



Hardwood Lumber
Pine Lumber & Plywood
Treated Wood Products

RECEIVED

SEP 19 2003

September 15, 2003

BUREAU OF AIR REGULATION

Corporate Headquarters
P.O. Box 829
Weldon, North Carolina 27890
Telephone: (919) 536-4211
Fax: (919) 536-3102
Please Respond To:

Ms. Sandra F. Veazey
Air Program Administrator
Northwest District
Florida Department of Environmental Protection
160 Governmental Center
Pensacola, Florida 32501

RE: Third Request For Additional Information Regarding Title V Air Permit Renewal
Renewal Application File 0390009-005-AV
Gadsden County

Dear Ms. Veazey:

This letter is in response to your letter of August 26, 2003 (copy attached).

Coastal concurs with all suggested modifications to its CAM plan.

Enclosed herewith is a revised CAM plan and backup data which reflects all suggested changes.

Also enclosed are R.O. and P.E. Certification statements.

Please contact me if you have questions or need additional information.

Sincerely,

Thomson W. Rockwood

Copies:
Jonathan Holtom, FDEP Tallahassee
Rick Bradburn, FDEP Pensacola
Stephen Smallwood, Air Quality Services



Jeb Bush
Governor

Department of Environmental Protection

Northwest District
160 Governmental Center
Pensacola, Florida 32501-5794

David B. Struhs
Secretary

August 26, 2003

CERTIFIED, RETURN RECEIPT REQUESTED

Thomson W. Rockwood
General Manager
Coastal Lumber Company
Post Office Box 1128
Havana, Florida 32333

Re: Third Request for Additional Information Regarding Title V Air Operation Permit
Renewal Application, File No. 0390009-005-AV
Coastal Lumber Company, Gadsden County

Dear Mr. Rockwood:

This is response to your July 28, 2003 submittal (CAM plan) addressing the Department's May 9, 2003 request for additional information letter concerning the project referenced above. Your application for permit renewal remains incomplete. The facility's proposed CAM plan was reviewed by Jonathan Holtom of our Tallahassee office and we have summarized his comments below. In order to continue processing your application, please address the comments listed below pursuant to Rules 62-213.420(1)(b)3, and 62-4.070(1), F.A.C.

Should your response to the items below require new calculations, please submit the new calculations, assumptions, reference material and appropriate revised pages of the application form.

- The excursion range for the scrubber pressure drop should be 2.0 – 7.0" of water, instead of 1.5 – 8.0" of water, to provide adequate time for evaluation and corrective actions to be taken.
- The excursion range for the water spray header pressure should be 13 – 35 psi, instead of 10 – 40 psi, to provide adequate time for evaluation and corrective actions to be taken.
- The proposed Data Collection Procedures states that boiler sheets will be retained for "two" years. This needs to be changed to "five" years in order to comply with Rule 62-213.440(1)(b)2.b, F.A.C.

Responsible Official (R.O.) Certification Statement: Rule 62-213.420, F.A.C. requires that all Title V permit applications must be certified by a responsible official. Due to the nature of the information requested above, your response should be certified by the responsible official. Please complete and submit a new R.O. certification statement page from the new long application form, DEP Form No. 62-210.900, effective February 11, 1999 (enclosed).

"More Protection, Less Process"

Printed on recycled paper.

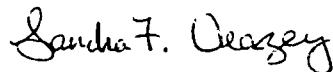
Thomson W. Rockwood
File No. 0390009-005-AV
August 26, 2003
Page Two

Professional Engineer (P.E.) Certification Statement: Rule 62-4.050(3), F.A.C. requires that all applications for a Department permit must be certified by a professional engineer registered in the State of Florida. This requirement also applies to responses to Department requests for additional information of an engineering nature. As a result, at a minimum your response to the first two items above should be certified by a professional engineer registered in the State of Florida. Please complete and submit a new P.E. certification statement page from the new long application form, DEP Form No. 62-210.900, effective February 11, 1999 (enclosed).

The Department must receive a response from you within 90 (ninety) days of receipt of this letter, unless you (the applicant) request additional time under Rule 62-213.420(1)(b)6., F.A.C.

If you have any questions concerning CAM, please contact Jonathan Holtom at 850/921-9531. For general questions, please contact Rick Bradburn at 850/595-8364, extension 1233.

Sincerely,



Sandra F. Veazey
Air Program Administrator

SFV/rbc

Enclosures

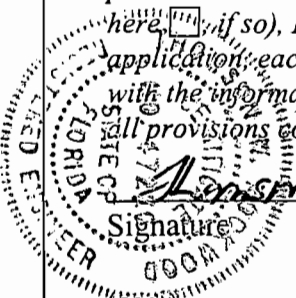
copy to:

Stephen Smallwood, P.E.

[electronic file name: 03900091ltr3.doc]

APPLICATION INFORMATION

Professional Engineer Certification

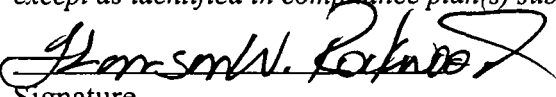
1. Professional Engineer Name: THOMPSON WHITIN ROCKWOOD Registration Number: 47220
2. Professional Engineer Mailing Address... Organization/Firm: COASTAL LUMBER CO Street Address: PO BOX 1128 City: HAYANA State: FL Zip Code: 32333
3. Professional Engineer Telephone Numbers... Telephone: (850) 539-6432 ext. 129 Fax: (850) 539-6799
4. Professional Engineer Email Address:
5. Professional Engineer Statement: <i>I, the undersigned, hereby certify, except as particularly noted herein*, that:</i> <p>(1) <i>To the best of my knowledge, there is reasonable assurance that the air pollutant emissions unit(s) and the air pollution control equipment described in this application for air permit, when properly operated and maintained, will comply with all applicable standards for control of air pollutant emissions found in the Florida Statutes and rules of the Department of Environmental Protection; and</i></p> <p>(2) <i>To the best of my knowledge, any emission estimates reported or relied on in this application are true, accurate, and complete and are either based upon reasonable techniques available for calculating emissions or, for emission estimates of hazardous air pollutants not regulated for an emissions unit addressed in this application, based solely upon the materials, information and calculations submitted with this application.</i></p> <p>(3) <i>If the purpose of this application is to obtain a Title V air operation permit (check here <input checked="" type="checkbox"/>, if so), I further certify that each emissions unit described in this application for air permit, when properly operated and maintained, will comply with the applicable requirements identified in this application to which the unit is subject, except those emissions units for which a compliance plan and schedule is submitted with this application.</i></p> <p>(4) <i>If the purpose of this application is to obtain an air construction permit (check here <input type="checkbox"/>, if so) or concurrently process and obtain an air construction permit and a Title V air operation permit revision or renewal for one or more proposed new or modified emissions units (check here <input type="checkbox"/>, if so), I further certify that the engineering features of each such emissions unit described in this application have been designed or examined by me or individuals under my direct supervision and found to be in conformity with sound engineering principles applicable to the control of emissions of the air pollutants characterized in this application.</i></p> <p>(5) <i>If the purpose of this application is to obtain an initial air operation permit or operation permit revision or renewal for one or more newly constructed or modified emissions units (check here <input type="checkbox"/>, if so), I further certify that, with the exception of any changes detailed as part of this application, each such emissions unit has been constructed or modified in substantial accordance with the information given in the corresponding application for air construction permit and with all provisions contained in such permit.</i></p> <p><i>Thompson W. Rockwood</i> Signature</p> <p><u>9/15/03</u> Date</p> 

* Attach any exception to certification statement.

APPLICATION INFORMATION

Application Responsible Official Certification

Complete if applying for an initial/revised/renewal Title V permit or concurrent processing of an air construction permit and a revised/renewal Title V permit. If there are multiple responsible officials, the "application responsible official" need not be the "primary responsible official."

1. Application Responsible Official Name: THOMSON W. ROCKWOOD VP & GM
2. Application Responsible Official Qualification (Check one or more of the following options, as applicable): <input checked="" type="checkbox"/> For a corporation, the president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation, or a duly authorized representative of such person if the representative is responsible for the overall operation of one or more manufacturing, production, or operating facilities applying for or subject to a permit under Chapter 62-213, F.A.C. <input type="checkbox"/> For a partnership or sole proprietorship, a general partner or the proprietor, respectively. <input type="checkbox"/> For a municipality, county, state, federal, or other public agency, either a principal executive officer or ranking elected official. <input type="checkbox"/> The designated representative at an Acid Rain source.
3. Application Responsible Official Mailing Address... Organization/Firm: COASTAL LUMBER COMPANY Street Address: PO BOX 1128 City: HAVANA State: FL Zip Code: 32333
4. Application Responsible Official Telephone Numbers... Telephone: (850) 539-6432 ext. 129 Fax: (850) 539-6799
5. Application Responsible Official Email Address:
6. Application Responsible Official Certification: <i>I, the undersigned, am a responsible official of the Title V source addressed in this air permit application. I hereby certify, based on information and belief formed after reasonable inquiry, that the statements made in this application are true, accurate and complete and that, to the best of my knowledge, any estimates of emissions reported in this application are based upon reasonable techniques for calculating emissions. The air pollutant emissions units and air pollution control equipment described in this application will be operated and maintained so as to comply with all applicable standards for control of air pollutant emissions found in the statutes of the State of Florida and rules of the Department of Environmental Protection and revisions thereof and all other applicable requirements identified in this application to which the Title V source is subject. I understand that a permit, if granted by the department, cannot be transferred without authorization from the department, and I will promptly notify the department upon sale or legal transfer of the facility or any permitted emissions unit. Finally, I certify that the facility and each emissions unit are in compliance with all applicable requirements to which they are subject, except as identified in compliance plan(s) submitted with this application.</i>  Signature <u>9/15/03</u> Date

COMPLIANCE ASSURANCE MONITORING
SCRUBBER FOR PM CONTROL
BOILER 3
COASTAL LUMBER COMPANY
HAVANA, FL

I. Background

A. Emissions Unit

Description:	Wood-Waste Fired Boiler
Identification:	Boiler 3 (McBurney)
Facility:	Coastal Lumber Company Havana, FL Facility ID No.: 0390009

B. Applicable Regulation, Emission Limit, and Monitoring Requirements

Regulation:	OAR 340-30-021
Emission Limit:	
Particulate Matter:	0.15 lb/MMBTU heat input or 9.2 lb/hr total PM
Monitoring Requirements:	Pressure drop across wet scrubber, water spray header pressure

C. Control Technology:

Wet scrubber

II. Monitoring Approach

The key elements of the monitoring approach are presented in Table A.

MONITORING APPROACH JUSTIFICATION

I. Background

The pollutant-specific emission unit is a wood-waste fired boiler that produces process steam that is used to manufacture softwood plywood. The exhaust from the boiler is ducted through a wet scrubber. In the scrubber, emissions are first mixed with water spray, which attracts and entraps particulate matter, and then the water (and entrapped particulate) is separated mechanically from the gas stream by a section of baffles. The pressure drop between the inlet of the water spray section and the scrubber discharge indicates the level effectiveness of the scrubber at any point in time. This pressure differential will be monitored to ensure that the scrubber is functioning normally. The water pressure in the water spray header is also an indicator of whether or not the scrubber is working properly. This water pressure will also be monitored to ensure that the scrubber is working properly.

II. Rationale for Selection of Performance Indicators

Pressure drop across the scrubber is recommended as the primary scrubber performance indicator because it confirms whether or not the gas flow through the scrubber is normal. After routine maintenance cleaning, the scrubber pressure drop is low. Over time, it is normal for the pressure drop to rise as the water spray nozzles become dirty, the mixing plates become dirty, and/or the separation baffle section fins become dirty. Cleaning spray nozzles in the system are manually activated periodically to clean the system while it is running. However, when the pressure drop exceeds certain levels and the cleaning spray system is no longer effective, the scrubber is shut down, opened up, and cleaned manually. On the other hand, a very low pressure drop indicates that there is a problem inside the scrubber (such as a baffle section having fallen out) and the scrubber is shut down and repaired.

Water pressure at the water spray nozzle header was chosen as a secondary scrubber performance indicator because it confirms whether or not sufficient water is being supplied to the spray nozzles to enable the scrubber to function normally. Low pressure indicates a water supply problem or that a spray head has come off. High water pressure indicates that the nozzles are becoming fouled and need to be cleaned. This indicator is not as accurate as pressure drop in predicting whether or not the scrubber is functioning normally, but it helps confirm the indication of the pressure drop.

The boiler does not operate if the scrubber is shut down.

III. Rationale for Selection of Indicator Ranges

The selected indicator range for the scrubber pressure drop is 2.0 to 7.0 inches of water column. The selected indicator range for water spray nozzle header pressure is 13 to 35 psi.

The indicator range for the scrubber pressure drop is large because the boiler load varies (Boiler 3 is the “swing” boiler of Havana’s three boilers; the other two boilers normally run at 100% of capacity while Boiler 3 runs only hard enough to make whatever steam is needed in addition to the other two). A pressure differential less than 2.0 indicates that there may be a mechanical problem with the scrubber internals and they must be inspected to ensure that all parts are in place. A pressure differential over 7.0 indicates that the scrubber is beginning to get dirty and must be cleaned.

The indicator range for the water spray nozzle header is large because two pumps normally feed the system. One pump is sufficient, but a second pump always runs also to ensure adequate water supply. When only one pump is running and pressure drops below 13 psi, something is probably wrong with the pump and the scrubber water supply may be insufficient. If both pumps are operating normally, header pressure is normally around 30 psi. A header pressure in excess of 35 psi indicates that the nozzles are getting dirty and probably need to be cleaned.

Whenever a reading outside of the above ranges is observed (an “excursion”), the boiler operator will inspect the equipment, evaluate the situation, and take appropriate corrective action. All excursions will be documented on the Daily Boiler Log Sheet including corrective action taken.

The indicator ranges for the scrubber pressure drop and water spray nozzle header pressure are based on normal scrubber operation and performance test results. During annual source testing from 1999 through 2003, the scrubber was operating under normal conditions and the average scrubber pressure drop was 6.0 and the average water pressure was 13 psi with one pump and 20 psi with two (the second pump was added in 2002). See Table B.

Table C shows scrubber pressure drop and water pressure for the month of June, 2003. When the boiler was operating, average hourly scrubber pressure drop was 4.6 inches of H₂O and ranged from 2.0 inches of H₂O (immediately after normal cleaning on 6/3) to 7.5 inches of H₂O (immediately before cleaning). Average water pressure was 30 psi (indicating that both pumps ran normally all month and water supply to the scrubber was adequate). Table C data shows that the scrubber operated within the proposed indicator ranges during the month of June, which indicates that the scrubber probably operated properly.

Table C Addendum shows that immediately after cleaning, the scrubber pressure drop was only 1.5 psi on 2 occasions. Whenever pressure drop readings are less than 2.0, the boiler operator will inspect the equipment to ensure that all parts are in place, take corrective action if needed, and log the excursion.

September 15, 2003

Table A

Boiler #3 Wet Scrubber Performance Monitoring Approach

	Indicator No.1	Indicator No.2
I. Indicator	Pressure drop across wet scrubber	Water spray header pressure
Measurement Approach	The pressure drop is continuously displayed on a Magnahelic pressure differential gauge in the boiler operator's console and is read and recorded every two hours on the daily boiler log sheet by the boiler operator on duty.	The pressure in the water spray header is measured with a pressure gauge located in the water spray header downstream of the two pumps. The pumps are inspected and the gauge is read and recorded every two hours on the daily boiler log sheet by the boiler operator on duty.
II. Indicator Range	An excursion is defined as a pressure drop that is outside the indicator range of 2.0 to 7.0 inches of water column. Excursions trigger an inspection, corrective action, and a reporting requirement.	An excursion is defined as a pressure reading that is outside of the indicator range of 13 to 35 psi. Excursions trigger an inspection, corrective action, and a reporting requirement.
III. Performance Criteria		
A. Data Representativeness	The monitoring system consists of a differential pressure gauge which measures the difference between pressures in the duct immediately upstream of the water spray and at the exit of the scrubber (bottom of the stack). The gauge range is 0 to 20 inches of water column, and the maximum measurement error per the manufacturer's specifications is 2% of the full range.	The monitoring system consists of a pressure gauge located in the spray water header. The gauge range is 0 to 60 psi and the maximum measurement error per the manufacturer's specifications is 2% of the full range.
B. Verification of Operational Status	NA	NA
C. QA/QC Practices and Criteria	The differential pressure reading is compared to a U-tube manometer annually in January to confirm that measurement accuracy is within manufacturer's specifications.	The pressure gauge is rotated annually in January and recalibrated for reuse.
D. Monitoring Frequency	The gauge is read and recorded every two hours.	The gauge is read and recorded every two hours.
Data Collection Procedures	Daily Boiler Log sheets are retained for five years.	Daily Boiler Log sheets are retained for five years.
Averaging Period	NA	NA

09/15/03

Coastal Plywood Company
Daily Boiler Log

Date: _____ Op: 1st _____ 2nd _____ 3rd _____

Control		#1 Boiler											
Range		7 am	9 am	11 am	1 pm	3 pm	5 pm	7 pm	9 pm	11 pm	1 am	3 am	5 am
5 - 15%	O2 Reading												
-2 to +2	Boiler Water Level, in.												

Control		#2 Boiler											
Range		7 am	9 am	11 am	1 pm	3 pm	5 pm	7 pm	9 pm	11 pm	1 am	3 am	5 am
5 - 15%	O2 Reading												
-2 to +2	Boiler Water Level, in.												

Control		#3 Boiler											
Range		7 am	9 am	11 am	1 pm	3 pm	5 pm	7 pm	9 pm	11 pm	1 am	3 am	5 am
5 - 15%	O2 Reading												
-2 to +2	Boiler Water Level, in.												
2.0 - 7.0	Scrubber Pressure Drop, in. H2O												
13 - 35	Scrubber Header Water, psi												

Control		Water/Pump Conditions											
Range		7 am	9 am	11 am	1 pm	3 pm	5 pm	7 pm	9 pm	11 pm	1 am	3 am	5 am
=0	Softened H2O Hardness												
<600	Softened H2O Conductivity												

		7 am			3 pm			11 pm		
=0	Condensate H2O Hardness									
<500	Condensate H2O Conductivity									
2 - 10	Condensate Sulfite, ppm									
		#1 Blr	#2 Blr	#3 Blr	#1 Blr	#2 Blr	#3 Blr	#1 Blr	#2 Blr	#3 Blr
<1100	Boiler Water Alkalinity									
<2400	Boiler Water Conductivity									
30 - 60	Boiler Water Sulfite, ppm									
-16 to +10	Large Flash Tank Level, in.									
400 - 600	Cond Return Pumps, psi									
>150	Cooling Water Pumps, psi									

Notation Of Every Reading That Was Out Of Range And Corrective Action Taken

Time (Summary Only: Write Detailed Explanation in Boiler Op Logbook)

Time	

Table B

Boiler #3 Wet Scrubber Performance Indicators During Annual Stack Tests:

<u>Year</u>	<u>Avg. Steam Flow Rate</u> (Mlbs/hr)	<u>Avg. % O2</u>	<u>PM Conc.</u> (lbs/SCF) x E-06	<u>Calc. Avg. PM Emissions</u> (lbs/MMBTU)	<u>Calc. Heat Input</u> (MMBTUH)	<u>Boiler Thermal Efficiency</u> <u>Calculated</u> <u>Comment</u>	<u>Reported in Annual Stack Test Reports:</u>				
							<u>Heat Input</u> (MMBTUH)	<u>Gas Flow Rate</u> (DSCFM)	<u>Avg. PM Emissions</u> (lbs/MMBTU)	<u>Scrubber Pressure Drop</u> (" H2O)	<u>Water Header Pressure</u> (psi)
1999	52500	11.60	5.11	0.1060	80.3 *	59% Very Low	80.6	27787	0.1058	7-7.5	15
2000	52400	12.10	4.88	0.1071	79.8 *	59% Very Low	79.5	29187	0.1073	7.5	15
2001	56000	10.70	5.49	0.1040	105.5 *	48% Unlikely	105.2	33296	0.1044	7.5	15
2002	28000	11.40	3.27	0.0665	62.6 *	40% Improbable	62.6	21216	0.0665	3.5-4	8.5
2003	16000	12.90	3.89	0.0939	61.1 *	24% Improbable	60.8	24563	0.0943	3-3.5	20
Avg										6	13 1 pump 20 2 pumps

* Calculated using EPA "F" factor for wood = 9240 SCF/MMBTU for wood fuel
 This factor is invalid for Havana's Boiler #3 as is indicated by the above calculated thermal efficiencies, which are unrealistically low

09/15/03

Table C

Boiler #3 Wet Scrubber Data
June 2003

Scrubber Differential:

Avg: 4.6 Max: 7.5 Min: 2.0

Date:	6/1	6/2	6/3	6/4	6/5	6/6	6/7	6/8	6/9	6/10	6/11	6/12	6/13	6/14	6/15	6/16	6/17	6/18	6/19	6/20	6/21	6/22	6/23	6/24	6/25	6/26	6/27	6/28	6/29	6/30
7am	5.0	7.0	4.0	3.5	3.0	3.0	3.5	3.5	3.5	4.5	3.5	3.0	3.0	3.0	3.0	5.5	5.0	5.5		6.5	4.5	4.5	5.0	5.0	5.5	5.0	4.5	4.0	4.5	5.5
9am	7.0	7.0		3.5	3.5	3.5			4.0	4.5	4.0	3.0	3.0	5.0	3.5	4.0		4.5			4.5	4.5	5.0	4.0		5.0	5.0		5.0	4.5
11am	7.0	7.0			3.0		3.0			4.5	4.0	3.5		4.0	4.5	4.5		4.5			4.5	4.5			3.5	5.0	5.0	4.0	4.5	5.5
1pm	7.0	7.0		3.0	3.0	3.5	3.0	3.0	4.0	4.5	3.5	3.5		4.0	5.5	4.0	5.0	4.0		4.5		4.5	5.0	4.0	4.0	4.5	5.0	4.5	6.0	4.0
3pm	7.0	7.0			3.5	3.0				4.5	4.5			4.5						4.0				4.0	4.0			4.5	4.5	5.0
5pm				3.0		3.0	3.0	3.5	4.0	4.5	3.5	3.5		3.0	5.0	4.0	4.0	5.0	4.5	4.5	4.5	4.5	5.0		4.0	4.5	4.5	4.5	4.5	5.0
7pm		7.0	2.0	2.5	3.0	3.0	2.5	4.0	4.5	4.5	3.5	3.0	4.5	3.0	5.5	4.5	4.5	5.0	5.0	5.5	5.0	6.5	4.0	5.5	5.0	4.5	5.5	4.5	5.0	5.5
9pm	6.5	6.5	3.5	3.0	3.0	3.0	3.0	4.0	3.5	4.0	4.5	4.0	4.5	3.5	7.5	5.0	4.5	5.5	5.0	5.5	5.0	6.0	7.0	5.5	5.0	5.0	4.0	4.5	6.5	5.5
11pm	7.0	7.0		3.0	4.0	3.0	3.0	4.0	4.0	4.5	4.5	4.0	5.0	5.5	6.0	4.5	5.5		5.0	4.5	5.5	5.5	7.0	6.0	6.5	5.0	4.0	4.5	5.5	6.0
1am	7.0			3.5	3.0	3.5	4.0	4.0	4.5	4.5	4.0	4.5	5.0	5.5	6.0	5.5	5.0		5.5	4.5	5.0	5.0	6.5	6.0	5.0	5.0	4.0	4.5	5.0	6.0
3am	7.0	5.0		3.5	3.0	3.0	4.0	4.0		4.5	4.0	4.0	5.0	6.5	5.5	5.5			5.5	4.5			6.0	6.0	5.0	4.5	4.0	4.0	6.5	6.0
5am	7.0	5.5		3.0	3.0	3.0	4.0	4.0	5.0	4.5	3.5	4.5	3.5	3.5	5.5	4.0	6.0		4.5	5.0		7.0	5.5	5.5		4.5	4.0	4.5	6.0	

* Scrubber cleaned

Scrubber Inlet Water PSI:

Avg: 30.0 Max: 30.0 Min: 30.0

Date:	6/1	6/2	6/3	6/4	6/5	6/6	6/7	6/8	6/9	6/10	6/11	6/12	6/13	6/14	6/15	6/16	6/17	6/18	6/19	6/20	6/21	6/22	6/23	6/24	6/25	6/26	6/27	6/28	6/29	6/30
7am	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30		30	30	30	30	30	30	30	30	30	30	30
9am	30	30		30	30	30			30	30	30	30	30	30	30	30		30			30	30	30	30			30	30		30
11am	30	30			30		30			30	30	30		30	30	30		30			30	30			30	30	30	30	30	30
1pm	30	30		30	30	30	30	30	30	30	30	30		30	30	30	30	30		30		30	30	30	30	30	30	30	30	30
3pm	30	30			30	30				30	30			30							30				30	30			30	30
5pm				30		30	30	30	30	30	30	30		30	30	30	30	30	30	30	30	30	30		30	30	30	30	30	30
7pm		30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30
9pm	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30
11pm	30	30		30	30	30	30	30	30	30	30	30	30	30	30	30	30		30	30	30	30	30	30	30	30	30	30	30	30
1am	30			30	30	30	30	30	30	30	30	30		30	30	30	30		30	30	30	30	30	30	30	30	30	30	30	30
3am	30	30		30	30	30	30	30		30	30	30	30	30	30	30			30	30			30	30	30	30	30	30	30	30
5am	30	30		30	30	30	30	30	30	30	30	30	30	30	30	30	30		30	30			30	30	30		30	30	30	30

09/15/03

TABLE C ADDENDUM 1 OF 3

Date: 7/24/03 1st Kent/Chuck 2nd _____ 3rd _____

Control Range		7 am	9 am	11 am	1 pm	3 pm	5 pm	7 pm	9 pm	11 pm	1 am	3 am	5 am
7-15%	O Reading	8.8						20.6					
	Was adjustment made?	N						N					
Record	Boiler Water Level	0.1						1.3					

Adjustment made to change O		Control Range		Boiler Water		7 am	3 pm	11 pm
1st		1100 max	Alkalinity					
2nd		2400 max	Conductivity					
3rd		30 / 60	Sulfite					

Control Range		Condensate			Control Range		Condensate		
		7 am	3 pm	11 pm			7 am	3 pm	11 pm
O	Hardness				-16 to 10	Level			
Record	Conductivity				400 - 600	Pump Discharge			
Record	Sulfite				-150	Cooling Pump			

#2 Boiler

Control Range		7 am	9 am	11 am	1 pm	3 pm	5 pm	7 pm	9 pm	11 pm	1 am	3 am	5 am
7-15%	O Reading	8.9	18.3	10.1	10.1	10.3	11.0	12.9	17.1	16.9	17.2	17.2	14.9
	Was adjustment made?	N	N	N	N	N	N	N	N	N	N	N	N
Record	Boiler Water Level	-0.2	0	-0.2	-0.1	0	1.2	0	0	1.2	0	1	2

Adjustment made to change O		Control Range		Boiler Water		7 am	3 pm	11 pm
1st		1100 max	Alkalinity	1040	1380			
2nd		2400 max	Conductivity	2110	2680			
3rd		30 / 60	Sulfite	310	230			

Control Range		Condensate			Control Range		Condensate		
		7 am	3 pm	11 pm			7 am	3 pm	11 pm
O	Hardness	0	0		-16 to 10	Level			
Record	Conductivity	196	46		400 - 600	Pump Discharge			
Record	Sulfite	0.3	0.1		+150	Cooling Pump			

#3 Boiler

Control Range		7 am	9 am	11 am	1 pm	3 pm	5 pm	7 pm	9 pm	11 pm	1 am	3 am	5 am
0-1.0	Hardness	210	210	210	210	210	210	210	210	210	210	210	210
600	Conductivity	304	306	308	305	304	309	304	307	304	308	302	306
7-15%	O Reading												
	Was adjustment made?												
5-3	Scrubber Differential												
7-18	Scrubber inlet water PSI												
Record	Laidig bin level	30+	30+	30+	30+	30+	30+	30+	30+	30+	30+	30+	30+
Record	Boiler water level												

Control Range		Feed Water			Control Range		Boiler Water		
		7 am	3 pm	11 pm			7 am	3 pm	11 pm
O	Hardness				1100 max	Alkalinity			
Record	Conductivity				2400 max	Conductivity			
Record	Sulfite				30 / 60	Sulfite			

Adjustment made to change O

1st		Silo Magnehelic Reading		Ash shed % full
2nd		Pond Level		Trailer on line
3rd				

Fire ext #	Condition	7 am	3 pm	11 pm	Multicyclones	Condition	7 am	3 pm	11 pm
68	Satisfactory or Unsaf				#1	Clear or plugged			
69	Satisfactory or Unsaf				#2	Clear or plugged			
70	Satisfactory or Unsaf				#3	Clear or plugged			
71	Satisfactory or Unsaf				X-over	Open or closed			
Control	Satisfactory or Unsaf				vent	Open or closed			
930	Satisfactory or Unsaf				vat live steam	1, 2, 3, 5			

Observations and Comments

0630 #3 Boiler Shut Down - Cleaned Scrubbers
 0840 #1 Boiler Shut Down
 #2 Boiler: High Conductivity & Alkalinity Due to Low Steam Flow

Date: 7/27/03 #1 Boiler
 1st CLARK 2nd _____

TABLE C ADDENDUM 2 OF 3
 3rd MALCO

Control Range		7 am	9 am	11 am	1 pm	3 pm	5 pm	7 pm	9 pm	11 pm	1 am	3 am	5 am
7-15%	O Reading	4.6	7.7	6.3	5.3	10.0	5.4	3.1	4.7	6.5	OFF	OFF	OFF
	Was adjustment made?		N	N	N	N	N	N	N	N	L	L	L
Record	Boiler Water Level	.8	0	-1	0	-1.1	.2	-1	0	0			

Control Range		Boiler Water		7 am	3 pm	11 pm
1st	Adjustment made to change O	1100 max	Alkalinity	490		50
2nd		2400 max	Conductivity	1082		1247
3rd		30/60	Sulfite	1.8		5.0

Control Range		Control Range		Condensate		7 am	3 pm	11 pm
O	Hardness	-16 to 10	Level					
Record	Conductivity	400 - 600	Pump Discharge					
Record	Sulfite	+150	Cooling Pump					

#2 Boiler

Control Range		7 am	9 am	11 am	1 pm	3 pm	5 pm	7 pm	9 pm	11 pm	1 am	3 am	5 am
7-15%	O Reading	6.4	5.2	5.1	5.5	6.9	7.7	4.5	5.2	6.6	OFF	OFF	OFF
	Was adjustment made?	N	N	N	N	N	N	N	N	N	L	L	L
Record	Boiler Water Level	1.2	2	-1	0	-1.3	.1	.1	3	4			

Control Range		Boiler Water		7 am	3 pm	11 pm
1st	Adjustment made to change O	1100 max	Alkalinity	640		760
2nd		2400 max	Conductivity	1271		1627
3rd		30/60	Sulfite	.7		3.1

Control Range		Control Range		Condensate		7 am	3 pm	11 pm
O	Hardness	-16 to 10	Level					
Record	Conductivity	400 - 600	Pump Discharge					
Record	Sulfite	+150	Cooling Pump					

#3 Boiler → DOWN 7/25 & 7/26

Control Range		7 am	9 am	11 am	1 pm	3 pm	5 pm	7 pm	9 pm	11 pm	1 am	3 am	5 am
0-10	Hardness	20	30	20	20	20	20	2/0	2/0	2/0	2/0	2/0	2/0
500	Conductivity	306	306	305	305	305	305	304	310	310	310	307	314
7-15%	O Reading	11.9	15.3	13.1	14.9	15.8	17.9	7.0	17.9	17.5	OFF	OFF	OFF
	Was adjustment made?	N	N	N	N	N	N	N	N	N	L	L	L
3-3	Scrubber Differential	2	2	2.5	2	2	2.5	1.5	2	2	L	L	L
7-18	Scrubber inlet water PSI	25	25	25	25	25	25	25	25	25	L	L	L
Record	Laidig bin level	30+	30+	30+	30+	30+	30+	30+	30+	30+	30+	30+	30+
Record	Boiler water level	-1	-1	-1	-1	-1	.9	.5	.2	.1	OFF	OFF	OFF

Control Range		Control Range		Boiler Water		7 am	3 pm	11 pm
O	Hardness	1100 max	Alkalinity	230		250		
Record	Conductivity	2400 max	Conductivity	572		964		
Record	Sulfite	30/60	Sulfite	.1		1.2		

Adjustment made to change O		Silo Magnehelic Reading		Ash shed % Ash	
1st					
2nd		Pond Level			Trailer on line
3rd					

Fire ext #	Condition	7 am	3 pm	11 pm	Multicyclones	Condition	7 am	3 pm	11 pm
68	Satisfactory or Unsat				#1	Clear or plugged			
69	Satisfactory or Unsat				#2	Clear or plugged			
70	Satisfactory or Unsat				#3	Clear or plugged			
71	Satisfactory or Unsat				X-over	Open or closed			
Control	Satisfactory or Unsat				vent	Open or closed			
930	Satisfactory or Unsat				vat live steam	1, 2, 3, HT			

Observations and Comments

TABLE C ADDENDUM 3 OF 3

Coastal Plywood Company													
Daily Boiler Log													
Date: <u>7/31/03</u>			Op: 1st <u>CLARK</u>			2nd _____			3rd <u>MANCO</u>				
#1 Boiler													
Control Range		7 am	9 am	11 am	1 pm	3 pm	5 pm	7 pm	9 pm	11 pm	1 am	3 am	5 am
5 - 15%	O2 Reading	8.5	6.9	6.8	7.2	7.8	6.8	7.6	7.1	7.2	15.0	7.3	7.3
-2 to +2	Boiler Water Level, in.	.4	.3	.1	0	0	-.5	.1	0	.4	1.2	.4	.2
#2 Boiler													
Control Range		7 am	9 am	11 am	1 pm	3 pm	5 pm	7 pm	9 pm	11 pm	1 am	3 am	5 am
5 - 15%	O2 Reading	9.1	5.3	5.4	5.6	6.8	6.1	6.1	6.7	7.7	5.1	5.7	8.0
-2 to +2	Boiler Water Level, in.	1	0	.1	0	.1	-.2	.1	1	3	2	1	.2
#3 Boiler — DOWN 7/28 - 7/30													
Control Range		7 am	9 am	11 am	1 pm	3 pm	5 pm	7 pm	9 pm	11 pm	1 am	3 am	5 am
5 - 15%	O2 Reading	9.0	14.4	14.5	15.0	12.9	13.5	14.4	14.6	14.1	9.6	14.9	14.1
-2 to +2	Boiler Water Level, in.	-.8	-.1	.4	0	0	0	.2	0	.4	.2	.2	.4
1.5 - 8.0	Scrubber Pressure Drop, in. H2O	2.5	2	2	1.5	3	3	2.5	2.5	3	2.5	3	3
10 - 40	Scrubber Header Water, psi	25	25	25	25	25	25	25	25	25	25	25	24
Water/Pump Conditions													
Control Range		7 am	9 am	11 am	1 pm	3 pm	5 pm	7 pm	9 pm	11 pm	1 am	3 am	5 am
=0	Softened H2O Hardness	10	10	10	10	10	10	10	10	10	10	10	10
<600	Softened H2O Conductivity	306	306	304	304	304	304	305	304	308	309	310	310
Control Range		7 am				3 pm				11 pm			
=0	Condensate H2O Hardness	0				0				0			
<500	Condensate H2O Conductivity	60				130				90			
2 - 10	Condensate Sulfite, ppm	2				4				4			
Control Range		#1 Blr	#2 Blr	#3 Blr		#1 Blr	#2 Blr	#3 Blr		#1 Blr	#2 Blr	#3 Blr	
<1100	Boiler Water Alkalinity	450	1100	350		610	900	400		440	780	450	
<2400	Boiler Water Conductivity	1017	2210	803		1531	1875	1201		1204	1513	1020	
30 - 60	Boiler Water Sulfite, ppm	38	18	24		40	30	32		20	30	30	
-16 to +10	Large Flash Tank Level, in.	6.5				1.4				7.0			
400 - 600	Cond Return Pumps, psi	450				420				450			
>150	Cooling Water Pumps, psi	160				160				160			
Notation Of Every Reading That Was Out Of Range And Corrective Action Taken													
(Summary Only: Write Detailed Explanation in Boiler Op Logbook)													
Time													
7:00 A.M.	LOW SO2 READINGS DUE TO COLD PLANT START UP.												

--ATTENTION MAIL ROOM--

PLEASE ROUTE THIS
DOCUMENT TO:

RECEIVED
AUG 17 2003
DARM

Matthew J. ...
Name of Individual/Office
AIR REGULATION

5500
Mail Station Number

KW
8/4/03



Hardwood Lumber
Pine Lumber & Plywood
Treated Wood Products

Corporate Headquarters
P.O. Box 829
Weldon, North Carolina 27890
Telephone: (919) 536-4211
Fax: (919) 536-3102
Please Respond To:

July 28, 2003

Mr. Kevin M. White
Air Permitting Supervisor
Department of Environmental Protection
Northwest District
160 Governmental Center
Pensacola, FL 32501-5794

RECEIVED
AUG 01 2003
NORTHWEST FLORIDA
DEP

(850) 595-8364 x1226
(850) 595-4417 fax
kevin.m.white@dep.state.fl.us


Subject: COASTAL LUMBER COMPANY
Request for Additional Information – CAM Rule
Renewal Application, File No. 039 0009– 005-AV

Dear Mr. White:

In your May 9, 2003 letter you said that, based on the information provided in the company's April 14, 2003 Title V Renewal Application, the No. 3 McBurney plywood plant wood waste boiler might be subject to the US EPA's new Compliance Assurance Monitoring rule. You ask us to provide additional information that shows that the unit is not subject to that rule or submit a compliance monitoring plan for the unit.

We have determined that while the unit would not be subject to the EPA rule as originally proposed, the unit is subject to the rule as finally adopted. The attachment to this letter "Compliance Assurance Monitoring, Scrubber for PM Control, Boiler 3, Coastal Lumber Company, Havana, FL," provided the required compliance monitoring plan and supporting data for the No. 3 Boiler.

The Responsible Official and Professional Engineer Certification forms, which are attached to this letter, apply to the April 14, 2003 Title V Renewal Application, as amended by this submittal. Please contact me or Mr. Smallwood, if you have any questions about the proposed CAM plan.

Sincerely,

Thomson W. Rockwood
General Manager
Florida Division

c: Stephen Smallwood, PE
Air Quality Services

AQS: C:\AQServices\Projects\904_Clc - ACTIVE\05 - Title V Permit Renewal\CAM Rule Info 0728 03.doc

ATTACHMENTS

- **COMPLIANCE ASSURANCE MONITORING
SCRUBBER FOR PM CONTROL
BOILER 3
COASTAL LUMBER COMPANY
HAVANA, FL**

(Including Tables A, B, C)

- **RESPONSIBLE OFFICIAL'S CERTIFICATION**

- **PROFESSIONAL ENGINEER'S CERTIFICATION**

COMPLIANCE ASSURANCE MONITORING
SCRUBBER FOR PM CONTROL
BOILER 3
COASTAL LUMBER COMPANY
HAVANA, FL

I. Background

A. Emissions Unit

Description:	Wood-Waste Fired Boiler
Identification:	Boiler 3 (McBurney)
Facility:	Coastal Lumber Company Havana, FL Facility ID No.: 0390009

B. Applicable Regulation, Emission Limit, and Monitoring Requirements

Regulation:	FDER 17-2.03 FAC BACT (1979)
Emission Limit:	
Particulate Matter:	0.15 lb/MMBTU heat input or 9.2 lb/hr total PM (61.1 MMBTU/Hr maximum hourly heat input)
Monitoring Requirements:	Pressure drop across wet scrubber, water spray header pressure

C. Control Technology:

Wet scrubber

II. Monitoring Approach

The key elements of the monitoring approach are presented in Table A.

MONITORING APPROACH JUSTIFICATION

I. Background

The pollutant-specific emission unit is a wood-waste fired boiler that produces process steam that is used to manufacture softwood plywood. The exhaust from the boiler is ducted through a wet scrubber. In the scrubber, emissions are first mixed with water spray, which attracts and entraps particulate matter, and then the water (and entrapped particulate) is separated mechanically from the gas stream by a section of baffles. The pressure drop between the inlet of the water spray section and the scrubber discharge indicates the level of effectiveness of the scrubber at any point in time. This pressure differential will be monitored to ensure that the scrubber is functioning normally. The water pressure in the water spray header is also an indicator of whether or not the scrubber is working properly. This water pressure will also be monitored to ensure that the scrubber is working properly.

II. Rationale for Selection of Performance Indicators

Pressure drop across the scrubber is recommended as the primary scrubber performance indicator because it confirms whether or not the gas flow through the scrubber is normal. After routine maintenance cleaning, the scrubber pressure drop is low. Over time, it is normal for the pressure drop to rise as the water spray nozzles become dirty, the mixing plates become dirty, and/or the separation baffle section fins become dirty. Cleaning spray nozzles in the system are manually activated periodically to clean the system while it is running. However, when the pressure drop exceeds certain levels and the cleaning spray system is no longer effective, the scrubber is shut down, opened up, and cleaned manually. On the other hand, a very low pressure drop indicates that there is a problem inside the scrubber (such as a baffle section having fallen out) and the scrubber is shut down and repaired.

Water pressure at the water spray nozzle header was chosen as a secondary scrubber performance indicator because it confirms whether or not sufficient water is being supplied to the spray nozzles to enable the scrubber to function normally. Low pressure indicates a water supply problem or that a spray head has come off. High water pressure indicates that the nozzles are becoming fouled and need to be cleaned. This indicator is not as accurate as pressure drop in predicting whether or not the scrubber is functioning normally, but it helps confirm the indication of the pressure drop.

The boiler does not operate if the scrubber is shut down.

III. Rationale for Selection of Indicator Ranges

The selected indicator range for the scrubber pressure drop is 1.5 to 8.0 inches of water column. The selected indicator range for water spray nozzle header pressure 10 to 40 psi.

The indicator range for the scrubber pressure drop is large because the boiler load varies (Boiler 3 is the "swing" boiler of Havana's three boilers; the other two boilers normally run at 100% of capacity while Boiler 3 runs only hard enough to make whatever steam is needed in addition to the other two). A pressure differential less than 1.5 indicates that there is a mechanical problem with the scrubber internals. A pressure differential over 8.0 indicates that the scrubber is beginning to get dirty and needs to be cleaned.

The indicator range for the water spray nozzle header is large because two pumps normally feed the system. One pump is sufficient, but a second pump always runs also to ensure adequate water supply. When only one pump is running and pressure drops below 10 psi, something is probably wrong with the pump and the scrubber water supply is probably insufficient. If both pumps are operating normally, header pressure is normally around 30 psi. A header pressure in excess of 40 psi indicates that the nozzles are getting dirty and need to be cleaned.

When an excursion occurs, corrective action will be initiated, beginning with an evaluation of the occurrence to determine the action required to correct the situation. All excursions will be documented and reported.

The indicator ranges for the scrubber pressure drop and water spray nozzle header pressure are based on normal scrubber operation and performance test results. During annual source testing from 1999 through 2003, the scrubber was operating under normal conditions and the average scrubber pressure drop was 6.0 and the average water pressure was 13 psi with one pump and 20 psi with two (the second pump was added in 2002). See Table B.

Table C shows scrubber pressure drop and water pressure for the month of June, 2003. When the boiler was operating, average hourly scrubber pressure drop was 4.6 inches of H₂O and ranged from 2.0 inches of H₂O (immediately after normal cleaning on 6/3) to 7.5 inches of H₂O (immediately before cleaning). Average water pressure was 30 psi (indicating that both pumps ran normally all month and water supply to the scrubber was adequate). Table C data shows that the scrubber operated within the proposed indicator ranges during the month of June, which indicates that the scrubber probably operated properly.

Coastal Plywood Company
Daily Boiler Log

Date: _____ Op: 1st _____ 2nd _____ 3rd _____

Control Range		#1 Boiler											
		7 am	9 am	11 am	1 pm	3 pm	5 pm	7 pm	9 pm	11 pm	1 am	3 am	5 am
5 - 15%	O2 Reading												
-2 to +2	Boiler Water Level, in.												

Control Range		#2 Boiler											
		7 am	9 am	11 am	1 pm	3 pm	5 pm	7 pm	9 pm	11 pm	1 am	3 am	5 am
5 - 15%	O2 Reading												
-2 to +2	Boiler Water Level, in.												

Control Range		#3 Boiler											
		7 am	9 am	11 am	1 pm	3 pm	5 pm	7 pm	9 pm	11 pm	1 am	3 am	5 am
5 - 15%	O2 Reading												
-2 to +2	Boiler Water Level, in.												
1.5 - 8.0	Scrubber Pressure Drop, in. H2O												
10 - 40	Scrubber Header Water, psi												

Control Range		Water/Pump Conditions											
		7 am	9 am	11 am	1 pm	3 pm	5 pm	7 pm	9 pm	11 pm	1 am	3 am	5 am
=0	Softened H2O Hardness												
<600	Softened H2O Conductivity												

		7 am				3 pm				11 pm
=0	Condensate H2O Hardness									
<500	Condensate H2O Conductivity									
2 - 10	Condensate Sulfite, ppm									
		#1 Blr	#2 Blr	#3 Blr				#1 Blr	#2 Blr	#3 Blr
<1100	Boiler Water Alkalinity									
<2400	Boiler Water Conductivity									
30 - 60	Boiler Water Sulfite, ppm									
-16 to +10	Large Flash Tank Level, in.									
400 - 600	Cond Return Pumps, psi									
>150	Cooling Water Pumps, psi									

Notation Of Every Reading That Was Out Of Range And Corrective Action Taken
(Summary Only: Write Detailed Explanation in Boiler Op Logbook)

Time	

Table A

Boiler #3 Wet Scrubber Performance Monitoring Approach

	Indicator No.1	Indicator No.2
I. Indicator	Pressure drop across wet scrubber	Water spray header pressure
Measurement Approach	The pressure drop is continuously displayed on a Magnahelic pressure differential gauge in the boiler operator's console and is read and recorded every two hours on the daily boiler log sheet by the boiler operator on duty.	The pressure in the water spray header is measured with a pressure gauge located in the water spray header downstream of the two pumps. The pumps are inspected and the gauge is read and recorded every two hours on the daily boiler log sheet by the boiler operator on duty.
II. Indicator Range	An excursion is defined as a pressure drop that is outside the indicator range of 1.5 to 8.0 inches of water column. Excursions trigger an inspection, corrective action, and a reporting requirement.	An excursion is defined as a pressure reading that is outside of the indicator range of 10 to 40 psi. Excursions trigger an inspection, corrective action, and a reporting requirement.
III. Performance Criteria		
A. Data Representativeness	The monitoring system consists of a differential pressure gauge which measures the difference between pressures in the duct immediately upstream of the water spray and at the exit of the scrubber (bottom of the stack). The gauge range is 0 to 20 inches of water column, and the maximum measurement error per the manufacturer's specifications is 2% of the full range.	The monitoring system consists of a pressure gauge located in the spray water header. The gauge range is 0 to 60 psi and the maximum measurement error per the manufacturer's specifications is 2% of the full range.
B. Verification of Operational Status	NA	NA
C. QA/QC Practices and Criteria	The differential pressure reading is compared to a U-tube manometer annually in January to confirm that measurement accuracy is within manufacturer's specifications.	The pressure gauge is rotated annually in January and recalibrated for reuse.
D. Monitoring Frequency	The gauge is read and recorded every two hours.	The gauge is read and recorded every two hours.
Data Collection Procedures	Daily boiler log sheets are retained for two years.	Daily boiler log sheets are retained for two years.
Averaging Period	NA	NA

Table B

Boiler #3 Wet Scrubber Performance Indicators During Annual Stack Tests:

Year	Avg. Steam Flow Rate (Mlbs/hr)	Avg. % O2	PM Conc. (lbs/SCF) x E-06	Calc. Avg. PM Emissions (lbs/MMBTU)	Calc. Heat Input (MMBTUH)	Calc. Boiler Thermal Efficiency	Comment	Reported in Annual Stack Test Reports:				
								Heat Input (MMBTUH)	Gas Flow Rate (DSCFM)	Avg. PM Emissions (lbs/MMBTU)	Scrubber Pressure Drop (" H2O)	Water Header Pressure (psi)
1999	52500	11.60	5.11	0.1060	80.3 *	59%	Very Low	80.6	27787	0.1058	7-7.5	15
2000	52400	12.10	4.88	0.1071	79.8 *	59%	Very Low	79.5	29187	0.1073	7.5	15
2001	56000	10.70	5.49	0.1040	105.5 *	48%	Unlikely	105.2	33296	0.1044	7.5	15
2002	28000	11.40	3.27	0.0665	62.6 *	40%	Improbable	62.6	21216	0.0665	3.5-4	8.5
2003	16000	12.90	3.89	0.0939	61.1 *	24%	Improbable	60.8	24563	0.0943	3-3.5	20
Avg											6	13 1 pump 20 2 pumps

Calculated using EPA "F" factor for wood: 9240 SCF/MMBTU for wood fuel
 This factor is invalid for Havana's Boiler #3 as is indicated by the calculated thermal efficiencies, which are unrealistically low

Thomson W. Rockwood, PE Coastal Lumber 0728 03

Table C

**Boiler #3 Wet Scrubber Data
June 2003**

Scrubber Differential:

Avg: 4.6 Max: 7.5 Min: 2.0

Date:	6/1	6/2	6/3	6/4	6/5	6/6	6/7	6/8	6/9	6/10	6/11	6/12	6/13	6/14	6/15	6/16	6/17	6/18	6/19	6/20	6/21	6/22	6/23	6/24	6/25	6/26	6/27	6/28	6/29	6/30
7am	5.0	7.0	4.0	3.5	3.0	3.0	3.5	3.5	3.5	4.5	3.5	3.0	3.0	3.0	3.0	5.5	5.0	5.5		6.5	4.5	4.5	5.0	5.0	5.5	5.0	4.5	4.0	4.5	5.5
9am	7.0	7.0		3.5	3.5	3.5			4.0	4.5	4.0	3.0	3.0	5.0	3.5	4.0			4.5		4.5	4.5	5.0	4.0		5.0	5.0		5.0	4.5
11am	7.0	7.0			3.0		3.0			4.5	4.0	3.5		4.0	4.5	4.5			4.5		4.5	4.5			3.5	5.0	5.0	4.0	4.5	5.5
1pm	7.0	7.0		3.0	3.0	3.5	3.5	3.0	4.0	4.5	3.5	3.5		4.0	5.5	4.0	5.0	4.0		4.5		4.5	5.0	4.0	4.0	4.5	5.0	4.5	6.0	4.0
3pm	7.0	7.0			3.5	3.0				4.5	4.5			4.5						4.0				4.0	4.0			4.5	4.5	5.0
5pm				3.0		3.0	3.0	3.5	4.0	4.5	3.5	3.5		3.0	5.0	4.0	4.0	5.0	4.5	4.5	4.5	4.5	5.0		4.0	4.5	4.5	4.5	4.5	5.0
7pm		7.0	2.0	2.5	3.0	3.0	2.5	4.0	4.5	4.5	3.5	3.0	4.5	3.0	5.5	4.5	4.5	5.0	5.0	5.5	5.0	6.5	4.0	5.5	5.0	4.5	5.5	4.5	5.0	5.5
9pm	6.5	6.5	3.5	3.0	3.0	3.0	3.0	4.0	3.5	4.0	4.5	4.0	4.5	3.5	7.5	5.0	4.5	5.5	5.0	5.5	5.0	6.0	7.0	5.5	5.0	5.0	4.0	4.5	6.5	5.5
11pm	7.0	7.0		3.0	4.0	3.0	3.0	4.0	4.0	4.5	4.5	4.0	5.0	5.5	6.0	4.5	5.5		5.0	4.5	5.5	5.5	7.0	6.0	6.5	5.0	4.0	4.5	5.5	6.0
1am	7.0			3.5	3.0	3.5	4.0	4.0	4.5	4.5	4.0	4.5	5.0	5.5	6.0	5.5	5.0		5.5	4.5	5.0	5.0	6.5	6.0	5.0	5.0	4.0	4.5	5.0	6.0
3am	7.0	5.0		3.5	3.0	3.0	4.0	4.0		4.5	4.0	4.0	5.0	6.5	5.5	5.5			5.5	4.5			6.0	6.0	5.0	4.5	4.0	4.0	6.5	6.0
5am	7.0	5.5		3.0	3.0	3.0	4.0	4.0	5.0	4.5	3.5	4.5	3.5	3.5	5.5	4.0	6.0		4.5	5.0		7.0	5.5	5.5		4.5	4.0	4.5	6.0	

* Scrubber cleaned

Scrubber Inlet Water PSI:

Avg: 30.0 Max: 30.0 Min: 30.0

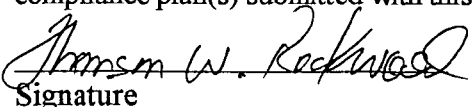
Date:	6/1	6/2	6/3	6/4	6/5	6/6	6/7	6/8	6/9	6/10	6/11	6/12	6/13	6/14	6/15	6/16	6/17	6/18	6/19	6/20	6/21	6/22	6/23	6/24	6/25	6/26	6/27	6/28	6/29	6/30
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9am	30	30		30	30	30			30	30	30	30	30	30	30	30			30		30	30	30	30		30	30		30	30
11am	30	30			30		30			30	30	30		30	30	30			30		30	30			30	30	30	30	30	30
1pm	30	30		30	30	30	30	30	30	30	30	30		30	30	30	30	30		30		30	30	30	30	30	30	30	30	30
3pm	30	30			30	30				30	30			30						30				30	30			30	30	30
5pm				30		30	30	30	30	30	30	30		30	30	30	30	30	30	30	30	30	30		30	30	30	30	30	30
7pm		30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30
9pm	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30
11pm	30	30		30	30	30	30	30	30	30	30	30	30	30	30	30	30			30	30	30	30	30	30	30	30	30	30	30
1am	30			30	30	30	30	30	30	30	30		30	30	30	30	30			30	30	30	30	30	30	30	30	30	30	30
3am	30	30		30	30	30	30	30		30	30	30	30	30	30	30			30	30			30	30	30	30	30	30	30	30
5am	30	30		30	30	30	30	30	30	30	30	30	30	30	30	30	30			30	30		30	30	30		30	30	30	30

■ RESPONSIBLE OFFICIAL'S CERTIFICATION

APPLICATION INFORMATION

Application Responsible Official Certification

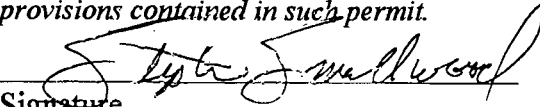
Complete if applying for an initial/revised/renewal Title V permit or concurrent processing of an air construction permit and a revised/renewal Title V permit. If there are multiple responsible officials, the "application responsible official" need not be the "primary responsible official."

1. Application Responsible Official Name: Thomson W. Rockwood, General Manager, Florida Division
2. Application Responsible Official Qualification (Check one or more of the following options, as applicable): <input checked="" type="checkbox"/> For a corporation, the president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation, or a duly authorized representative of such person if the representative is responsible for the overall operation of one or more manufacturing, production, or operating facilities applying for or subject to a permit under Chapter 62-213, F.A.C. <input type="checkbox"/> For a partnership or sole proprietorship, a general partner or the proprietor, respectively. <input type="checkbox"/> For a municipality, county, state, federal, or other public agency, either a principal executive officer or ranking elected official. <input type="checkbox"/> The designated representative at an Acid Rain source.
3. Application Responsible Official Mailing Address... Organization/Firm: Coastal Lumber Company Street Address: Post Office Box 1128, Highway 27 North City: Havana State: FL Zip Code: 32333
4. Application Responsible Official Telephone Numbers... Telephone: (850) 539-6432 ext.129 Fax: (850) 539-6799
5. Application Responsible Official Email Address: tomrockwood@msn.com
6. Application Responsible Official Certification: <p>I, the undersigned, am a responsible official of the Title V source addressed in this air permit application. I hereby certify, based on information and belief formed after reasonable inquiry, that the statements made in this application are true, accurate and complete and that, to the best of my knowledge, any estimates of emissions reported in this application are based upon reasonable techniques for calculating emissions. The air pollutant emissions units and air pollution control equipment described in this application will be operated and maintained so as to comply with all applicable standards for control of air pollutant emissions found in the statutes of the State of Florida and rules of the Department of Environmental Protection and revisions thereof and all other applicable requirements identified in this application to which the Title V source is subject. I understand that a permit, if granted by the department, cannot be transferred without authorization from the department, and I will promptly notify the department upon sale or legal transfer of the facility or any permitted emissions unit. Finally, I certify that the facility and each emissions unit are in compliance with all applicable requirements to which they are subject, except as identified in compliance plan(s) submitted with this application.</p> <p> Signature</p> <p><u>7/28/03</u> Date</p>

■ **PROFESSIONAL ENGINEER'S CERTIFICATION**

APPLICATION INFORMATION

Professional Engineer Certification

1. Professional Engineer Name: Stephen Smallwood, PE Registration Number: 26 630
2. Professional Engineer Mailing Address... Organization/Firm: Air Quality Services Street Address: 1640 Eagles Landing, Unit 103 City: Tallahassee State: FL Zip Code: 32308-1560
3. Professional Engineer Telephone Numbers... Telephone: (850) 385-0002 ext. Fax: (850) 385-8715
4. Professional Engineer Email Address: ssm97@comcast
5. Professional Engineer Statement: <i>I, the undersigned, hereby certify, except as particularly noted herein*, that:</i> <i>(1) To the best of my knowledge, there is reasonable assurance that the air pollutant emissions unit(s) and the air pollution control equipment described in this application for air permit, when properly operated and maintained, will comply with all applicable standards for control of air pollutant emissions found in the Florida Statutes and rules of the Department of Environmental Protection; and</i> <i>(2) To the best of my knowledge, any emission estimates reported or relied on in this application are true, accurate, and complete and are either based upon reasonable techniques available for calculating emissions or, for emission estimates of hazardous air pollutants not regulated for an emissions unit addressed in this application, based solely upon the materials, information and calculations submitted with this application.</i> <i>(3) If the purpose of this application is to obtain a Title V air operation permit (check here <input checked="" type="checkbox"/>, if so), I further certify that each emissions unit described in this application for air permit, when properly operated and maintained, will comply with the applicable requirements identified in this application to which the unit is subject, except those emissions units for which a compliance plan and schedule is submitted with this application.</i> <i>(4) If the purpose of this application is to obtain an air construction permit (check here <input type="checkbox"/>, if so) or concurrently process and obtain an air construction permit and a Title V air operation permit revision or renewal for one or more proposed new or modified emissions units (check here <input type="checkbox"/>, if so), I further certify that the engineering features of each such emissions unit described in this application have been designed or examined by me or individuals under my direct supervision and found to be in conformity with sound engineering principles applicable to the control of emissions of the air pollutants characterized in this application.</i> <i>(5) If the purpose of this application is to obtain an initial air operation permit or operation permit revision or renewal for one or more newly constructed or modified emissions units (check here <input type="checkbox"/>, if so), I further certify that, with the exception of any changes detailed as part of this application, each such emissions unit has been constructed or modified in substantial accordance with the information given in the corresponding application for air construction permit and with all provisions contained in such permit.</i> Signature  Date <u>July 30, 2003</u> (seal) <i>Control Number FS Renewal/ App</i>

* Attach any exception to certification statement - None.



Hardwood Lumber
Pine Lumber & Plywood
Treated Wood Products

Corporate Headquarters
P.O. Box 829
Weldon, North Carolina 27890
Telephone: (919) 536-4211
Fax: (919) 536-3102

Please Respond To:

July 28, 2003

Mr. Kevin M. White
Air Permitting Supervisor
Department of Environmental Protection
Northwest District
160 Governmental Center
Pensacola, FL 32501-5794

(850) 595-8364 x1226
(850) 595-4417 fax
kevin.m.white@dep.state.fl.us

Subject: COASTAL LUMBER COMPANY
Request for Additional Information – CAM Rule
Renewal Application, File No. 039 0009– 005-AV

Dear Mr. White:

In your May 9, 2003 letter you said that, based on the information provided in the company's April 14, 2003 Title V Renewal Application, the No. 3 McBurney plywood plant wood waste boiler might be subject to the US EPA's new Compliance Assurance Monitoring rule. You ask us to provide additional information that shows that the unit is not subject to that rule or submit a compliance monitoring plan for the unit.

We have determined that while the unit would not be subject to the EPA rule as originally proposed, the unit is subject to the rule as finally adopted. The attachment to this letter "Compliance Assurance Monitoring, Scrubber for PM Control, Boiler 3, Coastal Lumber Company, Havana, FL," provided the required compliance monitoring plan and supporting data for the No. 3 Boiler.

The Responsible Official and Professional Engineer Certification forms, which are attached to this letter, apply to the April 14, 2003 Title V Renewal Application, as amended by this submittal. Please contact me or Mr. Smallwood, if you have any questions about the proposed CAM plan.

Sincerely,

Thomson W. Rockwood
General Manager
Florida Division

c: Stephen Smallwood, PE
Air Quality Services

AQS: C:\AQServices\Projects\904_Clc - ACTIVE\05 - Title V Permit Renewal\CAM Rule Info 0728 03.doc

ATTACHMENTS

- **COMPLIANCE ASSURANCE MONITORING
SCRUBBER FOR PM CONTROL
BOILER 3
COASTAL LUMBER COMPANY
HAVANA, FL**

(Including Tables A, B, C)

- **RESPONSIBLE OFFICIAL'S CERTIFICATION**

- **PROFESSIONAL ENGINEER'S CERTIFICATION**

COMPLIANCE ASSURANCE MONITORING
SCRUBBER FOR PM CONTROL
BOILER 3
COASTAL LUMBER COMPANY
HAVANA, FL

I. Background

A. Emissions Unit

Description:	Wood-Waste Fired Boiler
Identification:	Boiler 3 (McBurney)
Facility:	Coastal Lumber Company Havana, FL Facility ID No.: 0390009

B. Applicable Regulation, Emission Limit, and Monitoring Requirements

Regulation:	FDER 17-2.03 FAC BACT (1979)
Emission Limit:	
Particulate Matter:	0.15 lb/MMBTU heat input or 9.2 lb/hr total PM (61.1 MMBTU/Hr maximum hourly heat input) <i>40-378Y</i>
Monitoring Requirements:	Pressure drop across wet scrubber, water spray header pressure

C. Control Technology:

Wet scrubber

II. Monitoring Approach

The key elements of the monitoring approach are presented in Table A.

MONITORING APPROACH JUSTIFICATION

I. Background

The pollutant-specific emission unit is a wood-waste fired boiler that produces process steam that is used to manufacture softwood plywood. The exhaust from the boiler is ducted through a wet scrubber. In the scrubber, emissions are first mixed with water spray, which attracts and entraps particulate matter, and then the water (and entrapped particulate) is separated mechanically from the gas stream by a section of baffles. The pressure drop between the inlet of the water spray section and the scrubber discharge indicates the level of effectiveness of the scrubber at any point in time. This pressure differential will be monitored to ensure that the scrubber is functioning normally. The water pressure in the water spray header is also an indicator of whether or not the scrubber is working properly. This water pressure will also be monitored to ensure that the scrubber is working properly.

II. Rationale for Selection of Performance Indicators

Pressure drop across the scrubber is recommended as the primary scrubber performance indicator because it confirms whether or not the gas flow through the scrubber is normal. After routine maintenance cleaning, the scrubber pressure drop is low. Over time, it is normal for the pressure drop to rise as the water spray nozzles become dirty, the mixing plates become dirty, and/or the separation baffle section fins become dirty. Cleaning spray nozzles in the system are manually activated periodically to clean the system while it is running. However, when the pressure drop exceeds certain levels and the cleaning spray system is no longer effective, the scrubber is shut down, opened up, and cleaned manually. On the other hand, a very low pressure drop indicates that there is a problem inside the scrubber (such as a baffle section having fallen out) and the scrubber is shut down and repaired. ✓

Water pressure at the water spray nozzle header was chosen as a secondary scrubber performance indicator because it confirms whether or not sufficient water is being supplied to the spray nozzles to enable the scrubber to function normally. Low pressure indicates a water supply problem or that a spray head has come off. High water pressure indicates that the nozzles are becoming fouled and need to be cleaned. This indicator is not as accurate as pressure drop in predicting whether or not the scrubber is functioning normally, but it helps confirm the indication of the pressure drop. ✓

The boiler does not operate if the scrubber is shut down. *good*

III. Rationale for Selection of Indicator Ranges

The selected indicator range for the scrubber pressure drop is 1.5 to 8.0 inches of water column. The selected indicator range for water spray nozzle header pressure 10 to 40 psi.

The indicator range for the scrubber pressure drop is large because the boiler load varies (Boiler 3 is the "swing" boiler of Havana's three boilers; the other two boilers normally run at 100% of capacity while Boiler 3 runs only hard enough to make whatever steam is needed in addition to the other two). A pressure differential less than 1.5 indicates that there is a mechanical problem with the scrubber internals. A pressure differential over 8.0 indicates that the scrubber is beginning to get dirty and needs to be cleaned.

The indicator range for the water spray nozzle header is large because two pumps normally feed the system. One pump is sufficient, but a second pump always runs also to ensure adequate water supply. When only one pump is running and pressure drops below 10 psi, something is probably wrong with the pump and the scrubber water supply is probably insufficient. If both pumps are operating normally, header pressure is normally around 30 psi. A header pressure in excess of 40 psi indicates that the nozzles are getting dirty and need to be cleaned.

When an excursion occurs, corrective action will be initiated, beginning with an evaluation of the occurrence to determine the action required to correct the situation. All excursions will be documented and reported.

The indicator ranges for the scrubber pressure drop and water spray nozzle header pressure are based on normal scrubber operation and performance test results. During annual source testing from 1999 through 2003, the scrubber was operating under normal conditions and the average scrubber pressure drop was 6.0 and the average water pressure was 13 psi with one pump and 20 psi with two (the second pump was added in 2002). See Table B.

Table C shows scrubber pressure drop and water pressure for the month of June, 2003. When the boiler was operating, average hourly scrubber pressure drop was 4.6 inches of H₂O and ranged from 2.0 inches of H₂O (immediately after normal cleaning on 6/3) to 7.5 inches of H₂O (immediately before cleaning). Average water pressure was 30 psi (indicating that both pumps ran normally all month and water supply to the scrubber was adequate). Table C data shows that the scrubber operated within the proposed indicator ranges during the month of June, which indicates that the scrubber probably operated properly.

Table A

Boiler #3 Wet Scrubber Performance Monitoring Approach

	Indicator No.1	Indicator No.2
I. Indicator	Pressure drop across wet scrubber	Water spray header pressure
Measurement Approach	The pressure drop is continuously displayed on a Magnahelic pressure differential gauge in the boiler operator's console and is read and recorded every two hours on the daily boiler log sheet by the boiler operator on duty.	The pressure in the water spray header is measured with a pressure gauge located in the water spray header downstream of the two pumps. The pumps are inspected and the gauge is read and recorded every two hours on the daily boiler log sheet by the boiler operator on duty.
II. Indicator Range	<p style="text-align: center;">2-7</p> An excursion is defined as a pressure drop that is outside the indicator range of 1.5 to 8.0 inches of water column. Excursions trigger an inspection, corrective action, and a reporting requirement.	<p style="text-align: right;"><i>only for 60</i> <i>35 for two</i> <i>normal = 30</i> <i>Duty = 90</i> <i>Look at 35</i></p> An excursion is defined as a pressure reading that is outside of the indicator range of 10 to 40 psi. Excursions trigger an inspection, corrective action, and a reporting requirement.
III. Performance Criteria		
A. Data Representativeness	The monitoring system consists of a differential pressure gauge which measures the difference between pressures in the duct immediately upstream of the water spray and at the exit of the scrubber (bottom of the stack). The gauge range is 0 to 20 inches of water column, and the maximum measurement error per the manufacturer's specifications is 2% of the full range.	The monitoring system consists of a pressure gauge located in the spray water header. The gauge range is 0 to 60 psi and the maximum measurement error per the manufacturer's specifications is 2% of the full range.
B. Verification of Operational Status	NA	NA
C. QA/QC Practices and Criteria	The differential pressure reading is compared to a U-tube manometer annually in January to confirm that measurement accuracy is within manufacturer's specifications.	The pressure gauge is rotated annually in January and recalibrated for reuse.
D. Monitoring Frequency	<p style="text-align: center;"><i>only Req 1/day</i></p> The gauge is read and recorded every two hours.	<p style="text-align: center;"><i>only Req 1/day</i></p> The gauge is read and recorded every two hours.
Data Collection Procedures	Daily boiler log sheets are retained for two years.	Daily boiler log sheets are retained for two years.
Averaging Period	NA	NA

Table B

Boiler #3 Wet Scrubber Performance Indicators During Annual Stack Tests:

<u>Year</u>	<u>Avg. Steam Flow Rate</u> (Mlbs/hr)	<u>Avg. % O2</u>	<u>PM Conc.</u> (lbs/SCF) x E-06	<u>Calc. Avg. PM Emissions</u> (lbs/MMBTU)	<u>Calc. Heat Input</u> (MMBTUH)	<u>Calc. Boiler Thermal Efficiency</u>	<u>Comment</u>	<u>Reported in Annual Stack Test Reports:</u>				
								<u>Heat Input</u> (MMBTUH)	<u>Gas Flow Rate</u> (DSCFM)	<u>Avg. PM Emissions</u> (lbs/MMBTU)	<u>Scrubber Pressure Drop</u> (" H2O)	<u>Water Header Pressure</u> (psi)
1999	52500	11.60	5.11	0.1060	80.3 *	59%	Very Low	80.6	27787	0.1058	7-7.5	15
2000	52400	12.10	4.88	0.1071	79.8 *	59%	Very Low	79.5	29187	0.1073	7.5	15
2001	56000	10.70	5.49	0.1040	105.5 *	48%	Unlikely	105.2	33296	0.1044	7.5	15
2002	28000	11.40	3.27	0.0665	62.6 *	40%	Improbable	62.6	21216	0.0665	3.5-4	8.5
2003	16000	12.90	3.89	0.0939	61.1 *	24%	Improbable	60.8	24563	0.0943	3-3.5	20
Avg											6	13 1 pump 20 2 pumps

Calculated using EPA "F" factor for wood: 9240 SCF/MMBTU for wood fuel
 This factor is invalid for Havana's Boiler #3 as is indicated by the calculated thermal efficiencies, which are unrealistically low

Thomson W. Rockwood, PE Coastal Lumber 0728 03

Table C

**Boiler #3 Wet Scrubber Data
June 2003**

Scrubber Differential:

Avg: 4.6 Max: 7.5 Min: 2.0

Date:	6/1	6/2	6/3	6/4	6/5	6/6	6/7	6/8	6/9	6/10	6/11	6/12	6/13	6/14	6/15	6/16	6/17	6/18	6/19	6/20	6/21	6/22	6/23	6/24	6/25	6/26	6/27	6/28	6/29	6/30
7am	5.0	7.0	4.0	3.5	3.0	3.0	3.5	3.5	3.5	4.5	3.5	3.0	3.0	3.0	3.0	5.5	5.0	5.5		6.5	4.5	4.5	5.0	5.0	5.5	5.0	4.5	4.0	4.5	5.5
9am	7.0	7.0		3.5	3.5	3.5			4.0	4.5	4.0	3.0	3.0	5.0	3.5	4.0		4.5			4.5	4.5	5.0	4.0		5.0	5.0		5.0	4.5
11am	7.0	7.0			3.0		3.0			4.5	4.0	3.5		4.0	4.5	4.5		4.5			4.5	4.5			3.5	5.0	5.0	4.0	4.5	5.5
1pm	7.0	7.0		3.0	3.0	3.5	3.5	3.0	4.0	4.5	3.5	3.5		4.0	5.5	4.0	5.0	4.0			4.5		5.0	4.0	4.0	4.5	5.0	4.5	6.0	4.0
3pm	7.0	7.0			3.5	3.0				4.5	4.5			4.5							4.0			4.0	4.0			4.5	4.5	5.0
5pm				3.0		3.0	3.0	3.5	4.0	4.5	3.5	3.5		3.0	5.0	4.0	4.0	5.0	4.5	4.5	4.5	4.5	5.0		4.0	4.5	4.5	4.5	4.5	5.0
7pm		7.0	2.0	2.5	3.0	3.0	2.5	4.0	4.5	4.5	3.5	3.0	4.5	3.0	5.5	4.5	4.5	5.0	5.0	5.5	5.0	6.5	4.0	5.5	5.0	4.5	5.5	4.5	5.0	5.5
9pm	6.5	6.5	3.5	3.0	3.0	3.0	3.0	4.0	3.5	4.0	4.5	4.0	4.5	3.5	7.5	5.0	4.5	5.5	5.0	5.5	5.0	6.0	7.0	5.5	5.0	5.0	4.0	4.5	6.5	5.5
11pm	7.0	7.0		3.0	4.0	3.0	3.0	4.0	4.0	4.5	4.5	4.0	5.0	5.5	6.0	4.5	5.5		5.0	4.5	5.5	5.5	7.0	6.0	6.5	5.0	4.0	4.5	5.5	6.0
1am	7.0			3.5	3.0	3.5	4.0	4.0	4.5	4.5	4.0	4.5	5.0	5.5	6.0	5.5	5.0		5.5	4.5	5.0	5.0	6.5	6.0	5.0	5.0	4.0	4.5	5.0	6.0
3am	7.0	5.0		3.5	3.0	3.0	4.0	4.0		4.5	4.0	4.0	5.0	6.5	5.5	5.5			5.5	4.5			6.0	6.0	5.0	4.5	4.0	4.0	6.5	6.0
5am	7.0	5.5		3.0	3.0	3.0	4.0	4.0	5.0	4.5	3.5	4.5	3.5	3.5	5.5	4.0	6.0		4.5	5.0		7.0	5.5	5.5		4.5	4.0	4.5	6.0	

* Scrubber cleaned

Scrubber Inlet Water PSI:

Avg: 30.0 Max: 30.0 Min: 30.0

Date:	6/1	6/2	6/3	6/4	6/5	6/6	6/7	6/8	6/9	6/10	6/11	6/12	6/13	6/14	6/15	6/16	6/17	6/18	6/19	6/20	6/21	6/22	6/23	6/24	6/25	6/26	6/27	6/28	6/29	6/30
7am	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30		30	30	30	30	30	30	30	30	30	30	30
9am	30	30		30	30	30			30	30	30	30	30	30	30	30		30			30	30	30	30		30	30		30	30
11am	30	30			30		30			30	30	30		30	30	30		30			30	30			30	30	30	30	30	30
1pm	30	30		30	30	30	30	30	30	30	30	30		30	30	30	30	30		30		30	30	30	30	30	30	30	30	30
3pm	30	30			30	30				30	30			30							30			30	30			30	30	30
5pm				30		30	30	30	30	30	30	30		30	30	30	30	30	30	30	30	30	30		30	30	30	30	30	30
7pm		30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30
9pm	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30
11pm	30	30		30	30	30	30	30	30	30	30	30	30	30	30	30	30	30		30	30	30	30	30	30	30	30	30	30	30
1am	30			30	30	30	30	30	30	30	30		30	30	30	30	30		30	30	30	30	30	30	30	30	30	30	30	30
3am	30	30		30	30	30	30	30		30	30	30	30	30	30	30			30	30			30	30	30	30	30	30	30	30
5am	30	30		30	30	30	30	30	30	30	30	30	30	30	30	30	30		30	30		30	30	30		30	30	30	30	30

Coastal Plywood Company
Daily Boiler Log

Date: _____ Op: 1st _____ 2nd _____ 3rd _____

Control Range		#1 Boiler											
		7 am	9 am	11 am	1 pm	3 pm	5 pm	7 pm	9 pm	11 pm	1 am	3 am	5 am
5 - 15%	O2 Reading												
-2 to +2	Boiler Water Level, in.												

Control Range		#2 Boiler											
		7 am	9 am	11 am	1 pm	3 pm	5 pm	7 pm	9 pm	11 pm	1 am	3 am	5 am
5 - 15%	O2 Reading												
-2 to +2	Boiler Water Level, in.												

Control Range		#3 Boiler											
		7 am	9 am	11 am	1 pm	3 pm	5 pm	7 pm	9 pm	11 pm	1 am	3 am	5 am
5 - 15%	O2 Reading												
-2 to +2	Boiler Water Level, in.												
1.5 - 8.0	Scrubber Pressure Drop, in. H2O												
10 - 40	Scrubber Header Water, psi												

Control Range		Water/Pump Conditions											
		7 am	9 am	11 am	1 pm	3 pm	5 pm	7 pm	9 pm	11 pm	1 am	3 am	5 am
=0	Softened H2O Hardness												
<600	Softened H2O Conductivity												

		7 am			3 pm			11 pm		
		#1 Blr	#2 Blr	#3 Blr	#1 Blr	#2 Blr	#3 Blr	#1 Blr	#2 Blr	#3 Blr
=0	Condensate H2O Hardness									
<500	Condensate H2O Conductivity									
2 - 10	Condensate Sulfite, ppm									
<1100	Boiler Water Alkalinity									
<2400	Boiler Water Conductivity									
30 - 60	Boiler Water Sulfite, ppm									
-16 to +10	Large Flash Tank Level, in.									
400 - 600	Cond Return Pumps, psi									
>150	Cooling Water Pumps, psi									

Notation Of Every Reading That Was Out Of Range And Corrective Action Taken

(Summary Only: Write Detailed Explanation in Boiler Op Logbook)

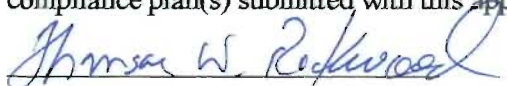
Time	

■ **RESPONSIBLE OFFICIAL'S CERTIFICATION**

APPLICATION INFORMATION

Application Responsible Official Certification



Complete if applying for an initial/revised/renewal Title V permit or concurrent processing of an air construction permit and a revised/renewal Title V permit. If there are multiple responsible officials, the "application responsible official" need not be the "primary responsible official."

1. Application Responsible Official Name: Thomson W. Rockwood, General Manager, Florida Division
2. Application Responsible Official Qualification (Check one or more of the following options, as applicable): <input checked="" type="checkbox"/> For a corporation, the president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation, or a duly authorized representative of such person if the representative is responsible for the overall operation of one or more manufacturing, production, or operating facilities applying for or subject to a permit under Chapter 62-213, F.A.C. <input type="checkbox"/> For a partnership or sole proprietorship, a general partner or the proprietor, respectively. <input type="checkbox"/> For a municipality, county, state, federal, or other public agency, either a principal executive officer or ranking elected official. <input type="checkbox"/> The designated representative at an Acid Rain source.
3. Application Responsible Official Mailing Address... Organization/Firm: Coastal Lumber Company Street Address: Post Office Box 1128, Highway 27 North City: Havana State: FL Zip Code: 32333
4. Application Responsible Official Telephone Numbers... Telephone: (850) 539-6432 ext. 129 Fax: (850) 539-6799
5. Application Responsible Official Email Address: tomrockwood@msn.com
6. Application Responsible Official Certification: <p>I, the undersigned, am a responsible official of the Title V source addressed in this air permit application. I hereby certify, based on information and belief formed after reasonable inquiry, that the statements made in this application are true, accurate and complete and that, to the best of my knowledge, any estimates of emissions reported in this application are based upon reasonable techniques for calculating emissions. The air pollutant emissions units and air pollution control equipment described in this application will be operated and maintained so as to comply with all applicable standards for control of air pollutant emissions found in the statutes of the State of Florida and rules of the Department of Environmental Protection and revisions thereof and all other applicable requirements identified in this application to which the Title V source is subject. I understand that a permit, if granted by the department, cannot be transferred without authorization from the department, and I will promptly notify the department upon sale or legal transfer of the facility or any permitted emissions unit. Finally, I certify that the facility and each emissions unit are in compliance with all applicable requirements to which they are subject, except as identified in compliance plan(s) submitted with this application.</p> <p> Signature</p> <p><u>7/28/03</u> Date</p>

■ **PROFESSIONAL ENGINEER'S CERTIFICATION**

APPLICATION INFORMATION

Professional Engineer Certification

1. Professional Engineer Name: Stephen Smallwood, PE Registration Number: 26 630
2. Professional Engineer Mailing Address... Organization/Firm: Air Quality Services Street Address: 1640 Eagles Landing, Unit 103 City: Tallahassee State: FL Zip Code: 32308-1560
3. Professional Engineer Telephone Numbers... Telephone: (850) 385-0002 ext. Fax: (850) 385-8715
4. Professional Engineer Email Address: ssm97@comcast
5. Professional Engineer Statement: <i>I, the undersigned, hereby certify, except as particularly noted herein*, that:</i> <i>(1) To the best of my knowledge, there is reasonable assurance that the air pollutant emissions unit(s) and the air pollution control equipment described in this application for air permit, when properly operated and maintained, will comply with all applicable standards for control of air pollutant emissions found in the Florida Statutes and rules of the Department of Environmental Protection; and</i> <i>(2) To the best of my knowledge, any emission estimates reported or relied on in this application are true, accurate, and complete and are either based upon reasonable techniques available for calculating emissions or, for emission estimates of hazardous air pollutants not regulated for an emissions unit addressed in this application, based solely upon the materials, information and calculations submitted with this application.</i> <i>(3) If the purpose of this application is to obtain a Title V air operation permit (check here <input checked="" type="checkbox"/>, if so), I further certify that each emissions unit described in this application for air permit, when properly operated and maintained, will comply with the applicable requirements identified in this application to which the unit is subject, except those emissions units for which a compliance plan and schedule is submitted with this application.</i> <i>(4) If the purpose of this application is to obtain an air construction permit (check here <input type="checkbox"/>, if so) or concurrently process and obtain an air construction permit and a Title V air operation permit revision or renewal for one or more proposed new or modified emissions units (check here <input type="checkbox"/>, if so), I further certify that the engineering features of each such emissions unit described in this application have been designed or examined by me or individuals under my direct supervision and found to be in conformity with sound engineering principles applicable to the control of emissions of the air pollutants characterized in this application.</i> <i>(5) If the purpose of this application is to obtain an initial air operation permit or operation permit revision or renewal for one or more newly constructed or modified emissions units (check here <input type="checkbox"/>, if so), I further certify that, with the exception of any changes detailed as part of this application, each such emissions unit has been constructed or modified in substantial accordance with the information given in the corresponding application for air construction permit and with all provisions contained in such permit.</i> Signature:  Date: <u>July 30, 2003</u>  Coastal Lumber TS Renewal App

* Attach any exception to certification statement - None.

COMPLIANCE ASSURANCE MONITORING
SCRUBBER FOR PM CONTROL
BOILER 3
COASTAL LUMBER COMPANY
HAVANA, FL

I. Background

A. Emissions Unit

Description:	Wood-Waste Fired Boiler
Identification:	Boiler 3 (McBurney)
Facility:	Coastal Lumber Company Havana, FL Facility ID No.: 0390009

B. Applicable Regulation, Emission Limit, and Monitoring Requirements

Regulation:	OAR 340-30-021	17-2.03 BACT TVPa
Emission Limit:		
Particulate Matter:	0.15 lb/MMBTU heat input or 9.2 lb/hr total PM (61.1 mmBTU/Hr maximum hourly heat input per October 2002 amendment to Title V Permit).	Permit Increase AC ALSO?

Monitoring Requirements:	Pressure drop across wet scrubber, water spray header pressure
--------------------------	---

C. Control Technology:

Wet scrubber

II. Monitoring Approach

The key elements of the monitoring approach are presented in Table A.

MONITORING APPROACH JUSTIFICATION

I. Background

The pollutant-specific emission unit is a wood-waste fired boiler that produces process steam that is used to manufacture softwood plywood. The exhaust from the boiler is ducted through a wet scrubber. In the scrubber, emissions are first mixed with water spray, which attracts and entraps particulate matter, and then the water (and entrapped particulate) is separated mechanically from the gas stream by a section of baffles. The pressure drop between the inlet of the water spray section and the scrubber discharge indicates the level effectiveness of the scrubber at any point in time. This pressure differential will be monitored to ensure that the scrubber is functioning normally. The water pressure in the water spray header is also an indicator of whether or not the scrubber is working properly. This water pressure will also be monitored to ensure that the scrubber is working properly.

II. Rationale for Selection of Performance Indicators

Pressure drop across the scrubber is recommended as the primary scrubber performance indicator because it confirms whether or not the gas flow through the scrubber is normal. After routine maintenance cleaning, the scrubber pressure drop is low. Over time, it is normal for the pressure drop to rise as the water spray nozzles become dirty, the mixing plates become dirty, and/or the separation baffle section fins become dirty. Cleaning spray nozzles in the system are manually activated periodically to clean the system while it is running. However, when the pressure drop exceeds certain levels and the cleaning spray system is no longer effective, the scrubber is shut down, opened up, and cleaned manually. On the other hand, a very low pressure drop indicates that there is a problem inside the scrubber (such as a baffle section having fallen out) and the scrubber is shut down and repaired.

Water pressure at the water spray nozzle header was chosen as a secondary scrubber performance indicator because it confirms whether or not sufficient water is being supplied to the spray nozzles to enable the scrubber to function normally. Low pressure indicates a water supply problem or that a spray head has come off. High water pressure indicates that the nozzles are becoming fouled and need to be cleaned. This indicator is not as accurate as pressure drop in predicting whether or not the scrubber is functioning normally, but it helps confirm the indication of the pressure drop.

The boiler does not operate if the scrubber is shut down.

III. Rationale for Selection of Indicator Ranges

The selected indicator range for the scrubber pressure drop is 1.5 to 8.0 inches of water column. The selected indicator range for water spray nozzle header pressure is 10 to 40 psi.

The indicator range for the scrubber pressure drop is large because the boiler load varies (Boiler 3 is the “swing” boiler of Havana’s three boilers; the other two boilers normally run at 100% of capacity while Boiler 3 runs only hard enough to make whatever steam is needed in addition to the other two). A pressure differential less than 1.5 indicates that there is a mechanical problem with the scrubber internals. A pressure differential over 8.0 indicates that the scrubber is beginning to get dirty and needs to be cleaned.

The indicator range for the water spray nozzle header is large because two pumps normally feed the system. One pump is sufficient, but a second pump always runs also to ensure adequate water supply. When only one pump is running and pressure drops below 10 psi, something is probably wrong with the pump and the scrubber water supply is probably insufficient. If both pumps are operating normally, header pressure is normally around 30 psi. A header pressure in excess of 40 psi indicates that the nozzles are getting dirty and need to be cleaned.

When an excursion occurs, corrective action will be initiated, beginning with an evaluation of the occurrence to determine the action required to correct the situation. All excursions will be documented and reported.

The indicator ranges for the scrubber pressure drop and water spray nozzle header pressure are based on normal scrubber operation and performance test results. During annual source testing from 1999 through 2003, the scrubber was operating under normal conditions and the average scrubber pressure drop was 6.0 and the average water pressure was 13 psi with one pump and 20 psi with two (the second pump was added in 2002). See Table B.

Table C shows scrubber pressure drop and water pressure for the month of June, 2003. When the boiler was operating, average hourly scrubber pressure drop was 4.6 inches of H₂O and ranged from 2.0 inches of H₂O (immediately after normal cleaning on 6/3) to 7.5 inches of H₂O (immediately before cleaning). Average water pressure was 30 psi (indicating that both pumps ran normally all month and water supply to the scrubber was adequate). Table C data shows that the scrubber operated within the proposed indicator ranges during the month of June, which indicates that the scrubber probably operated properly.

$$9.15 \frac{\text{lb}}{\text{m}}^{\text{PM}} = 40.08 \text{ TPY}$$

Table A

Boiler #3 Wet Scrubber Performance Monitoring Approach

	Indicator No.1	Indicator No.2
I. Indicator	Pressure drop across wet scrubber	Water spray header pressure
Measurement Approach	The pressure drop is continuously displayed on a Magnahelic pressure differential gauge in the boiler operator's console and is read and recorded every <u>two hours</u> on the daily boiler log sheet by the boiler operator on duty.	The pressure in the water spray header is measured with a pressure gauge located in the water spray header downstream of the two pumps. The pumps are inspected and the gauge is read and recorded every two hours on the daily boiler log sheet by the boiler operator on duty.
II. Indicator Range	An excursion is defined as a <u>pressure drop</u> that is outside the indicator range of <u>1.5 to 8.0</u> inches of water column. Excursions trigger an inspection, corrective action, and a reporting requirement.	An excursion is defined as a pressure reading that is outside of the indicator range of 10 to 40 psi. Excursions trigger an inspection, corrective action, and a reporting requirement.
III. Performance Criteria		
A. Data Representativeness	The monitoring system consists of a differential pressure gauge which measures the difference between pressures in the duct immediately upstream of the water spray and at the exit of the scrubber (bottom of the stack). The gauge range is 0 to 20 inches of water column, and the maximum measurement error per the manufacturer's specifications is 2% of the full range.	The monitoring system consists of a pressure gauge located in the spray water header. The gauge range is 0 to 60 psi and the maximum measurement error per the manufacturer's specifications is 2% of the full range.
B. Verification of Operational Status	NA	NA
C. QA/QC Practices and Criteria	The differential pressure reading is compared to a U-tube manometer annually in January to confirm that measurement accuracy is within manufacturer's specifications.	The pressure gauge is rotated annually in January and recalibrated for reuse.
D. Monitoring Frequency	The gauge is read and recorded every <u>two hours</u> .	The gauge is read and recorded every <u>two hours</u> .
Data Collection Procedures	Daily boiler log sheets are retained for <u>two</u> years.	Daily boiler log sheets are retained for <u>two</u> years.
Averaging Period	NA	NA - <u>Daily Average?</u>

Table B

Boiler #3 Wet Scrubber Performance Indicators During Annual Stack Tests:

Year	Avg. Steam Flow Rate (Mlbs/hr)	Avg. % O ₂	PM Conc. (lbs/SCF) x E-06	Calc. Avg. PM Emissions (lbs/MMBTU)	Calc. Heat Input (MMBTUH)	Calc. Boiler Thermal Efficiency	Comment	Reported in Annual Stack Test Reports:				
								Heat Input (MMBTUH)	Gas Flow Rate (DSCFM)	Avg. PM Emissions (lbs/MMBTU)	Scrubber Pressure Drop (" H ₂ O)	Water Header Pressure (psi)
1999	52500	11.60	5.11	0.1060	80.3 *	59%	Very Low	80.6	27787	0.1058	7-7.5	15
2000	52400	12.10	4.88	0.1071	79.8 *	59%	Very Low	79.5	29187	0.1073	7.5	15
2001	56000	10.70	5.49	0.1040	105.5 *	48%	Unlikely	105.2	33296	0.1044	7.5	15
2002	28000	11.40	3.27	0.0665	62.6 *	40%	Improbable	62.6	21216	0.0665	3.5-4	8.5
2003	16000	12.90	3.89	0.0939	61.1 *	24%	Improbable	60.8	24563	0.0943	3-3.5	20
Avg											6	13 1 pump 20 2 pumps

Calculated using EPA "F" factor for wood: 9240 SCF/MMBTU for wood fuel
 This factor is invalid for Havana's Boiler #3 as is indicated by the calculated thermal efficiencies, which are unrealistically low

Thomson W. Rockwood, PE Coastal Lumber 0728 03

$$\frac{61 \text{ mm BTU}}{10} = 7.625 \text{ Tons/m} \Rightarrow 217 \text{ TPY PM}_2$$
 for wood + Bank Boilers
 Need test correlation from MWD

Table C

**Boiler #3 Wet Scrubber Data
June 2003**

Scrubber Differential:

Avg: 4.6 Max: 7.5 Min: 2.0

Date:	6/1	6/2	6/3	6/4	6/5	6/6	6/7	6/8	6/9	6/10	6/11	6/12	6/13	6/14	6/15	6/16	6/17	6/18	6/19	6/20	6/21	6/22	6/23	6/24	6/25	6/26	6/27	6/28	6/29	6/30
7am	5.0	7.0	4.0	3.5	3.0	3.0	3.5	3.5	3.5	4.5	3.5	3.0	3.0	3.0	3.0	5.5	5.0	5.5		6.5	4.5	4.5	5.0	5.0	5.5	5.0	4.5	4.0	4.5	5.5
9am	7.0	7.0		3.5	3.5	3.5			4.0	4.5	4.0	3.0	3.0	5.0	3.5	4.0		4.5			4.5	4.5	5.0	4.0		5.0	5.0		5.0	4.5
11am	7.0	7.0			3.0		3.0			4.5	4.0	3.5		4.0	4.5	4.5		4.5			4.5	4.5			3.5	5.0	5.0	4.0	4.5	5.5
1pm	7.0	7.0		3.0	3.0	3.5	3.5	3.0	4.0	4.5	3.5	3.5		4.0	5.5	4.0	5.0	4.0		4.5		4.5	5.0	4.0	4.0	4.5	5.0	4.5	6.0	4.0
3pm	7.0	7.0			3.5	3.0				4.5	4.5			4.5						4.0				4.0	4.0			4.5	4.5	5.0
5pm				3.0		3.0	3.0	3.5	4.0	4.5	3.5	3.5		3.0	5.0	4.0	4.0	5.0	4.5	4.5	4.5	4.5	5.0		4.0	4.5	4.5	4.5	4.5	5.0
7pm		7.0	2.0	2.5	3.0	3.0	2.5	4.0	4.5	4.5	3.5	3.0	4.5	3.0	5.5	4.5	4.5	5.0	5.0	5.5	5.0	6.5	4.0	5.5	5.0	4.5	5.5	4.5	5.0	5.5
9pm	6.5	6.5	3.5	3.0	3.0	3.0	3.0	4.0	3.5	4.0	4.5	4.0	4.5	3.5	7.5	5.0	4.5	5.5	5.0	5.5	5.0	6.0	7.0	5.5	5.0	5.0	4.0	4.5	6.5	5.5
11pm	7.0	7.0		3.0	4.0	3.0	3.0	4.0	4.0	4.5	4.5	4.0	5.0	5.5	6.0	4.5	5.5		5.0	4.5	5.5	5.5	7.0	6.0	6.5	5.0	4.0	4.5	5.5	6.0
1am	7.0			3.5	3.0	3.5	4.0	4.0	4.5	4.5	4.0	4.5	5.0	5.5	6.0	5.5	5.0		5.5	4.5	5.0	5.0	6.5	6.0	5.0	5.0	4.0	4.5	5.0	6.0
3am	7.0	5.0		3.5	3.0	3.0	4.0	4.0		4.5	4.0	4.0	5.0	6.5	5.5	5.5			5.5	4.5			6.0	6.0	5.0	4.5	4.0	4.0	6.5	6.0
5am	7.0	5.5		3.0	3.0	3.0	4.0	4.0	5.0	4.5	3.5	4.5	3.5	3.5	5.5	4.0	6.0		4.5	5.0		7.0	5.5	5.5		4.5	4.0	4.5	6.0	

* Scrubber cleaned

Scrubber Inlet Water PSI:

Avg: 30.0 Max: 30.0 Min: 30.0

Date:	6/1	6/2	6/3	6/4	6/5	6/6	6/7	6/8	6/9	6/10	6/11	6/12	6/13	6/14	6/15	6/16	6/17	6/18	6/19	6/20	6/21	6/22	6/23	6/24	6/25	6/26	6/27	6/28	6/29	6/30
7am	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30		30	30	30	30	30	30	30	30	30	30	30
9am	30	30		30	30	30			30	30	30	30	30	30	30	30		30			30	30	30	30		30	30		30	30
11am	30	30			30		30			30	30	30		30	30	30		30			30	30			30	30	30	30	30	30
1pm	30	30		30	30	30	30	30	30	30	30	30		30	30	30	30	30		30		30	30	30	30	30	30	30	30	30
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5pm				30		30	30	30	30	30	30	30		30	30	30	30	30	30	30	30	30	30		30	30	30	30	30	30
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11pm	30	30		30	30	30	30	30	30	30	30	30	30	30	30	30	30			30	30	30	30	30	30	30	30	30	30	30
1am	30			30	30	30	30	30	30	30	30		30	30	30	30	30			30	30	30	30	30	30	30	30	30	30	30
3am	30	30		30	30	30	30	30		30	30	30	30	30	30	30				30	30			30	30	30	30	30	30	30
5am	30	30		30	30	30	30	30	30	30	30	30	30	30	30	30	30			30	30		30	30	30		30	30	30	30

--ATTENTION MAIL ROOM--

PLEASE ROUTE THIS
DOCUMENT TO:

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SEP 24 2003

Jonathan Tolton, DARM
BUREAU OF AIR REGULATION

Name of Individual/Office

5500

Mail Station Number



Jonathan Holtom

Hardwood Lumber
Pine Lumber & Plywood
Treated Wood Products

September 15, 2003

Corporate Headquarters
P.O. Box 829
Weldon, North Carolina 27890
Telephone: (919) 536-1211
Fax: (919) 536-3102

RECEIVED

Please Respond To:

SEP 19 2003

NORTHWEST FLORIDA
DEP

Ms. Sandra F. Veazey
Air Program Administrator
Northwest District
Florida Department of Environmental Protection
160 Governmental Center
Pensacola, Florida 32501

RE: Third Request For Additional Information Regarding Title V Air Permit Renewal
Renewal Application File 0390009-005-AV
Gadsden County

Dear Ms. Veazey:

This letter is in response to your letter of August 26, 2003 (copy attached).

Coastal concurs with all suggested modifications to its CAM plan.

Enclosed herewith is a revised CAM plan and backup data which reflects all suggested changes.

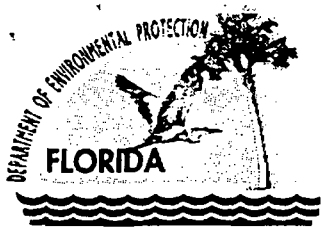
Also enclosed are R.O. and P.E. Certification statements.

Please contact me if you have questions or need additional information.

Sincerely,

Thomson W. Rockwood

Copies:
Jonathan Holtom, FDEP Tallahassee
Rick Bradburn, FDEP Pensacola
Stephen Smallwood, Air Quality Services



Jeb Bush
Governor

Department of Environmental Protection

Northwest District
160 Governmental Center
Pensacola, Florida 32501-5794

David B. Struhs
Secretary

August 26, 2003

CERTIFIED, RETURN RECEIPT REQUESTED

Thomson W. Rockwood
General Manager
Coastal Lumber Company
Post Office Box 1128
Havana, Florida 32333

Re: Third Request for Additional Information Regarding Title V Air Operation Permit
Renewal Application, File No. 0390009-005-AV
Coastal Lumber Company, Gadsden County

Dear Mr. Rockwood:

This is response to your July 28, 2003 submittal (CAM plan) addressing the Department's May 9, 2003 request for additional information letter concerning the project referenced above. Your application for permit renewal remains incomplete. The facility's proposed CAM plan was reviewed by Jonathan Holtom of our Tallahassee office and we have summarized his comments below. In order to continue processing your application, please address the comments listed below pursuant to Rules 62-213.420(1)(b)3, and 62-4.070(1), F.A.C.

Should your response to the items below require new calculations, please submit the new calculations, assumptions, reference material and appropriate revised pages of the application form.

- The excursion range for the scrubber pressure drop should be 2.0 – 7.0" of water, instead of 1.5 – 8.0" of water, to provide adequate time for evaluation and corrective actions to be taken.
- The excursion range for the water spray header pressure should be 13 – 35 psi, instead of 10 – 40 psi, to provide adequate time for evaluation and corrective actions to be taken.
- The proposed Data Collection Procedures states that boiler sheets will be retained for "two" years. This needs to be changed to "five" years in order to comply with Rule 62-213.440(1)(b)2.b, F.A.C.

Responsible Official (R.O.) Certification Statement: Rule 62-213.420, F.A.C. requires that all Title V permit applications must be certified by a responsible official. Due to the nature of the information requested above, your response should be certified by the responsible official. Please complete and submit a new R.O. certification statement page from the new long application form, DEP Form No. 62-210.900, effective February 11, 1999 (enclosed).

"More Protection, Less Process"

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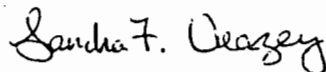
Thomson W. Rockwood
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Page Two

Professional Engineer (P.E.) Certification Statement: Rule 62-4.050(3), F.A.C. requires that all applications for a Department permit must be certified by a professional engineer registered in the State of Florida. This requirement also applies to responses to Department requests for additional information of an engineering nature. As a result, at a minimum your response to the first two items above should be certified by a professional engineer registered in the State of Florida. Please complete and submit a new P.E. certification statement page from the new long application form, DEP Form No. 62-210.900, effective February 11, 1999 (enclosed).

The Department must receive a response from you within 90 (ninety) days of receipt of this letter, unless you (the applicant) request additional time under Rule 62-213.420(1)(b)6., F.A.C.

If you have any questions concerning CAM, please contact Jonathan Holtom at 850/921-9531. For general questions, please contact Rick Bradburn at 850/595-8364, extension 1233.

Sincerely,




Sandra F. Veazey
Air Program Administrator

SFV/rbc

Enclosures
copy to:
Stephen Smallwood, P.E.

APPLICATION INFORMATION

Professional Engineer Certification

1. Professional Engineer Name: THOMPSON WHITIN ROCKWOOD Registration Number: 47220
2. Professional Engineer Mailing Address... Organization/Firm: COASTAL LUMBER CO Street Address: PO BOX 1128 City: HAYANA State: FL Zip Code: 32333
3. Professional Engineer Telephone Numbers... Telephone: (850) 539-6432 ext. 129 Fax: (850) 539-6799
4. Professional Engineer Email Address:
5. Professional Engineer Statement: <i>I, the undersigned, hereby certify, except as particularly noted herein*, that:</i> (1) <i>To the best of my knowledge, there is reasonable assurance that the air pollutant emissions unit(s) and the air pollution control equipment described in this application for air permit, when properly operated and maintained, will comply with all applicable standards for control of air pollutant emissions found in the Florida Statutes and rules of the Department of Environmental Protection; and</i> (2) <i>To the best of my knowledge, any emission estimates reported or relied on in this application are true, accurate, and complete and are either based upon reasonable techniques available for calculating emissions or, for emission estimates of hazardous air pollutants not regulated for an emissions unit addressed in this application, based solely upon the materials, information and calculations submitted with this application.</i> (3) <i>If the purpose of this application is to obtain a Title V air operation permit (check here <input checked="" type="checkbox"/>, if so), I further certify that each emissions unit described in this application for air permit, when properly operated and maintained, will comply with the applicable requirements identified in this application to which the unit is subject, except those emissions units for which a compliance plan and schedule is submitted with this application.</i> (4) <i>If the purpose of this application is to obtain an air construction permit (check here <input type="checkbox"/>, if so) or concurrently process and obtain an air construction permit and a Title V air operation permit revision or renewal for one or more proposed new or modified emissions units (check here <input type="checkbox"/>, if so), I further certify that the engineering features of each such emissions unit described in this application have been designed or examined by me or individuals under my direct supervision and found to be in conformity with sound engineering principles applicable to the control of emissions of the air pollutants characterized in this application.</i> (5) <i>If the purpose of this application is to obtain an initial air operation permit or operation permit revision or renewal for one or more newly constructed or modified emissions units (check here <input type="checkbox"/>, if so), I further certify that, with the exception of any changes detailed as part of this application, each such emissions unit has been constructed or modified in substantial accordance with the information given in the corresponding application for air construction permit and with all provisions contained in such permit.</i>  Signature: Whitin Rockwood Date: 9/15/03

* Attach any exception to certification statement.

APPLICATION INFORMATION

Application Responsible Official Certification

Complete if applying for an initial/revised/renewal Title V permit or concurrent processing of an air construction permit and a revised/renewal Title V permit. If there are multiple responsible officials, the "application responsible official" need not be the "primary responsible official."

1. Application Responsible Official Name: <i>THOMSON W. ROCKWOOD</i> <i>VP & GM</i>
2. Application Responsible Official Qualification (Check one or more of the following options, as applicable): <input checked="" type="checkbox"/> For a corporation, the president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation, or a duly authorized representative of such person if the representative is responsible for the overall operation of one or more manufacturing, production, or operating facilities applying for or subject to a permit under Chapter 62-213, F.A.C. <input type="checkbox"/> For a partnership or sole proprietorship, a general partner or the proprietor, respectively. <input type="checkbox"/> For a municipality, county, state, federal, or other public agency, either a principal executive officer or ranking elected official. <input type="checkbox"/> The designated representative at an Acid Rain source.
3. Application Responsible Official Mailing Address... Organization/Firm: <i>COASTAL LUMBER COMPANY</i> Street Address: <i>PO BOX 1128</i> City: <i>HAVANA</i> State: <i>FL</i> Zip Code: <i>32333</i>
4. Application Responsible Official Telephone Numbers... Telephone: <i>(850) 539-6432 ext. 129</i> Fax: <i>(850) 539-6799</i>
5. Application Responsible Official Email Address:
6. Application Responsible Official Certification: <i>I, the undersigned, am a responsible official of the Title V source addressed in this air permit application. I hereby certify, based on information and belief formed after reasonable inquiry, that the statements made in this application are true, accurate and complete and that, to the best of my knowledge, any estimates of emissions reported in this application are based upon reasonable techniques for calculating emissions. The air pollutant emissions units and air pollution control equipment described in this application will be operated and maintained so as to comply with all applicable standards for control of air pollutant emissions found in the statutes of the State of Florida and rules of the Department of Environmental Protection and revisions thereof and all other applicable requirements identified in this application to which the Title V source is subject. I understand that a permit, if granted by the department, cannot be transferred without authorization from the department, and I will promptly notify the department upon sale or legal transfer of the facility or any permitted emissions unit. Finally, I certify that the facility and each emissions unit are in compliance with all applicable requirements to which they are subject, except as identified in compliance plan(s) submitted with this application.</i> <i>Thomson W. Rockwood</i> Signature <u>9/15/03</u> Date

COMPLIANCE ASSURANCE MONITORING
SCRUBBER FOR PM CONTROL
BOILER 3
COASTAL LUMBER COMPANY
HAVANA, FL

I. Background

A. Emissions Unit

Description:	Wood-Waste Fired Boiler
Identification:	Boiler 3 (McBurney)
Facility:	Coastal Lumber Company Havana, FL Facility ID No.: 0390009

B. Applicable Regulation, Emission Limit, and Monitoring Requirements

Regulation:	OAR 340-30-021
Emission Limit:	
Particulate Matter:	0.15 lb/MMBTU heat input or 9.2 lb/hr total PM
Monitoring Requirements:	Pressure drop across wet scrubber, water spray header pressure

C. Control Technology:

Wet scrubber

II. Monitoring Approach

The key elements of the monitoring approach are presented in Table A.

MONITORING APPROACH JUSTIFICATION

I. Background

The pollutant-specific emission unit is a wood-waste fired boiler that produces process steam that is used to manufacture softwood plywood. The exhaust from the boiler is ducted through a wet scrubber. In the scrubber, emissions are first mixed with water spray, which attracts and entraps particulate matter, and then the water (and entrapped particulate) is separated mechanically from the gas stream by a section of baffles. The pressure drop between the inlet of the water spray section and the scrubber discharge indicates the level effectiveness of the scrubber at any point in time. This pressure differential will be monitored to ensure that the scrubber is functioning normally. The water pressure in the water spray header is also an indicator of whether or not the scrubber is working properly. This water pressure will also be monitored to ensure that the scrubber is working properly.

II. Rationale for Selection of Performance Indicators

Pressure drop across the scrubber is recommended as the primary scrubber performance indicator because it confirms whether or not the gas flow through the scrubber is normal. After routine maintenance cleaning, the scrubber pressure drop is low. Over time, it is normal for the pressure drop to rise as the water spray nozzles become dirty, the mixing plates become dirty, and/or the separation baffle section fins become dirty. Cleaning spray nozzles in the system are manually activated periodically to clean the system while it is running. However, when the pressure drop exceeds certain levels and the cleaning spray system is no longer effective, the scrubber is shut down, opened up, and cleaned manually. On the other hand, a very low pressure drop indicates that there is a problem inside the scrubber (such as a baffle section having fallen out) and the scrubber is shut down and repaired.

Water pressure at the water spray nozzle header was chosen as a secondary scrubber performance indicator because it confirms whether or not sufficient water is being supplied to the spray nozzles to enable the scrubber to function normally. Low pressure indicates a water supply problem or that a spray head has come off. High water pressure indicates that the nozzles are becoming fouled and need to be cleaned. This indicator is not as accurate as pressure drop in predicting whether or not the scrubber is functioning normally, but it helps confirm the indication of the pressure drop.

The boiler does not operate if the scrubber is shut down.

III. Rationale for Selection of Indicator Ranges

The selected indicator range for the scrubber pressure drop is 2.0 to 7.0 inches of water column. The selected indicator range for water spray nozzle header pressure is 13 to 35 psi.

The indicator range for the scrubber pressure drop is large because the boiler load varies (Boiler 3 is the "swing" boiler of Havana's three boilers; the other two boilers normally run at 100% of capacity while Boiler 3 runs only hard enough to make whatever steam is needed in addition to the other two). A pressure differential less than 2.0 indicates that there may be a mechanical problem with the scrubber internals and they must be inspected to ensure that all parts are in place. A pressure differential over 7.0 indicates that the scrubber is beginning to get dirty and must be cleaned.

The indicator range for the water spray nozzle header is large because two pumps normally feed the system. One pump is sufficient, but a second pump always runs also to ensure adequate water supply. When only one pump is running and pressure drops below 13 psi, something is probably wrong with the pump and the scrubber water supply may be insufficient. If both pumps are operating normally, header pressure is normally around 30 psi. A header pressure in excess of 35 psi indicates that the nozzles are getting dirty and probably need to be cleaned.

Whenever a reading outside of the above ranges is observed (an "excursion"), the boiler operator will inspect the equipment, evaluate the situation, and take appropriate corrective action. All excursions will be documented on the Daily Boiler Log Sheet including corrective action taken.

The indicator ranges for the scrubber pressure drop and water spray nozzle header pressure are based on normal scrubber operation and performance test results. During annual source testing from 1999 through 2003, the scrubber was operating under normal conditions and the average scrubber pressure drop was 6.0 and the average water pressure was 13 psi with one pump and 20 psi with two (the second pump was added in 2002). See Table B.

Table C shows scrubber pressure drop and water pressure for the month of June, 2003. When the boiler was operating, average hourly scrubber pressure drop was 4.6 inches of H₂O and ranged from 2.0 inches of H₂O (immediately after normal cleaning on 6/3) to 7.5 inches of H₂O (immediately before cleaning). Average water pressure was 30 psi (indicating that both pumps ran normally all month and water supply to the scrubber was adequate). Table C data shows that the scrubber operated within the proposed indicator ranges during the month of June, which indicates that the scrubber probably operated properly.

Table C Addendum shows that immediately after cleaning, the scrubber pressure drop was only 1.5 psi on 2 occasions. Whenever pressure drop readings are less than 2.0, the boiler operator will inspect the equipment to ensure that all parts are in place, take corrective action if needed, and log the excursion.

September 15, 2003

Table A

Boiler #3 Wet Scrubber Performance Monitoring Approach

	Indicator No.1	Indicator No.2
I. Indicator	Pressure drop across wet scrubber	Water spray header pressure
Measurement Approach	The pressure drop is continuously displayed on a Magnahelic pressure differential gauge in the boiler operator's console and is read and recorded every two hours on the daily boiler log sheet by the boiler operator on duty.	The pressure in the water spray header is measured with a pressure gauge located in the water spray header downstream of the two pumps. The pumps are inspected and the gauge is read and recorded every two hours on the daily boiler log sheet by the boiler operator on duty.
II. Indicator Range	An excursion is defined as a pressure drop that is outside the indicator range of 2.0 to 7.0 inches of water column. Excursions trigger an inspection, corrective action, and a reporting requirement.	An excursion is defined as a pressure reading that is outside of the indicator range of 13 to 35 psi. Excursions trigger an inspection, corrective action, and a reporting requirement.
III. Performance Criteria		
A. Data Representativeness	The monitoring system consists of a differential pressure gauge which measures the difference between pressures in the duct immediately upstream of the water spray and at the exit of the scrubber (bottom of the stack). The gauge range is 0 to 20 inches of water column, and the maximum measurement error per the manufacturer's specifications is 2% of the full range.	The monitoring system consists of a pressure gauge located in the spray water header. The gauge range is 0 to 60 psi and the maximum measurement error per the manufacturer's specifications is 2% of the full range.
B. Verification of Operational Status	NA	NA
C. QA/QC Practices and Criteria	The differential pressure reading is compared to a U-tube manometer annually in January to confirm that measurement accuracy is within manufacturer's specifications.	The pressure gauge is rotated annually in January and recalibrated for reuse.
D. Monitoring Frequency	The gauge is read and recorded every two hours.	The gauge is read and recorded every two hours.
Data Collection Procedures	Daily Boiler Log sheets are retained for five years.	Daily Boiler Log sheets are retained for five years.
Averaging Period	NA	NA

09/15/03

**Coastal Plywood Company
Daily Boiler Log**

Date: _____ Op: 1st _____ 2nd _____ 3rd _____

Control

#1 Boiler

Range		7 am	9 am	11 am	1 pm	3 pm	5 pm	7 pm	9 pm	11 pm	1 am	3 am	5 am
5 - 15%	O2 Reading												
-2 to +2	Boiler Water Level, in.												

Control

#2 Boiler

Range		7 am	9 am	11 am	1 pm	3 pm	5 pm	7 pm	9 pm	11 pm	1 am	3 am	5 am
5 - 15%	O2 Reading												
-2 to +2	Boiler Water Level, in.												

Control

#3 Boiler

Range		7 am	9 am	11 am	1 pm	3 pm	5 pm	7 pm	9 pm	11 pm	1 am	3 am	5 am
5 - 15%	O2 Reading												
-2 to +2	Boiler Water Level, in.												
2.0 - 7.0	Scrubber Pressure Drop, in. H2O												
13 - 35	Scrubber Header Water, psi												

Control

Water/Pump Conditions

Range		7 am	9 am	11 am	1 pm	3 pm	5 pm	7 pm	9 pm	11 pm	1 am	3 am	5 am
=0	Softened H2O Hardness												
<600	Softened H2O Conductivity												

		7 am			3 pm			11 pm		
=0	Condensate H2O Hardness									
<500	Condensate H2O Conductivity									
2 - 10	Condensate Sulfite, ppm									
		#1 Blr	#2 Blr	#3 Blr	#1 Blr	#2 Blr	#3 Blr	#1 Blr	#2 Blr	#3 Blr
<1100	Boiler Water Alkalinity									
<2400	Boiler Water Conductivity									
30 - 60	Boiler Water Sulfite, ppm									
-16 to +10	Large Flash Tank Level, in.									
400 - 600	Cond Return Pumps, psi									
>150	Cooling Water Pumps, psi									

Notation Of Every Reading That Was Out Of Range And Corrective Action Taken

(Summary Only: Write Detailed Explanation in Boiler Op Logbook)

Time	

Table B

Boiler #3 Wet Scrubber Performance Indicators During Annual Stack Tests:

Year	Avg. Steam Flow Rate (Mlbs/hr)	Avg. % O ₂	PM Conc. (lbs/SCF) x E-06	Calc. Avg. PM Emissions (lbs/MMBTU)	Calc. Heat Input (MMBTUH)	Boiler Thermal Efficiency Calculated	Boiler Thermal Efficiency Comment	Reported in Annual Stack Test Reports:				
								Heat Input (MMBTUH)	Gas Flow Rate (DSCFM)	Avg. PM Emissions (lbs/MMBTU)	Scrubber Pressure Drop (" H ₂ O)	Water Header Pressure (psi)
1999	52500	11.60	5.11	0.1060	80.3 *	59%	Very Low	80.6	27787	0.1058	7-7.5	15
2000	52400	12.10	4.88	0.1071	79.8 *	59%	Very Low	79.5	29187	0.1073	7.5	15
2001	56000	10.70	5.49	0.1040	105.5 *	48%	Unlikely	105.2	33296	0.1044	7.5	15
2002	28000	11.40	3.27	0.0665	62.6 *	40%	Improbable	62.6	21216	0.0665	3.5-4	8.5
2003	16000	12.90	3.89	0.0939	61.1 *	24%	Improbable	60.8	24563	0.0943	3-3.5	20
Avg											6	13 1 pump 20 2 pumps

* Calculated using EPA "F" factor for wood = 9240 SCF/MMBTU for wood fuel
 This factor is invalid for Havana's Boiler #3 as is indicated by the above calculated thermal efficiencies, which are unrealistically low

09/15/03

Table C

Boiler #3 Wet Scrubber Data
June 2003

Scrubber Differential:

Avg: 4.6 Max: 7.5 Min: 2.0

Date:	6/1	6/2	6/3	6/4	6/5	6/6	6/7	6/8	6/9	6/10	6/11	6/12	6/13	6/14	6/15	6/16	6/17	6/18	6/19	6/20	6/21	6/22	6/23	6/24	6/25	6/26	6/27	6/28	6/29	6/30
7am	5.0	7.0	4.0	3.5	3.0	3.0	3.5	3.5	3.5	4.5	3.5	3.0	3.0	3.0	5.5	5.0	5.5		6.5	4.5	4.5	5.0	5.0	5.5	5.0	4.5	4.0	4.5	5.5	
9am	7.0	7.0		3.5	3.5	3.5			4.0	4.5	4.0	3.0	3.0	5.0	3.5	4.0		4.5		4.5	4.5	5.0	4.0		5.0	5.0		5.0	4.5	
11am	7.0	7.0			3.0		3.0			4.5	4.0	3.5		4.0	4.5	4.5		4.5		4.5	4.5			3.5	5.0	5.0	4.0	4.5	5.5	
1pm	7.0	7.0		3.0	3.0	3.5	3.5	3.0	4.0	4.5	3.5	3.5		4.0	5.5	4.0	5.0	4.0		4.5		4.5	5.0	4.0	4.0	4.5	5.0	4.5	6.0	4.0
3pm	7.0	7.0			3.5	3.0				4.5	4.5			4.5						4.0				4.0	4.0		4.5	4.5	5.0	
5pm				3.0		3.0	3.0	3.5	4.0	4.5	3.5	3.5		3.0	5.0	4.0	4.0	5.0	4.5	4.5	4.5	4.5	5.0		4.0	4.5	4.5	4.5	4.5	5.0
7pm		7.0	2.0	2.5	3.0	3.0	2.5	4.0	4.5	4.5	3.5	3.0	4.5	3.0	5.5	4.5	4.5	5.0	5.0	5.5	5.0	6.5	4.0	5.5	5.0	4.5	5.5	4.5	5.0	5.5
9pm	6.5	6.5	3.5	3.0	3.0	3.0	3.0	4.0	3.5	4.0	4.5	4.0	4.5	3.5	7.5	5.0	4.5	5.5	5.0	5.5	5.0	6.0	7.0	5.5	5.0	5.0	4.0	4.5	6.5	5.5
11pm	7.0	7.0		3.0	4.0	3.0	3.0	4.0	4.0	4.5	4.5	4.0	5.0	5.5	6.0	4.5	5.5		5.0	4.5	5.5	5.5	7.0	6.0	6.5	5.0	4.0	4.5	5.5	6.0
1am	7.0			3.5	3.0	3.5	4.0	4.0	4.5	4.5	4.0	4.5	5.0	5.5	6.0	5.5	5.0		5.5	4.5	5.0	5.0	6.5	6.0	5.0	5.0	4.0	4.5	5.0	6.0
3am	7.0	5.0		3.5	3.0	3.0	4.0	4.0		4.5	4.0	4.0	5.0	6.5	5.5	5.5			5.5	4.5			6.0	6.0	5.0	4.5	4.0	4.0	6.5	6.0
5am	7.0	5.5		3.0	3.0	3.0	4.0	4.0	5.0	4.5	3.5	4.5	3.5	3.5	5.5	4.0	6.0		4.5	5.0		7.0	5.5	5.5		4.5	4.0	4.5	6.0	

* Scrubber cleaned

Scrubber Inlet Water PSI:

Avg: 30.0 Max: 30.0 Min: 30.0

Date:	6/1	6/2	6/3	6/4	6/5	6/6	6/7	6/8	6/9	6/10	6/11	6/12	6/13	6/14	6/15	6/16	6/17	6/18	6/19	6/20	6/21	6/22	6/23	6/24	6/25	6/26	6/27	6/28	6/29	6/30
7am	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30		30	30	30	30	30	30	30	30	30	30	30
9am	30	30		30	30	30			30	30	30	30	30	30	30	30		30		30	30	30	30		30	30	30		30	30
11am	30	30			30		30			30	30	30		30	30	30		30		30	30	30			30	30	30	30	30	30
1pm	30	30		30	30	30	30	30	30	30	30	30		30	30	30	30	30		30		30	30	30	30	30	30	30	30	30
3pm	30	30			30	30				30	30			30						30					30	30		30	30	30
5pm				30		30	30	30	30	30	30	30		30	30	30	30	30	30	30	30	30	30		30	30	30	30	30	30
7pm		30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30
9pm	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30
11pm	30	30		30	30	30	30	30	30	30	30	30	30	30	30	30	30		30	30	30	30	30	30	30	30	30	30	30	30
1am	30			30	30	30	30	30	30	30	30		30	30	30	30	30		30	30	30	30	30	30	30	30	30	30	30	30
3am	30	30		30	30	30	30	30		30	30	30	30	30	30	30			30	30			30	30	30	30	30	30	30	30
5am	30	30		30	30	30	30	30	30	30	30	30	30	30	30	30	30		30	30		30	30	30		30	30	30	30	30

09/15/03

TABLE C ADDENDUM 1 OF 3

Date: 7/24/03 1st Kent/Chuck 2nd _____ 3rd _____

Control Range		7 am	9 am	11 am	1 pm	3 pm	5 pm	7 pm	9 pm	11 pm	1 am	3 am	5 am
7-15%	O Reading	8.8						20.6					
	Was adjustment made?	N						N					
Record	Boiler Water Level	0.1						1.3					

Adjustment made to change O	Control Range	Boiler Water	7 am	3 pm	11 pm
1st	1100 max	Alkalinity			
2nd	2400 max	Conductivity			
3rd	30 / 60	Sulfite			

Control Range	Condensate	7 am	3 pm	11 pm	Control Range	Condensate	7 am	3 pm	11 pm
O	Hardness				-16 to 10	Level			
Record	Conductivity				400 - 500	Pump Discharge			
Record	Sulfite				+150	Cooling Pump			

#2 Boiler

Control Range		7 am	9 am	11 am	1 pm	3 pm	5 pm	7 pm	9 pm	11 pm	1 am	3 am	5 am
7-15%	O Reading	8.9	18.3	10.1	10.1	10.3	11.6	12.9	17.1	16.9	17.2	17.2	14.9
	Was adjustment made?	N	N	N	N	N	N	N	N	N	N	N	N
Record	Boiler Water Level	-0.2	0	-0.2	-0.1	0	1.2	0	0	1.2	0	-1	1.2

Adjustment made to change O	Control Range	Boiler Water	7 am	3 pm	11 pm
1st	1100 max	Alkalinity	1040	1380	
2nd	2400 max	Conductivity	210	2680	
3rd	30 / 60	Sulfite	310	230	

Control Range	Condensate	7 am	3 pm	11 pm	Control Range	Condensate	7 am	3 pm	11 pm
O	Hardness	0	0		-16 to 10	Level			
Record	Conductivity	196	46		400 - 500	Pump Discharge			
Record	Sulfite	0.3	0.1		+150	Cooling Pump			

#3 Boiler

Control Range		7 am	9 am	11 am	1 pm	3 pm	5 pm	7 pm	9 pm	11 pm	1 am	3 am	5 am
0-1.0	Hardness	2/0	2/0	2/0	2/0	2/0	2/0	2/0	2/0	2/0	2/0	2/0	2/0
500	Conductivity	304	306	308	305	304	309	304	307	304	304	302	306
7-15%	O Reading												
	Was adjustment made?												
5-3	Scrubber Differential												
7-18	Scrubber inlet water PSI												
Record	Laidig bin level	30+	30+	30+	30+	30+	30+	30+	30+	30+	30+	30+	30+
Record	Boiler water level												

Control Range	Feed Water	7 am	3 pm	11 pm	Control Range	Boiler Water	7 am	3 pm	11 pm
O	Hardness				1100 max	Alkalinity			
Record	Conductivity				2400 max	Conductivity			
Record	Sulfite				30 / 60	Sulfite			

Adjustment made to change O			
1st	Silo Magnehelic Reading		Ash shed % full
2nd	Pond Level		Trailer on line
3rd			

Fire ext #	Condition	7 am	3 pm	11 pm	Multicyclones	Condition	7 am	3 pm	11 pm
68	Satisfactory or Unsat				#1	Clear or plugged			
69	Satisfactory or Unsat				#2	Clear or plugged			
70	Satisfactory or Unsat				#3	Clear or plugged			
71	Satisfactory or Unsat				X-over	Open or closed			
Control	Satisfactory or Unsat				vent	Open or closed			
930	Satisfactory or Unsat				vat live steam	1, 2, 3, 5			

Observations and Comments

0630 #3 Boiler Shut Down - Cleaned Scrubbers
 0840 #1 Boiler Shut Down
 #2 Boiler: High Conductivity & Alkalinity Due to Low Steam Flow

Date: 7/27/03 #1 Boiler
 1st CLARK 2nd _____

TABLE C ADDENDUM 2 OF 3
 3rd MALEU

Control Range		7 am	9 am	11 am	1 pm	3 pm	5 pm	7 pm	9 pm	11 pm	1 am	3 am	5 am
7-15%	O Reading	4.6	7.7	6.3	5.3	10.0	6.4	3.1	4.7	6.5	OFF	OFF	OFF
	Was adjustment made?		N	N	N	N	N	N	N	N	L	L	L
Record	Boiler Water Level	.8	0	.1	0	-1.1	.2	.1	0	0			

Adjustment made to change O		Control Range		Boiler Water		7 am	3 pm	11 pm
1st		1100 max	Alkalinity	490				50
2nd		2400 max	Conductivity	1082				1247
3rd		30/60	Sulfite	.8				5.0

Control Range		Condensate			Control Range		Condensate		
		7 am	3 pm	11 pm			7 am	3 pm	11 pm
O	Hardness				-16 to 10	Level			
Record	Conductivity				400 - 600	Pump Discharge			
Record	Sulfite				+150	Cooling Pump			

#2 Boiler

Control Range		7 am	9 am	11 am	1 pm	3 pm	5 pm	7 pm	9 pm	11 pm	1 am	3 am	5 am
7-15%	O Reading	6.4	5.2	5.1	5.5	6.9	7.7	4.5	5.2	6.4	OFF	OFF	OFF
	Was adjustment made?	N	N	N	N	N	N	N	N	N	L	L	L
Record	Boiler Water Level	1.2	.2	-.1	0	-1.3	.1	.1	3	1.1			

Adjustment made to change O		Control Range		Boiler Water		7 am	3 pm	11 pm
1st		1100 max	Alkalinity	640				760
2nd		2400 max	Conductivity	1271				1622
3rd		30/60	Sulfite	.7				3.1

Control Range		Condensate			Control Range		Condensate		
		7 am	3 pm	11 pm			7 am	3 pm	11 pm
O	Hardness				-16 to 10	Level			
Record	Conductivity				400 - 600	Pump Discharge			
Record	Sulfite				+150	Cooling Pump			

#3 Boiler

→ DOWN 7/25 & 7/26

Control Range		7 am	9 am	11 am	1 pm	3 pm	5 pm	7 pm	9 pm	11 pm	1 am	3 am	5 am
0-1.0	Hardness	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
500	Conductivity	306	306	305	305	305	305	304	310	310	310	307	304
7-15%	O Reading	11.9	15.3	13.1	14.9	15.8	17.9	17.0	17.9	17.5	OFF	OFF	OFF
	Was adjustment made?	N	N	N	N	N	N	N	N	N	L	L	L
5-3	Scrubber Differential	2	2	2.5	2	2	2.5	2	2	2	L	L	L
7-18	Scrubber inlet water PSI	25	25	25	25	25	25	25	25	25	L	L	L
Record	Laidig bin level	304	304	304	304	304	304	304	304	304	304	304	304
Record	Boiler water level	-.1	-.1	.1	-.1	-.1	.9	.5	.2	.1	OFF	OFF	OFF

Control Range		Feed Water			Control Range		Boiler Water		
		7 am	3 pm	11 pm			7 am	3 pm	11 pm
O	Hardness	0		0	1100 max	Alkalinity	230		250
Record	Conductivity	112		329	2400 max	Conductivity	577		964
Record	Sulfite	.1		.14	30/60	Sulfite	.1		1.2

Adjustment made to change O

1st		Silo Magnehelic Reading		Ash shed % full
2nd		Pond Level		Trailer on line
3rd				

Fire ext #	Condition	7 am	3 pm	11 pm	Multicyclones	Condition	7 am	3 pm	11 pm
68	Satisfactory or Unsat				#1	Clear or plugged			
69	Satisfactory or Unsat				#2	Clear or plugged			
70	Satisfactory or Unsat				#3	Clear or plugged			
71	Satisfactory or Unsat				X-over	Open or closed			
Control	Satisfactory or Unsat				vent	Open or closed			
930	Satisfactory or Unsat				val live steam	1, 2, 3, HT			

Observations and Comments

TABLE C ADDENDUM 3 OF 3

Coastal Plywood Company
Daily Boiler Log

Date: 7/31/03 Op: 1st CLARK 2nd _____ 3rd MANCO

#1 Boiler

Control Range	7 am	9 am	11 am	1 pm	3 pm	5 pm	7 pm	9 pm	11 pm	1 am	3 am	5 am
5 - 15% O2 Reading	8.5	6.9	6.8	7.2	7.8	6.8	7.6	7.1	7.2	15.0	7.3	7.3
-2 to +2 Boiler Water Level, in.	.4	.3	.1	0	0	-.5	.1	0	.4	1.2	.4	.2

#2 Boiler

Control Range	7 am	9 am	11 am	1 pm	3 pm	5 pm	7 pm	9 pm	11 pm	1 am	3 am	5 am
5 - 15% O2 Reading	9.1	5.3	5.4	5.6	6.8	6.1	6.1	6.7	7.7	5.1	5.7	8.0
-2 to +2 Boiler Water Level, in.	1	0	.1	0	.1	-.2	.1	.1	.3	.2	.1	.2

#3 Boiler

— DOWN 7/28 - 7/30

Control Range	7 am	9 am	11 am	1 pm	3 pm	5 pm	7 pm	9 pm	11 pm	1 am	3 am	5 am
5 - 15% O2 Reading	9.0	14.4	14.5	15.0	12.9	13.5	14.4	14.6	14.1	9.6	14.9	14.1
-2 to +2 Boiler Water Level, in.	-.8	-.1	.4	0	0	0	.2	0	.4	.2	.2	.4
1.5 - 8.0 Scrubber Pressure Drop, in. H2O	2.5	2	2	1.5	3	3	2.5	2.5	3	2.5	3	3
10 - 40 Scrubber Header Water, psi	25	25	25	25	25	25	25	25	25	25	25	24

Water/Pump Conditions

Control Range	7 am	9 am	11 am	1 pm	3 pm	5 pm	7 pm	9 pm	11 pm	1 am	3 am	5 am
=0 Softened H2O Hardness	10	10	10	10	10	10	10	10	10	10	10	10
<600 Softened H2O Conductivity	306	306	304	304	304	304	305	304	306	309	310	310

	7 am	3 pm	11 pm						
=0 Condensate H2O Hardness	0	0	0						
<500 Condensate H2O Conductivity	60	130	90						
2 - 10 Condensate Sulfite, ppm	2	4	4						
	#1 Blr	#2 Blr	#3 Blr	#1 Blr	#2 Blr	#3 Blr	#1 Blr	#2 Blr	#3 Blr
<1100 Boiler Water Alkalinity	450	1100	350	610	900	400	440	780	450
<2400 Boiler Water Conductivity	1017	2210	803	1531	1895	1201	3204	1513	1000
30 - 60 Boiler Water Sulfite, ppm	38	18	24	40	30	32	20	30	30
	7 am	3 pm	11 pm						
-16 to +10 Large Flash Tank Level, in.	6.5	1.4	7.0						
400 - 600 Cond Return Pumps, psi	450	420	450						
>150 Cooling Water Pumps, psi	160	160	160						

Notation Of Every Reading That Was Out Of Range And Corrective Action Taken

(Summary Only: Write Detailed Explanation in Boiler Op Logbook)

Time	Summary Only: Write Detailed Explanation in Boiler Op Logbook)
7:00A.M.	LOW SO2 READINGS DUE TO COLD PLANT START UP.