

# Rayonier

*Performance Fibers*

*Fernandina Mill*

RECEIVED

NOV 09 2005

November 7, 2005

BUREAU OF AIR REGULATION

**Certified Mail, Return Receipt Requested**

Mr. Jeffery F. Koerner, P. E.  
Bureau of Air Regulation  
Division of Air Resources Management  
2600 Blair Stone Road, MS 5505  
Tallahassee, FL 32399-2400

RE: Request to Install No. 6 Power Boiler, and the No.6 Batch Digester system  
0890004-018-AC

Dear Mr. Koerner:

On October 20, 2005 Rayonier responded to your October 12, 2005 Request for Additional Information regarding the above referenced construction application. As discussed in greater detail in our recent correspondence, the emission analysis in the application excludes emissions that are not a "result" of the proposed change. This requirement that there be a causal connection between the proposed change and the emissions increase is recognized in the "Demand Growth" exclusion contained in the December 31, 2002 federal amendments. Because this clarification was judicially upheld by the United States Court of Appeals for the District of Columbia in State of New York et. al. vs U.S. Environmental Protection Agency ("Decision") and must be included in the Florida rules by the end of the year, we are providing you with supplemental information.

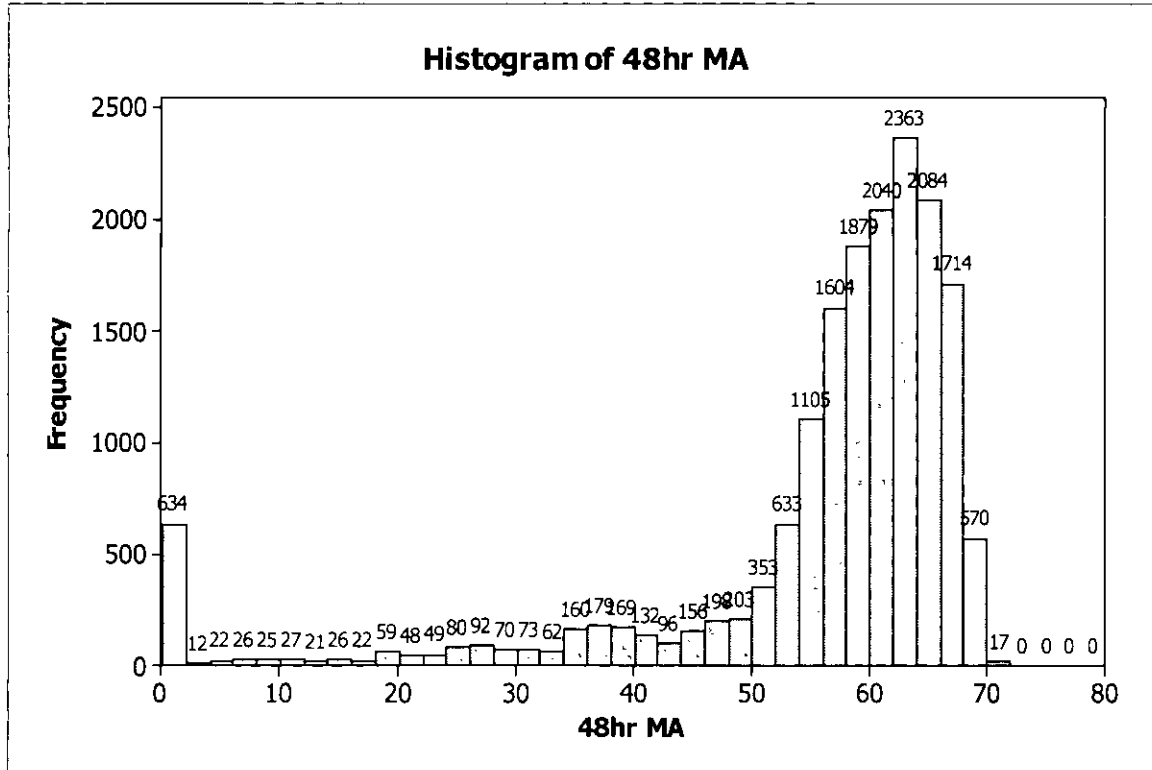
First, we provided the results of many tests showing the boiler could operate at the permit limit of 70,000 lbs of spent sulfite liquor ("SSL") solids per hour. In addition to these tests results, we are supplying information to demonstrate this boiler has repeatedly operated at the 70,000 lbs/hr rate during the baseline year period. The operating history shows a significant proportion of time the recovery boiler operates at or near 70,000 lb/hr rate. The histogram of 48 hour moving averages shown below demonstrates that for 570 periods in the 2003-2004 baseline period the boiler had an average burning rate of 68,000 lbs/hr. Hourly and daily histograms show even greater frequency of operation at the 70,000 lbs/hr rate.

Registered to ISO 9002



Certificate No. A2087

The Foot of Gum Street • P. O. Box 2002 • Fernandina Beach, FL 32035-2002  
Telephone (904) 261-3611 • Fax (904) 277-1411



Second, pursuant to the regulation, as upheld in the Decision, the demand growth emissions must be quantified and provided. We have used two methods to quantify these emissions. As you can see from the two tables below the two methods agree fairly well.

We first calculated demand growth emissions using the recovery boiler emissions used to calculate the 2003 and 2004 AORs and proportioning up just these emissions based on SSL burned. The table below gives these demand growth emissions.

SSL burned 2003	236,285	tons
SSL burned 2004	241,514	tons
Baseline SSL burning rate	238,900	tons
SSL burning rate at 70,000 lb/hr 8760 hrs/yr	306,600	tons
ratio increase in SSL burning	1.283	ratio

Parameter	baseline from 03/04 AOR	New Actual Emissions	Increase
CO	346.04	444.10	98.06
NOx	976.6	1,253.35	276.75
SO2	836.12	1,073.06	236.94
VOC	0.26	0.33	0.07
PM	67	85.99	18.99
PM10	68.6	88.04	19.44

We also recalculated these emissions based on SSL solids, but the procedure used involved the relationship between the liquor burning rate and the gas volume produced. Two pieces of data were utilized to define this relationship: The boiler design conditions as listed in the Title V permit application and actual emissions test of gas volumes for 2003-2005. The factor developed is 1.8 dscfm/(lb SSLs/hr). Utilizing this factor and the actual burn rates for the present operations [2004 data] the flue gas volume was determined. This volume was used with the average emissions concentrations for CO, NOx and SO2. The resultant ton/yr emission rate values were different [less] than reported in the 2004 AOR, but more accurate. Using the same procedure the emissions at the boiler permit limit capacity were determined and compared to the corrected 2004 emissions.

For VOC, the calculation involves the conversion of the boiler's permit limit liquor burning capacity to dry unbleached pulp production [ODUBT/yr]. Then the actual methanol testing values in lb/ODUBT were used to determine the permit limit capacity emission of VOC. For PM and PM10 a direct ratio of annual average liquor burn rate to the 70,000 lb SSLs/hr rate was used to determine the permit limit emissions rate.

2004						
Emissions Ton/yr						
Parameter	AOR Oil Fired	AOR SSLS Fired	AOR Total	Corrected Total	70,000 lb SSLS/hr Emissions	Potential Increase
CO	5.29	410.58	415.87	373.98	437.50	63.52
NOx	49.72	2070.36	2120.08	1,906.62	2,230.45	323.83
SO2	6.91	789.75	796.66	714.54	858.28	143.74
VOC	0.80	34.90	35.70		38.78	3.08
PM	1.80	84.11	85.91		113.61	27.70
PM10	1.55	75.10	76.65		101.38	24.73

Furthermore, if there is a reasonable possibility that the project will result in a significant emissions increase, emissions must be monitored and recorded for a specified period of time (generally 10 years) to prove there has been no increase other than that allowed by demand growth.

In this case, the demand growth excluded emissions are recovery boiler emissions up to the existing permit limit. Tracking these emissions will be accomplished by tracking the amount of SSL solids burned and to ensure we do not exceed the 70,000 lb/hr annual average.

Though the Request for Further Information did not specifically ask for these emissions to be quantified, and the original application provided sufficient information to calculate them, by the first method above, we are providing this information given the likelihood of near-term regulatory changes to formalize the Demand Growth exclusion as mandated by EPA regulations and the Decision. We provide them here, prior to our November 8 meeting, should you have questions regarding the calculation. If you have questions before or after our November 8 meeting, you can contact David Tudor at (904)557-8332, [david.tudor@rayonier.com](mailto:david.tudor@rayonier.com), or Dick Hopper at (904)277-1480, [dick.hopper@rayonier.com](mailto:dick.hopper@rayonier.com).

Sincerely,

F. Jack Perrett by C.A. McDonald

Jack Perrett  
 General Manager

CC: Bruce Mitchell  
 Trina Vielhaeuer