Lbs/Hr	Lbs/day	MMBTU/hr
09/01/05	24.00	0.00	24.00	304621	306981	2360	4.00	393	9,440	2.8
09/02/05	24.00	0.00	24.00	306981	310942	3961	4.00	660	15,844	4.6
09/03/05	24.00	0.00	24.00	310942	317424	6482	4.00	1080	25,928	7.6
09/04/05	24.00	0.00	24.00	317424	323267	5843	4.00	974	23,372	6.8
09/05/05	24.00	0.00	24.00	323267	327395	4128	4.00	688	16,512	4.8
09/06/05	24.00	0.00	24.00	327395	330432	3037	4.00	506	12,148	3.5
09/07/05	24.00	0.00	24.00	330432	332399	1967	4.00	328	7,868	2.3
09/08/05	24.00	0.00	24.00	332399	338389	5990	4.00	998	23,960	7.0
09/09/05	24.00	0.00	24.00	338389	343434	5045	4.00	841	20,180	5.9
09/10/05	24.00	0.00	24.00	343434	349213	5779	4.00	963	23,116	6.7
09/11/05	24.00	0.00	24.00	349213	355852	6639	4.00	1107	26,556	7.7
09/12/05	24.00	0.00	24.00	355852	361164	5312	4.00	885	21,248	6.2
09/13/05	24.00	0.00	24.00	361164	365547	4383	4.00	731	17,532	5.1
09/14/05	24.00	0.00	24.00	365547	368375	2828	4.00	471	11,312	3.3
09/15/05	24.00	0.00	24.00	368375	370428	2053	4.00	342	8,212	2.4
09/16/05	24.00	0.00	24.00	370428	378881	8453	4.00	1409	33,812	9.9
09/17/05	24.00	0.00	24.00	378881	384538	5657	4.00	943	22,628	6.6
09/18/05	24.00	0.00	24.00	384538	388794	4256	4.00	709	17,024	5.0
09/19/05	24.00	0.00	24.00	388794	394001	5207	4.00	868	20,828	6.1
09/20/05	24.00	0.00	24.00	394001	399954	5953	4.00	992	23,812	6.9
09/21/05	24.00	0.00	24.00	399954	406102	6148	4.00	1025	24,592	7.2
09/22/05	24.00	0.00	24.00	406102	412410	6308	4.00	1051	25,232	7.4
09/23/05	24.00	0.00	24.00	412410	417746	5336	4.00	889	21,344	6.2
09/24/05	24.00	0.00	24.00	417746	421875	4129	4.00	688	16,516	4.8
09/25/05	24.00	0.00	24.00	421875	428467	6592	4.00	1099	26,368	7.7
09/26/05	24.00	0.00	24.00	428467	434687	6220	4.00	1037	24,880	7.3
09/27/05	24.00	0.00	24.00	434687	440305	5618	4.00	936	22,472	6.6
09/28/05	24.00	0.00	24.00	440305	446448	6143	4.00	1024	24,572	7.2
09/29/05	24.00	0.00	24.00	446448	452237	5789	4.00	965	23,156	6.8
09/30/05	24.00	0.00	24.00	452237	457851	5614	4.00	936	22,456	6.5
Totals	720.00	0.00	720.00					25538	612,920	178.77

Robbins Sawmill Daily Boiler Fuel Usage
Sep-05 EMISSION UNIT NO. 002 HURST BOILER

Boiler 2	Hrs. Combustible Fuel in Boiler			Auger Revolutions				Combustible Fuel Used		Daily Avg. Hourly Heat Input Rate (13.1)
	Day	Schd.	Down	Run	Beginning	Ending	Total		Lbs/Hr	Lbs/day
09/01/05	24.00	0.00	24.00	3775517	3786672	11155	4.00	1859	44,620	13.0
09/02/05	24.00	0.00	24.00	3786672	3797844	11172	4.00	1862	44,688	13.0
09/03/05	24.00	0.00	24.00	3797844	3809037	11193	4.00	1866	44,772	13.1
09/04/05	24.00	0.00	24.00	3809037	3820036	10999	4.00	1833	43,996	0.0
09/05/05	24.00	0.00	24.00	3820036	3831146	11110	4.00	1852	44,440	13.0
09/06/05	24.00	0.00	24.00	3831146	3842303	11157	4.00	1860	44,628	13.0
09/07/05	24.00	0.00	24.00	3842303	3853042	10739	4.00	1790	42,956	12.5
09/08/05	24.00	0.00	24.00	3853042	3864552	11510	4.00	1918	46,040	13.4
09/09/05	24.00	0.00	24.00	3864552	3875543	10991	4.00	1832	43,964	12.8
09/10/05	24.00	0.00	24.00	3875543	3886712	11169	4.00	1862	44,676	13.0
09/11/05	24.00	0.00	24.00	3886712	3897902	11190	4.00	1865	44,760	13.1
09/12/05	24.00	0.00	24.00	3897902	3909042	11140	4.00	1857	44,560	13.0
09/13/05	24.00	0.00	24.00	3909042	3920187	11145	4.00	1858	44,580	13.0
09/14/05	24.00	0.00	24.00	3920187	3931350	11163	4.00	1861	44,652	13.0
09/15/05	24.00	0.00	24.00	3931350	3942509	11159	4.00	1860	44,636	13.0
09/16/05	24.00	0.00	24.00	3942509	3953709	11200	4.00	1867	44,800	13.1
09/17/05	24.00	0.00	24.00	3953709	3964972	11263	4.00	1877	45,052	13.1
09/18/05	24.00	0.00	24.00	3964972	3975895	10923	4.00	1821	43,692	12.7
09/19/05	24.00	0.00	24.00	3975895	3986892	10997	4.00	1833	43,988	12.8
09/20/05	24.00	0.00	24.00	3986892	3998091	11199	4.00	1867	44,796	13.1
09/21/05	24.00	0.00	24.00	3998091	4009230	11139	4.00	1857	44,556	13.0
09/22/05	24.00	0.00	24.00	4009230	4020410	11180	4.00	1863	44,720	13.0
09/23/05	24.00	0.00	24.00	4020410	4031404	10994	4.00	1832	43,976	12.8
09/24/05	24.00	0.00	24.00	4031404	4042563	11159	4.00	1860	44,636	13.0
09/25/05	24.00	0.00	24.00	4042563	4053553	10990	4.00	1832	43,960	12.8
09/26/05	24.00	0.00	24.00	4053553	4064708	11155	4.00	1859	44,620	13.0
09/27/05	24.00	0.00	24.00	4064708	4075707	10999	4.00	1833	43,996	12.8
09/28/05	24.00	0.00	24.00	4075707	4086817	11110	4.00	1852	44,440	13.0
09/29/05	24.00	0.00	24.00	4086817	4097974	11157	4.00	1860	44,628	13.0
09/30/05	24.00	0.00	24.00	4097974	4109073	11099	4.00	1850	44,396	12.9
Totals	720.00	0.00	720.00					55,593	1,334,224	376.32

KILN No. 1 CHARGES SEPT 2005					
DATE	CHARGE NO.	LUMBER			POLES (cf)
		Dimension	#	Board Feet	
09/05/05	1132P			0	6,710.20
09/09/05	1133P			0	5,213.70
09/14/05	1134P			0	6,032.10
09/17/05	1135P			0	6,140.40
09/23/05	1137P			0	5,769.40
09/27/05	1138P			0	6,775.70
09/30/05	1139P			0	6,276.90
09/30/05	1140P			0	6,317.30
Sept Total				0	49,235.70
YTD				4,422,976	378,619.48

12 MONTH TOTAL

KILN No. 2 CHARGES SEPT 2005					
DATE	CHARGE NO.	LUMBER			POLES (cf)
		Dimension	#	Board Feet	
09/01/05	2178L	5/4 X 4 X 8	11,191	37,303	0.00
		5/4 X 6 X 8	7,156	35,780	0.00
09/03/05	2179L	2 X 6 X 8	4,201	33,608	0.00
		5/4 X 4 X 8	1,430	4,766	0.00
		5/4 X 6 X 8	1,195	5,975	0.00
		2 X 4 X 8	8,415	44,880	0.00
09/04/05	2180L	2 X 6 X 8	751	6,008	0.00
		2 X 4 X 8	5,169	27,568	0.00
		5/4 X 4 X 8	4,059	13,530	0.00
		5/4 X 6 X 8	911	4,555	0.00
09/07/05	2181L	3 X 4 X 8	4,453	35,624	0.00
		6 X 6 X 8	1,709	41,016	0.00
09/09/05	2182L	2 X 4 X 8	18,319	97,701	0.00
09/10/05	2183L	2 X 4 X 8	11,857	63,237	0.00
		2 X 6 X 8	4,309	34,472	0.00
09/12/05	2184L	2 X 4 X 8	7,900	42,133	0.00
		2 X 6 X 8	3,054	24,432	0.00
		5/4 X 6 X 8	4,554	22,770	0.00
09/13/05	2185L	5/4 X 4 X 8	14,247	47,490	0.00
		5/4 X 6 X 8	4,991	24,955	0.00
09/15/05	2186L	6 X 6 X 8	1,949	46,776	0.00
09/17/05	2187L	2 X 4 X 8	18,075	96,400	0.00
09/18/05	2188L	2 X 6 X 8	12,222	97,776	0.00
09/19/05	2189L	2 X 4 X 8	18,076	96,405	0.00
09/20/05	2190L	2 X 6 X 8	12,226	97,808	0.00
09/22/05	2191L	2 X 4 X 8	18,142	96,757	0.00
09/23/05	2192L	5/4 X 4 X 8	22,454	74,847	0.00
09/24/05	2193L	2 X 6 X 8	11,994	95,952	0.00
09/25/05	2194L	2 X 4 X 8	18,236	97,259	0.00
09/27/05	2195L	2 X 4 X 8	18,365	97,947	0.00
09/28/05	2196L	5/4 X 6 X 8	14,061	70,305	0.00
		5/4 X 4 X 8	472	1,573	0.00
09/29/05	2197L	2 X 6 X 8	12,256	98,048	0.00
09/30/05	2198L	2 X 6 X 8	11,927	95,416	0.00
		2 X 4 X 8	384	2,048	0.00
09/30/05	2199L	2 X 4 X 8	18,247	97,317	0.00
Sept Total				1,910,439	0.00
YTD				12,752,909	0.00

12 10 24 2005

Sep-05

EMISSION UNIT NO. 005 SAWDUST STORAGE SILO

Date	Sawmill Sched. Run Time	Sawmill Down Time (actual)	Sawmill Run Time (actual)	Sawmill Daily Production, Mbf/day (actual)	24 hr Est. Sawmill Hourly Production, Mbf/hour (calc)	Est. Conversion Factor, tons/Mbf (given)	Sawdust Sent to Silo, tons per day (calc)	Sawdust Hourly Production, tons per hour (calc)
09/01/05	10.00	0.80	9.20	66.148	2.756	2.55	168.68	7.03/8.3
09/02/05	10.00	1.00	9.00	78.842	3.285	2.55	201.05	8.38
09/03/05	10.00	0.50	9.50	91.551	3.815	2.55	233.46	9.73
09/04/05					0.000	2.55	0.00	0.00
09/05/05			0.00		0.000	2.55	0.00	0.00
09/06/05	10.00	1.00	9.00	97.937	4.081	2.55	249.74	10.41
09/07/05	10.00	0.00	10.00	80.305	3.346	2.55	204.78	8.53
09/08/05	10.00	1.47	8.53	69.579	2.899	2.55	177.43	7.39
09/09/05	9.00	0.50	8.50	92.258	3.844	2.55	235.26	9.80
09/10/05	9.00	0.42	8.58	81.987	3.416	2.55	209.07	8.71
09/11/05			0.00		0.000	2.55	0.00	0.00
09/12/05			0.00		0.000	2.55	0.00	0.00
09/13/05	10.00	0.50	9.50	90.315	3.763	2.55	230.30	9.60
09/14/05	9.00	0.37	8.63	72.642	3.027	2.55	185.24	7.72
09/15/05	9.00	1.42	7.58	65.761	2.740	2.55	167.69	6.99
09/16/05	8.00	0.50	7.50	78.266	3.261	2.55	199.58	8.32
09/17/05	8.00	0.51	7.49	78.122	3.255	2.55	199.21	8.30
09/18/05					0.000	2.55	0.00	0.00
09/19/05					0.000	2.55	0.00	0.00
09/20/05	10.00	0.15	9.85	108.396	4.517	2.55	276.41	11.52
09/21/05	10.00	1.22	8.78	85.507	3.563	2.55	218.04	9.09
09/22/05	10.00	0.48	9.52	99.189	4.133	2.55	252.93	10.54
09/23/05	10.00	0.34	9.66	100.883	4.203	2.55	257.25	10.72
09/24/05	10.00	1.45	8.55	85.541	3.564	2.55	218.13	9.09
09/25/05					0.000	2.55	0.00	0.00
09/26/05					0.000	2.55	0.00	0.00
09/27/05	10.00	1.16	8.84	92.973	3.874	2.55	237.08	9.88
09/28/05	10.00	0.34	9.66	100.795	4.200	2.55	257.03	10.71
09/29/05	9.00	0.20	8.80	96.741	4.031	2.55	246.69	10.28
09/30/05	8.00	0.27	7.73	87.469	3.645	2.55	223.05	9.29
Totals	209:00	14:60	194:40	1901:207	79:217		4848:08	202:00
Max	10.00	1.47	10.00	108.40	4.52		276.41	11.52
Avg	9.50	0.66	7.78	86.42	2.64		161.60	6.73
Permit				130.00			331.68	13.82

Sawmill 130 Mbf/day

SILO HOLDS 69.08 TONS OF SAWDUST

5 HOURS TO FILL SILO

13.82 TON/HR SILO FILLING RATE

$$24 \frac{\text{HR}}{\text{DAY}} \times 13.82 \frac{\text{TONS}}{\text{HR}} = 331.68 \text{ TONS/DAY}$$

$$331.68 / 130 = 2.55 \frac{\text{TONS}}{\text{Mbf}}$$

$$\frac{9.2}{66.148} \sim \frac{24}{172.56}$$

130

$$\frac{5}{69.08} \sim \frac{12.2}{168.68}$$

Sep-05

EMISSION UNIT NO. 006 PLANER SHAVINGS STORAGE BIN

Date	Planer Mill Sched. Run Time	Planer Mill Down Time (actual)	Planer Mill Run Time (actual)	Planer Mill Daily Production, Mbf/day (actual)	Est. Planer Mill Hourly Production, Mbf/hour (calc)	Est. Conversion Factor, tons/Mbf (given)	Shavings Sent to Silo, tons per day (calc)	Shavings Hourly Production, tons per hour (calc)
09/01/05	9.00	2.00	7.00	98.303	4.096	0.5376	52.85	2.20
09/02/05	8.75	0.75	8.00	78.080	3.253	0.5376	41.98	1.75
09/03/05	9.00	1.00	8.00	75.200	3.133	0.5376	40.43	1.68
09/04/05			0.00		0.000	0.5376	0.00	0.00
09/05/05			0.00		0.000	0.5376	0.00	0.00
09/06/05	9.00	1.00	8.00	63.840	2.660	0.5376	34.32	1.43
09/07/05	9.00	1.00	8.00	73.513	3.063	0.5376	39.52	1.65
09/08/05	9.00	0.75	8.25	75.833	3.160	0.5376	40.77	1.70
09/09/05	9.00	1.75	7.25	96.988	4.041	0.5376	52.14	2.17
09/10/05	9.00	1.00	8.00	91.647	3.819	0.5376	49.27	2.05
09/11/05			0.00		0.000	0.5376	0.00	0.00
09/12/05			0.00		0.000	0.5376	0.00	0.00
09/13/05	8.50	0.50	8.00	152.094	6.337	0.5376	81.77	3.41
09/14/05			0.00		0.000	0.5376	0.00	0.00
09/15/05	9.00	1.00	8.00	105.216	4.384	0.5376	56.56	2.36
09/16/05	9.00	1.00	8.00	87.168	3.632	0.5376	46.86	1.95
09/17/05	8.00	0.75	7.25	29.696	1.237	0.5376	15.96	0.67
09/18/05	8.00	0.75	7.25	45.697	1.904	0.5376	24.57	1.02
09/19/05			0.00		0.000	0.5376	0.00	0.00
09/20/05	9.00	0.25	8.75	89.088	3.712	0.5376	47.89	2.00
09/21/05	9.00	2.00	7.00	64.800	2.700	0.5376	34.84	1.45
09/22/05	9.00	2.00	7.00	101.088	4.212	0.5376	54.34	2.26
09/23/05	9.00	0.50	8.50	141.625	5.901	0.5376	76.14	3.17
09/24/05	8.00	2.00	6.00	76.888	3.204	0.5376	41.33	1.72
09/25/05			0.00		0.000	0.5376	0.00	0.00
09/26/05			0.00		0.000	0.5376	0.00	0.00
09/27/05			0.00		0.000	0.5376	0.00	0.00
09/28/05			0.00		0.000	0.5376	0.00	0.00
09/29/05	9.00	1.00	8.00	216.447	9.019	0.5376	116.36	4.85
09/30/05	10.00	0.75	9.25	148.629	6.193	0.5376	79.90	3.33
Totals	177.25	21.75	155.50	1911.840	79.660		1027.81	42.83
Max	10.00	2.00	9.25	216.45	9.02		116.36	4.85
Avg	8.86	1.09	5.18	95.59	2.66		34.26	1.43
Permit				250.00			134.40	5.60