

Rayonier

Performance Fibers

Fernandina Mill

November 2, 2005

Certified Mail, Return Receipt Requested

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

RECEIVED

NOV 04 2005

BUREAU OF AIR REGULATION

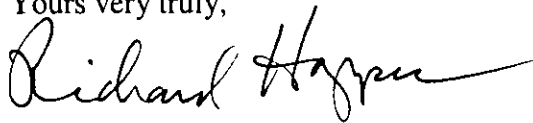
RE: October 12, 2005 completed letter Response regarding Request to Install No. 6 Power Boiler, and the No. 6 Batch Digester system
0890004-018-AC

Dear Mr. Koerner:

As noted in Rayonier's October 20, 2005 response, issue 7, page 9, the reports for the 2004 and 2005 NOx tests were to be attached. At the time of the submission the formal report for the 2005 nitrogen oxides emissions test was not available, therefore only three reports were provided. This report has now been received from our emissions testing contractor and is attached for your review.

If there are any questions, please contact me at (904) 277-1480.

Yours very truly,



Richard W. Hopper
Manager, Environmental Operations

cc: Christopher Kirts – FDEP
Trina Veilhauer – DARM
JFP, DET

Registered to ISO 9002



Certificate No. A2087

**NITROGEN OXIDES EMISSIONS TEST REPORT
FOR
SULFITE RECOVERY BOILER AND SCRUBBER B
AT
RAYONIER
FERNANDINA BEACH, FLORIDA**

Prepared for:

**RAYONIER
P.O. Box 2002
Foot of Gum Street
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Prepared by:

**Source Testing And Consulting Services, Inc.
1100 Purple Glory Drive
Apex, North Carolina 27502**

October 2005

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1.0 INTRODUCTION

1.0 INTRODUCTION

Under contract to Rayonier, Source Testing and Consulting Services, Inc. (STACS) performed a series of emission tests at Rayonier's Fernandina Beach, Florida facility during 2005.

Emission testing was performed for the Sulfite Recovery Boiler and Scrubber B. The purpose of the tests was to provide gaseous emissions data for the units. This document presents the results from the gaseous emissions testing for nitrogen oxides (NO_x).

All testing followed the procedures and quality control guidelines as prescribed in EPA Methods 3A, and 7E of (40 CFR Pt 60, Appendix A). Testing at the Sulfite Recovery Boiler occurred on June 8, 2005. The gaseous tests at Scrubber B occurred on July 8 and July 14, 2005.

The test methods that were used for this test program are listed briefly below:

EPA Method 3A: Continuous determination of oxygen and/or carbon dioxide content in the flue gas. A paramagnetic analyzer is used for O₂ determination for this test program.

EPA Method 7E: Determination of nitrogen oxides using continuous emissions monitoring techniques with a chemiluminescent analyzer (RATAS).

All procedures and quality control guidelines specified in the appropriate methods, including 40CFR60 Appendix A, and in the EPA Quality Assurance Handbook for Air Pollution Measurement Systems - Volume III were strictly followed during the test program, in addition to STACS' more stringent internal quality control standards.

Section 2.0 of this report provides a brief process description and a diagram of the sample point locations. Section 3.0 presents the test results. Section 4.0 outlines the procedures and test methods used and Section 5.0 discusses the quality assurance/quality control measures followed during sampling and analysis. Field data sheets, laboratory data, sample calculations, calibration data, process data, and a list of project participants are included in the Appendices to this report.

2.0 PROCESS DESCRIPTION AND SAMPLE POINT LOCATIONS

2.1 SULFITE RECOVERY BOILER

2.1.1 PROCESS DESCRIPTION

The Sulfite Recovery Boiler produces steam by the combustion of spent sulfite liquor (SSL). Emissions from the unit are controlled by venting the effluent gases through a Katzen wet scrubber followed by venting the effluent gases through a series of Brinks mist filters.

2.1.2 REFERENCE METHOD SAMPLING LOCATION

The reference method sampling port was located in the vicinity of the CEMs Probe in the exhaust ductwork from the unit. The ductwork is circular. Three sampling points were used for sampling the duct for each run and were located as described in PS2 Section 3.2 (40 CFR 60, Appendix B). The location is not required to meet EPA Method 1 criteria for the test methods used. A schematic diagram typical of the stack sampling location is included in Figure 2-2.

2.2 SCRUBBER B

The combined emissions from Boilers 2 and 3 are controlled by Scrubber B. Boiler 2 is fired with bark and Boiler 3 is fired with bark and/or oil.

2.2.1 PROCESS DESCRIPTION AND SAMPLING LOCATION

Gaseous and particulate matter emissions from scrubber B are controlled by venturi type scrubbers with entrained water demisters downstream of the venturi. The scrubber stack is 10' in inside diameter and was sampled through two ports 90° apart around the circumference of the stack. The nearest downstream disturbance from the sampling location was the atmospheric exhaust which was located one duct diameter away from the test ports. The nearest upstream disturbance was the top of the scrubber which was four diameters away from the ports. Three sampling points were used for sampling the duct for each run and were located as described in PS2 Section 3.2 (40 CFR 60, Appendix B). A schematic diagram typical of the stack sampling location is included in Figure 2-1.

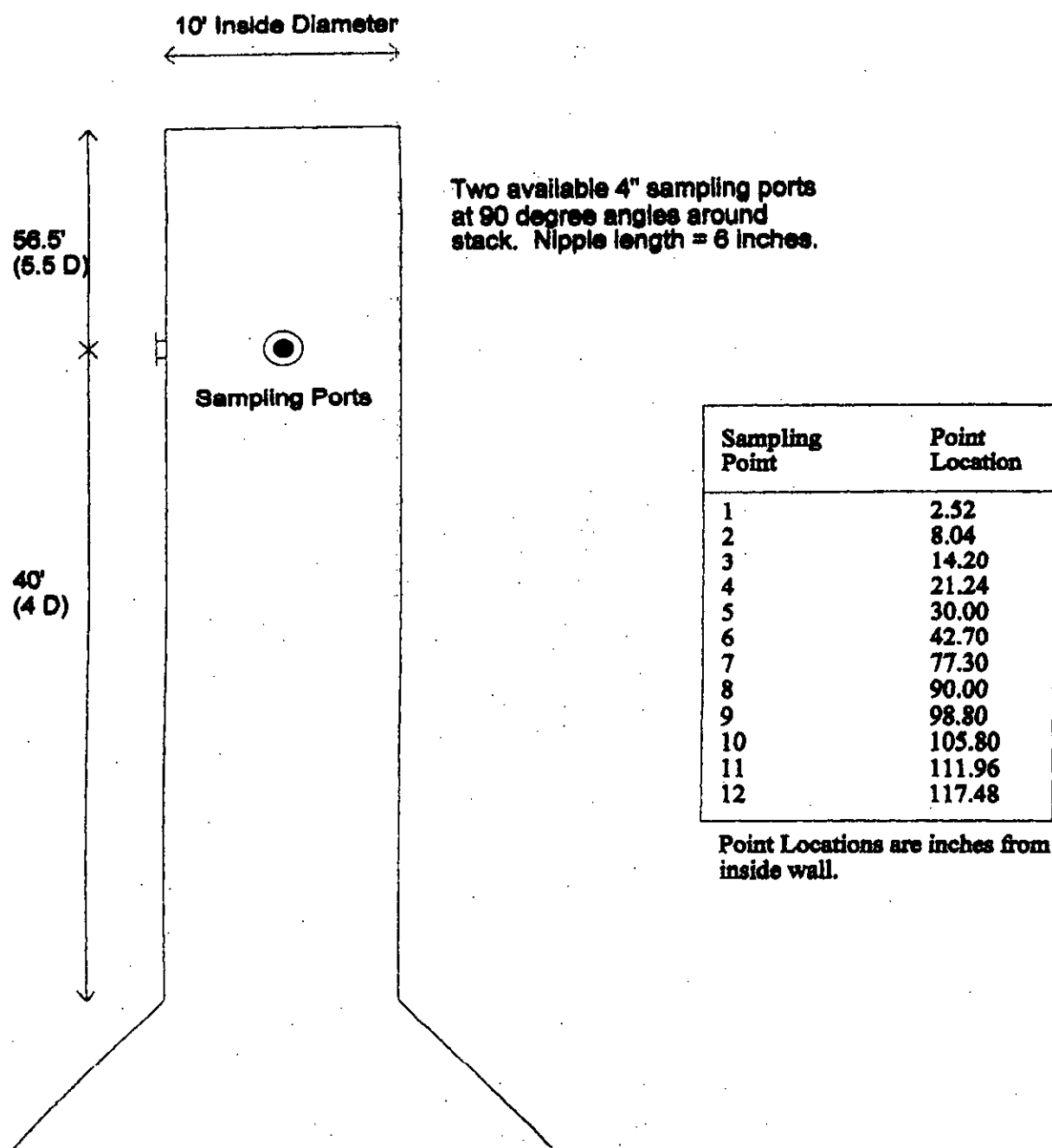


Figure 2-1. A & B Scrubber Stack Schematic Diagram

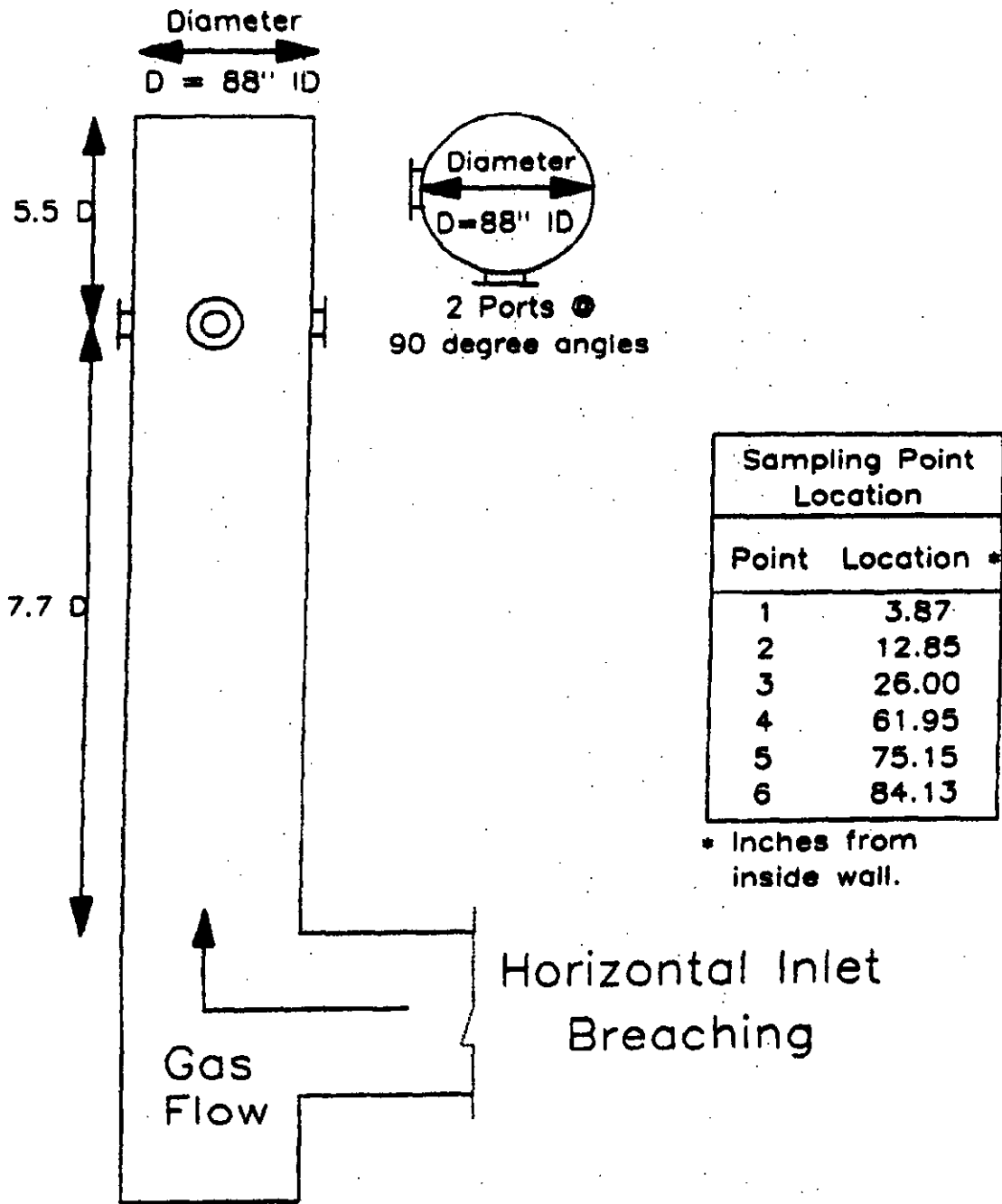


Figure 2-2. Sulfite Recovery Boiler Stack Schematic Diagram

3.0 EMISSION TEST RESULTS

3.0 EMISSION TEST RESULTS

Testing for gaseous emissions was conducted for the Rayonier's Sulfite Recovery Boiler on June 8, 2005. Gaseous tests for Scrubber B were conducted on July 8 and July 14, 2005. The tests at Scrubber B included operations with bark only as the fuel and a combination of bark and oil. NO_x emissions are presented as parts per million volume on a dry basis (ppmV, d). Oxygen (O₂) is presented on a percent by volume dry basis. NO_x emission rates are provided in lb/hr. The raw reference data collected during the tests is included in Appendix A. Calibration, bias/drift calculations, and cylinder certificates are found in Appendix B.

Three points were traversed for the reference method sampling during each test. Three one hour test runs were conducted using the procedures outlined in EPA Methods 3A, and 7E. The sampling occurred while the units were at prescribed testing conditions for each test run.

3.1 SULFITE RECOVERY BOILER TEST RESULTS

The gaseous emission testing for the sulfite recovery boiler occurred on June 8, 2005. Testing was concurrent with the SO₂ RATA tests. The boiler process data will therefore be the same as that data presented for the particulate and RATA tests. The results of the gaseous emissions tests are presented in Table 3-1.

3.2 SCRUBBER B TEST RESULTS

The gaseous emissions testing for Scrubber B occurred on July 8 and 14, 2005. Testing was conducted with and without supplemental oil firing with Unit 3 in operation emitting through Scrubber B on July 8. The tests on July 14 were performed with a combination of bark and oil fuel with only Unit 3 in operation. The boiler process data are included in Appendix D. The results of the gaseous emissions tests are presented in Tables 3-2 and 3-3.

Table 3-1. Sulfite Recovery Boiler Test Results, June 8, 2005

	6/8/05	6/8/05	6/8/05	
Date	6/8/05	6/8/05	6/8/05	
Start	9:00	10:54	12:53	
Stop	10:41	12:21	14:31	
Run	1	2	3	AVERAGE
Emission Parameter				
Volumetric Flow Rate, dscfm	110,182	119,105	119,731	116,339
O2 (%V,dry)	4.5	4.1	4.9	4.5
NOx (ppmV,dry)	590.3	576.2	637.3	601.3
NOx (@ 7% O2)	500.3	476.7	553.7	510.2
NOx, lb/hr	465.9	491.7	546.6	501.4

Note: Volumetric flow rate from concurrent particulate matter tests that have been reported separately.

Reference: Source Testing and Consulting, Inc. 2005

Table 3-2. Scrubber B Test Results, July 8, 2005

Bark Fuel Only, Boilers 2 and 3 On							
Date	7/8/05		7/8/05		7/8/05		
Start	8:59		10:22		11:38		
Stop	9:59		11:22		12:38		
Run	1		2		3		AVERAGE
Operating Mode							
Boiler No.	2	3	2	3	2	3	
On/Off	On	On	On	On	On	On	
Bark Feed Rate, tons/hr	33.2		36.5		34.8		34.8
Oil Feed Rate, gal/hr	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Bark Heat Input Rate, million Btu/hr	216.6		213.8		222.6		217.7
Oil Heat Input Rate, million Btu/hr	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Heat Input, million Btu/hr	216.6		213.8		222.6		217.7
Emission Parameter							
O2 (%V,dry)	12.2		12.6		12.4		12.4
NOx (ppmV,dry)	56.7		51.2		52.6		53.5
NOx (@3%O2)	116.7		110.5		110.7		112.6
NOx (lb/MMBtu)	0.156		0.148		0.148		0.151
NOx, lb/hr	33.8		31.7		33.7		33.1

Bark and Oil Fuel, Boilers 2 and 3 On							
Date	7/8/05		7/8/05				
Start	13:58		15:08				
Stop	14:58		16:08				
Run	1		2				AVERAGE
Operating Mode							
Boiler No.	2	3	2	3			
On/Off	On	On	On	On			
Bark Feed Rate, tons/hr	22.7		22.6				22.7
Oil Feed Rate, gal/hr	0.0	785.4	0.0	792.6			789.0
Bark Heat Input Rate, million Btu/hr	130.6		135.9				133.3
Oil Heat Input Rate, million Btu/hr	0.0	124.0	0.0	125.0			124.5
Total Heat Input, million Btu/hr	254.6		260.9				257.8
Emission Parameter							
O2 (%V,dry)	12.0		12.0				12.0
NOx (ppmV,dry)	64.9		65.0				65.0
NOx (@3%O2)	130.5		130.7				130.6
NOx (lb/MMBtu)	0.171		0.171				0.171
NOx, lb/hr	43.5		44.7				44.1

Reference: Source Testing and Consulting, Inc. 2005

Table 3-3. Scrubber B Test Results, July 14, 2005

Bark and Oil Fuel, Boiler 2 Off, Boiler 3 On						
Date	7/14/05		7/14/05		7/14/05	
Start	9:01		10:18		11:38	
Stop	10:01		11:19		12:39	
Run	1		2		3	
	AVERAGE					
Operating Mode						
Boiler No.	2	3	2	3	2	3
On/Off	Off	On	Off	On	Off	On
Bark Feed Rate, tons/hr	13.1		12.8		10.8	
Oil Feed Rate, gal/hr	0.0	894.6	0.0	904.7	0.0	921.2
Bark Heat Input Rate, million Btu/hr	90.3		75.6		88.2	
Oil Heat Input Rate, million Btu/hr	0.0	145.9	0.0	147.6	0.0	150.3
Total Heat Input, million Btu/hr	236.2		223.2		238.5	
Emission Parameter						
O2 (%V, dry)	12.6		13.2		12.4	
NOx (ppmV, dry)	73.2		69.8		72.0	
NOx (@3%O2)	157.9		162.3		151.6	
NOx (lb/MMBtu)	0.206		0.211		0.197	
NOx, lb/hr	48.6		47.1		47.1	

Reference: Source Testing and Consulting, Inc. 2005

4.0 FIELD AND ANALYTICAL PROCEDURES

4.0 FIELD AND ANALYTICAL PROCEDURES

4.1 INSTRUMENTAL REFERENCE METHODS

Stack gas emissions of oxides of nitrogen (NO_x) were measured using continuous instrumental techniques. Diluent oxygen concentration was also measured using continuous instrumental techniques. These tests are performed in accordance with EPA Methods 3A for oxygen and 7E for NO_x as outlined in Title 40, Part 60, Appendix A of the Code of Federal Regulations. Copies of all on-line instrumental reference method data collected during the testing are included in the Appendices to this report. Calibration records are also given with the data.

Flue gas sample is withdrawn from the stack at a constant rate via a heated stainless steel sample probe. The sample probe is equipped with an additional stainless steel line to enable probe tip calibrations. The probe is of sufficient length to allow traversing across the duct as required by the performance specifications and the applicable test methods. Extracted sample is passed from the probe through a filter and a heated teflon sample line to the moisture removal system. The moisture removal system (gas conditioner) is designed for minimal contact between condensate and sample gas in order to prevent any reaction between the moisture and the measured pollutants. All components of the sampling and gas conditioning system are fabricated from borosilicate glass, teflon, or stainless steel. The gas conditioning system consists of a continuously downward teflon condenser coil (to prevent bubbling) and two glass knockout condenser traps. Moisture is continuously removed from the traps by an external peristaltic pump. The gas conditioning system is cooled in an ice water bath to facilitate complete moisture removal. Dry gas sample from the gas conditioner is transported to the instrument enclosure via an unheated 1/4-inch O.D. teflon tube to a teflon-lined diaphragm pump,

which delivers positive pressure sample to the instrument system. Flow control valves are used to deliver the gas sample at a regulated positive pressure to the reference method analytical instruments through a teflon and stainless steel manifold delivery network.

Flow and pressure to all monitors is held constant by monitoring sample and bypass rotameters. A diagram of the instrumental reference method sampling and analysis system used for the test program is given in Figure 4-1.

The sampling system is leak checked by passing known calibration gas standards up through a calibration line to the end of the probe. The gas standards are then pulled back through the sampling probe at stack pressure and subsequently through the entire sampling system to the instrument system. An oxygen analyzer response of less than or equal to 0.5% V to a zero oxygen standard is considered an acceptable leak check.

Analyzer calibration error is calculated by the difference between the known calibration gas concentration and the concentration exhibited by the analyzer. Bias checks are performed by comparing calibration responses through the entire sampling system to those exhibited at the analyzer. EPA Protocol #1, NIST traceable standard calibration gases are used to calibrate the analyzers.

Acceptable system performance checks do not exceed $\pm 2\%$ calibration error, $\pm 5\%$ system bias check, $\pm 3\%$ zero drift, and $\pm 3\%$ upscale span drift.

Instrument response time is found by alternating zero nitrogen and upscale span gases through the bias check line and recording the upscale and down scale time. The response time of the CEM sampling system is performed to determine the length of time for the CEMs to respond to changes in the stack gas exhaust stream. Known, Protocol 1 reference gases and zero nitrogen are passed through the heated sample line, sample

conditioning system and the manifold delivery network to the continuous emission monitors.

4.2 DATA ACQUISITION

The STACS data acquisition system (DAS) for the CEM analyzers consists of a Microlink 751 USB Data Interface and a proprietary STACS Data Acquisition program. The data are stored on disk as well as on a printed hard copy for each run. The system has 16-bit analog to digital conversion resolution (1 in 64,000) and a scan rate of approximately 1200 readings per minute. Data is averaged and reported by the DAS on a 30 second basis. The averaging time may be changed if desired. The system is capable of displaying the on line results in measured units and corrected to 15% O₂ as well as in lb/MMBtu. Averages are generated immediately at the end of each test run.

4.3 REFERENCE METHOD ANALYZER PRINCIPLES OF OPERATION

4.3.1 METHOD 3A: OXYGEN ANALYSIS

Flue gas sample is continuously analyzed for oxygen by a Servomex Model 1400A paramagnetic instrument. The Servomex 1400A analyzer uses electron paramagnetic resonance to detect the presence of oxygen molecules. Unlike most substances, oxygen has a triplet electron ground state, which leaves one electron unpaired, making it a paramagnetic molecule. This electron may have one of two quantum spin states ($m_s = +/- 2$). By applying an alternating electromagnetic field of the proper frequency, the Servomex 1400A O₂ analyzer induces resonance between the two spin quantum states. In effect, the O₂ analyzer measures the electromagnetic energy absorbed by O₂ molecules at the resonant frequency.

4.3.2 METHOD 7E: OXIDES OF NITROGEN ANALYSIS

A Thermo Electron Model 10S instrument is used to analyze NO_x. The principle of operation of this instrument is a chemiluminescent reaction in which ozone (O₃) reacts

with nitric oxide (NO) to form oxygen (O_2) and nitrogen dioxide (NO_2). During this reaction, a photon with a specific ultraviolet wavelength is emitted which is detected by a photomultiplier tube. The instrument is capable of analyzing total oxides of nitrogen ($NO + NO_2$) by thermally converting NO_2 to NO in a separate reaction chamber prior to the photomultiplier tube, if desired. The analyzer is operated in the NO_x mode during sampling.

A converter efficiency test is performed on the Thermo Electron Model 10S before the test series. During this procedure, a leak-free Tedlar bag is partially filled with a Protocol 1 NO_x reference gas. The Tedlar bag is then filled to capacity with a Certified Oxygen reference gas standard. The contents are well mixed and immediately connected to the sample inlet of the analyzer. The Tedlar bag is analyzed by the analyzer in the " NO_x " mode for at least thirty minutes. As the oxygen is exposed to the NO in the bag, the NO begins to react to form NO_2 . A decrease in response in the NO_x mode of more than 2% absolute indicates that corrective action is required.

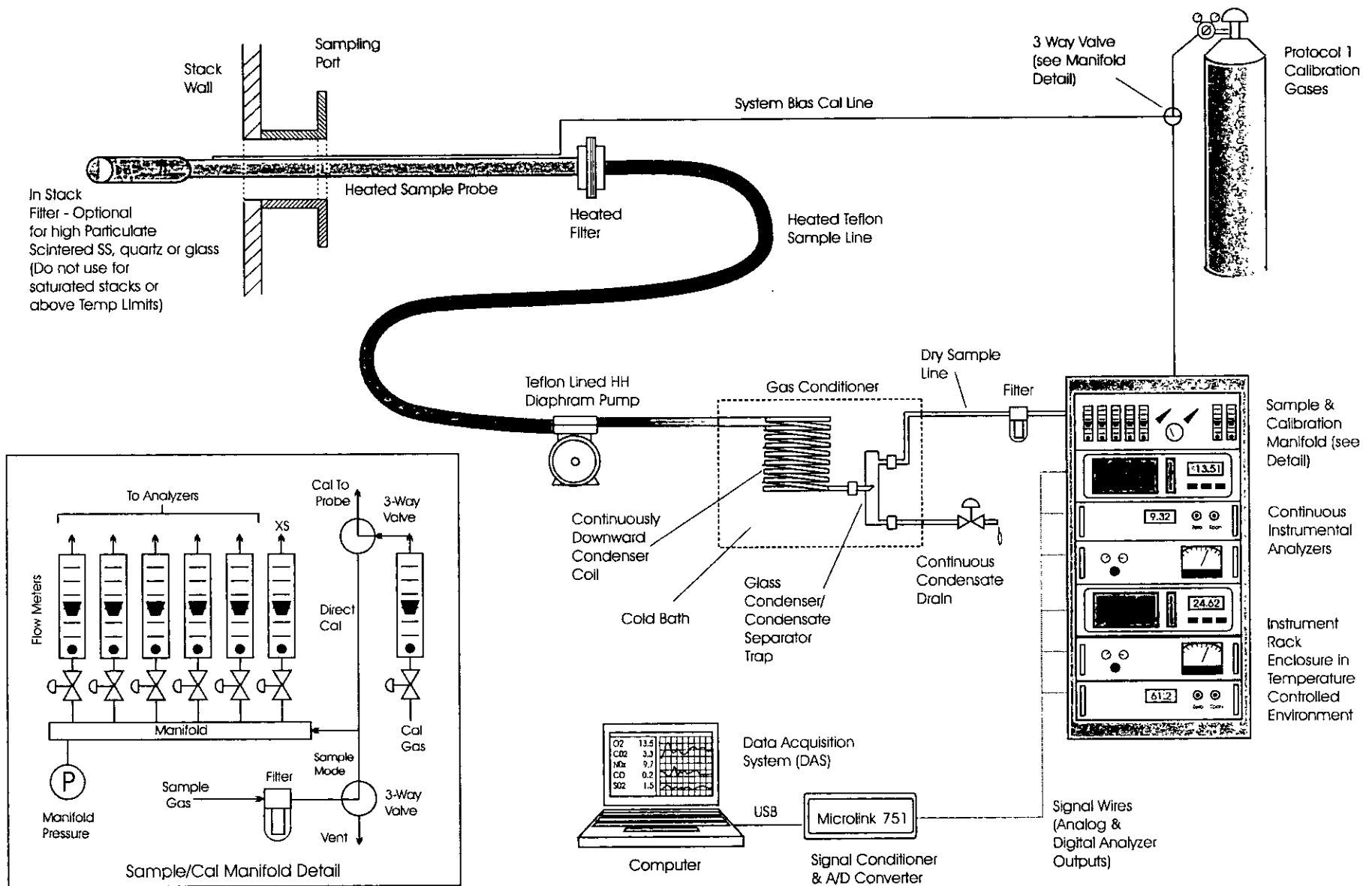


Figure 4-1. Schematic Diagram of STACS Instrumental Reference Method System

5.0 QUALITY ASSURANCE/QUALITY CONTROL

5.0 QUALITY ASSURANCE/QUALITY CONTROL

Strict Quality Assurance/Quality Control (QA/QC) measures were observed for all sampling and analysis performed for the Rayonier test program. The STACS QA/QC program is designed to provide the highest quality data in terms of the accuracy and precision of the measurements as well as the representativeness and comparability of the results.

Accuracy is the degree to which a measurement agrees to the true value or to an accepted reference value. Precision is the degree of reproducibility (or agreement) of a set of individual measurements of an identical property.

The objective of the overall QA/QC program is to provide guidelines in terms of accuracy and precision, which can be used to assess the uncertainty in the results and to substantiate the data in terms of the use of, accepted procedures. Quality Control can be defined as the use of operational techniques and activities that sustain good quality data. Adherence to accepted sampling and analytical methods and procedures (and specifically noting any aberrations or exceptions to these procedures) is an example of quality control. Quality Assurance includes all those planned and systematic activities necessary to ensure that the accuracy and precision of the results meets the needs of the testing program.

The QA program includes the activities planned by routine operators and analysts to provide an assessment of test data precision (and accuracy). Examples of implementation of QA measures include routine calibration checks to assess the bias and drift of an analyzer after each test run. The measurement system bias is an indicator of the accuracy of the system and the drift is an indication of the precision of the measurements.

The quality assurance/quality control measures for sampling and analysis included in the following documents were strictly followed during the emissions test program, except as noted below and elsewhere in this document. The procedures are incorporated by reference into the quality assurance program for this effort as they apply to the collection, analysis, and calculation of pollutant concentrations and mass emission rates from the combustion turbines:

The Code of Federal Regulations, Title 40, Part 60, Appendix A., EPA Methods 1, 2, 3A, 4, 5, 6C, 7E, 10.

The Quality Assurance Handbook for Air Pollution Measurement Systems - Volume III - Stationary Source Specific Methods (EPA-600/4-77-027b) Sections 3.0-3.4.

The following sections provide a brief synopsis of the internal QA program that is used for this test program. Quality assurance documentation is included in Appendix C.

5.1 CALIBRATIONS AND DRIFT ASSESSMENTS

At the beginning of each test day, the EPA Reference Method 6C, 7E, 10 and 3A test equipment is calibrated, and adjusted as required, on a two-point basis. EPA Protocol #1, NIST traceable standard calibration gases are used to calibrate the analyzers.

Subsequently, additional calibration standards are introduced to the analyzers to check the linearity of the instrument response. If the linearity of the instrument is within +/-2% of full scale of the calibration standard value, the calibration is accepted. Otherwise, corrective maintenance is performed, and the instrument is re-calibrated. During this time, bias checks are also performed by introducing calibration standards directly to the instrument manifold and through the entire sampling system and comparing the results.

Calibration checks are performed through the entire sampling system at the conclusion of each test run to determine calibration drift and any change in sample system bias. EPA Methods 3A and 7E require a bias/drift correction to be applied to the test data for each run based on pre-test and post-test bias and drift calibration checks. All data were bias/drift corrected for this program for consistency and in the interest of obtaining the highest quality data. The equation used for the bias corrections is provided in EPA Method 6C (Equation 6C-1).

Sampling system bias is assessed by introducing a mid-range or high-range gas through the sampling system and back to the analyzers. The maximum allowable bias is 5% of the value the analyzer read for the same gas when introduced to the probe tip as a percent of the span of the analyzer. STACS' internal QA/QC program requires that corrective action be taken if the bias exceeds 2% of the span.

Sampling system drift checks are subsequently performed at the conclusion of each test run. Corrective actions are taken if the drift checks exceed 2% of span after any test run. All calibration gases were EPA Protocol 1, NIST traceable standards with a rated accuracy of +/- 1%. Calibration gas analysis certificates are included in the test report.

5.2 NO₂ CONVERTER EFFICIENCY

Prior to the test series, an NO₂ to NO converter efficiency test is performed for the NO_x analyzer as prescribed in EPA Method 7E and 20. The procedure used for testing the converter efficiency is given below:

- Fill a leak-free Tedlar bag approximately half full with an NO in N₂ blend.
- Fill the remainder of the bag with 0.1 UHP grade air.
- Immediately attach the NO/Air mixture to the inlet of the NO_x monitor being used.
- Allow the monitor to sample the gas in the bag for 30 minutes.

As the O₂ and NO in the bag are exposed to each other a reaction occurs which changes the NO to NO₂. An attenuation in response over time of greater than two percent absolute indicates that the converter efficiency is unacceptable. Two NO_x analyzers were used for this test program

5.3 INSTRUMENT RESPONSE TIME

Maximum instrument system response time is determined by alternately passing zero and span gas through the entire sampling system and noting the time required for the monitors to achieve a change of 95% of the final concentrations. Both upscale and down scale response times are recorded. The supporting data sheets and DAS printouts are included in the test report.

5.4 LEAK CHECKS

Since all calibration drift and bias are performed through the entire sampling system, leak-checks are incorporated before and after each run. The criterion used for this test is an oxygen response to a zero gas of less than 0.5% O₂. Leak checks are also incorporated into the zero and span drift checks at the end of each run since the calibration gas is passed through the entire sampling system for each post test drift check. Acceptable bias checks are therefore also an indication that leakage is not occurring in the system. In addition, STACS conducts a vacuum leak check prior to initial sampling.

APPENDIX A
EMISSION DATA AND SAMPLE CALCULATIONS

To Convert Pollutant Concentrations to 7% O₂

$$ppmV @ 7\% O_2 = ppmV \times \frac{13.9}{20.9 - O_2}$$

Where:

ppmV = The concentration of the pollutant in parts per million by volume, dry basis.

O₂ = The concentration of O₂ in percent volume, dry basis.

ppmV @ 7% O₂ = The concentration of the pollutant normalized to 7% O₂.

To Convert Pollutant Concentrations to 3% O₂

$$ppmV @ 3\% O_2 = ppmV \times \frac{17.9}{20.9 - O_2}$$

Where:

ppmV = The concentration of the pollutant in parts per million by volume, dry basis.

O₂ = The concentration of O₂ in percent volume, dry basis.

ppmV @ 3% O₂ = The concentration of the pollutant normalized to 3% O₂.

To Convert Pollutant Concentrations to lb/MMBtu

$$lb/MMBtu = ppmV \times CONV \times F_d \times \frac{20.9}{20.9 - O_2}$$

where:

ppmV = The concentration of the pollutant in parts per million by volume, dry basis.

O₂ = The concentration of oxygen in percent volume, dry basis.

lb/MMBtu = Pollutant emission rate in pounds per million Btu.

F_d = The oxygen based dry F-factor for a given fuel in scf@0% O₂/MMBtu (8710 for Natural Gas and 9190 for fuel oil).

CONV = conversion factor to convert pollutant concentration in ppmV to lb/scf.

CONV = 1.194 x 10⁻⁷ lb/scf \$ ppmV for NO_x.

TO BIAS/DRIFT CORRECT RAW DATA FOR EPA METHODS 3A, 6C, AND 7E:

$$C_{gas} = (\bar{C} - C_o) \frac{C_{ma}}{C_m - C_o} \quad \text{Eq. 6C-1}$$

Where:

C_{gas} = Effluent gas concentration, dry basis, ppm V or %V

\bar{C} = Average gas concentration indicated by gas analyzer, dry basis, ppm V or %V

C_o = Average of initial and final system calibration bias check responses for the zero gas, ppm V or %V

C_m = Average of initial and final system calibration bias check responses for the upscale calibration gas, ppm V or %V

C_{ma} = Actual concentration of the upscale calibration gas, ppm V or %V

Source Testing And Consulting Services, Inc.

Scrubber B - Power Boiler 3

8-Jul-05		RAYONIER		Fuel: Bark		Unit #		SCRUBBER B		
Parameter		O2	NOx	CO	CO2	NOx	CO	0.00	0.00	Comments
Units		%V	ppmV	ppmV	%	@15%O2	@15%O2	0.00	0.00	
8-Jul-05	8:10:49	20.09	0.26	1.28	1.04	1.86	9.31			ce o2=20.0
8-Jul-05	8:10:54	20.12	0.26	1.38	1.04	1.93	10.38			ce o2=20.0
8-Jul-05	8:10:59	20.12	0.26	0.49	1.03	1.93	3.71			ce o2=20.0
8-Jul-05	8:11:04	20.09	0.26	0.39	1.00	1.85	2.85			ce o2=20.0
8-Jul-05	8:11:09	20.12	0.26	0.29	1.04	1.93	2.23			ce o2=20.0
8-Jul-05	8:11:14	20.10	0.26	0.39	1.01	1.88	2.89			ce o2=20.0
8-Jul-05	8:11:19	20.16	0.27	0.39	1.02	2.12	3.14			ce o2=20.0
8-Jul-05	8:11:24	20.13	0.26	0.39	1.03	1.96	3.01			ce o2=20.0
8-Jul-05	8:11:29	20.10	0.26	0.39	1.00	1.89	2.91			ce o2=20.0
8-Jul-05	8:11:39	20.12	0.27	0.39	1.00	2.01	2.98			lb
8-Jul-05	8:11:44	20.12	0.27	0.39	1.01	2.00	2.96			lb
8-Jul-05	8:11:49	20.16	0.27	0.49	1.03	2.12	3.93			lb
8-Jul-05	8:11:54	20.08	0.26	0.29	1.00	1.84	2.12			lb
8-Jul-05	8:11:59	20.13	0.26	0.29	1.00	1.96	2.27			lb
8-Jul-05	8:12:04	20.09	0.27	0.39	1.00	1.93	2.87			lb
8-Jul-05	8:12:09	20.12	0.26	0.29	1.00	1.92	2.22			lb
8-Jul-05	8:12:14	20.20	0.27	0.39	1.03	2.22	3.30			lb
8-Jul-05	8:12:19	20.14	0.26	0.39	1.03	1.98	3.04			lb
8-Jul-05	8:12:24	20.16	0.26	0.49	1.03	2.05	3.94			lb
8-Jul-05	8:12:29	20.13	0.26	0.39	1.00	1.96	3.02			lb
8-Jul-05	8:12:34	20.17	0.27	0.49	1.00	2.15	3.98			lb
8-Jul-05	8:12:39	20.15	0.27	0.39	1.03	2.09	3.09			lb
8-Jul-05	8:12:44	20.10	0.27	0.29	1.00	1.96	2.18			lb
8-Jul-05	8:12:49	20.15	0.27	0.39	1.03	2.09	3.10			lb
8-Jul-05	8:12:54	20.11	0.26	0.49	1.00	1.91	3.67			lb
8-Jul-05	8:12:59	20.13	0.27	0.39	1.00	2.02	2.99			lb
8-Jul-05	8:13:04	20.10	0.27	0.39	1.01	1.96	2.90			lb
8-Jul-05	8:13:09	20.19	0.26	0.39	1.00	2.12	3.26			lb
8-Jul-05	8:13:14	20.13	0.25	0.39	0.99	1.87	2.99			lb
8-Jul-05	8:13:19	20.12	0.26	0.29	1.00	1.94	2.24			lb
8-Jul-05	8:13:24	20.13	0.27	0.39	1.00	2.03	3.00			lb
8-Jul-05	8:13:29	20.14	0.26	0.39	1.03	1.99	3.06			lb
8-Jul-05	8:13:34	20.19	0.26	0.39	1.01	2.14	3.28			lb
8-Jul-05	8:14:45	12.49	0.24	0.39	1.00	0.17	0.28			ce co=12.53
8-Jul-05	8:14:51	12.53	0.26	0.39	1.01	0.18	0.28			ce co=12.53
8-Jul-05	8:14:56	12.52	0.26	0.49	1.01	0.18	0.35			ce co=12.53
8-Jul-05	8:15:01	12.54	0.27	0.39	1.03	0.19	0.28			ce co=12.53
8-Jul-05	8:15:06	12.56	0.26	0.39	1.03	0.18	0.28			ce co=12.53
8-Jul-05	8:15:12	12.50	0.27	0.49	1.00	0.19	0.35			lb
8-Jul-05	8:15:17	12.56	0.26	0.39	0.99	0.18	0.28			lb
8-Jul-05	8:15:22	12.51	0.26	0.39	0.99	0.18	0.28			lb
8-Jul-05	8:15:27	12.51	0.25	0.29	0.99	0.17	0.21			lb
8-Jul-05	8:15:32	12.48	0.26	0.39	1.01	0.18	0.28			lb
8-Jul-05	8:15:37	12.53	0.27	0.39	1.03	0.19	0.28			lb
8-Jul-05	8:15:42	12.58	0.27	0.39	1.00	0.19	0.28			lb
8-Jul-05	8:15:47	12.53	0.26	0.29	0.99	0.18	0.21			lb
8-Jul-05	8:21:40	0.10	110.00	901.03	0.97	31.20	266.10			ce co=905
8-Jul-05	8:21:45	0.00	110.00	903.06	0.97	31.05	272.42			ce co=905
8-Jul-05	8:21:50	0.03	110.00	906.04	0.96	31.09	269.94			ce co=905
8-Jul-05	8:21:55	0.11	110.00	911.04	1.00	31.22	262.86			ce co=905
8-Jul-05	8:22:00	0.07	110.00	916.04	1.00	31.16	262.33			ce co=905
8-Jul-05	8:22:05	0.12	110.00	912.01	0.99	31.23	250.45			ce co=905
8-Jul-05	8:22:10	0.06	110.00	913.92	1.00	31.14	244.59			ce co=905
8-Jul-05	8:22:15	0.08	110.00	919.04	1.00	31.17	246.24			ce co=905
8-Jul-05	8:22:20	0.00	110.00	911.00	1.00	31.06	257.22			ce co=905

Source Testing And Consulting Services, Inc.

Scrubber B - Power Boiler 3

8-Jul-05		RAYONIER		Fuel: Bark		Unit #		SCRUBBER B		Comments
Parameter	O2	NOx	CO	CO2	NOx	CO	0.00	0.00		
Units	%V	ppmV	ppmV	%	@15%O2	@15%O2	0.00	0.00		
8-Jul-05	8:22:25	0.07	110.00	901.96	0.98	31.16	255.54		ce	co=905
8-Jul-05	8:22:34	0.06	110.00	901.96	1.00	31.14	255.36		lb	
8-Jul-05	8:22:39	0.04	110.00	894.00	0.96	31.11	252.80		lb	
8-Jul-05	8:22:44	0.05	110.00	894.00	0.99	31.12	252.95		lb	
8-Jul-05	8:22:49	0.10	110.00	896.06	1.00	31.20	254.17		lb	
8-Jul-05	8:22:54	0.04	110.00	896.06	0.97	31.12	253.48		lb	
8-Jul-05	8:22:59	0.07	110.00	900.98	0.96	31.16	255.26		lb	
8-Jul-05	8:23:04	0.04	110.00	900.98	0.98	31.12	254.87		lb	
8-Jul-05	8:25:47	0.07	110.00	615.95	0.95	31.15	174.45		ce	co=619
8-Jul-05	8:25:52	0.03	110.00	625.88	0.96	31.09	176.92		ce	co=619
8-Jul-05	8:25:57	0.10	110.00	623.91	0.97	31.20	176.97		ce	co=619
8-Jul-05	8:26:02	0.04	110.00	623.91	0.95	31.11	176.43		ce	co=619
8-Jul-05	8:26:07	0.10	110.00	614.87	0.96	31.20	174.41		ce	co=619
8-Jul-05	8:26:12	0.06	110.00	614.87	0.95	31.13	174.04		ce	co=619
8-Jul-05	8:26:17	0.03	110.00	617.82	0.96	31.10	174.69		ce	co=619
8-Jul-05	8:26:22	-0.01	110.00	617.82	0.96	31.04	174.36		ce	co=619
8-Jul-05	8:26:27	0.08	110.00	621.85	0.95	31.18	176.26		ce	co=619
8-Jul-05	8:26:33	0.08	110.00	621.85	0.96	31.18	176.24		lb	
8-Jul-05	8:26:38	0.10	110.00	627.84	0.98	31.21	178.13		lb	
8-Jul-05	8:26:43	0.06	110.00	627.84	0.99	31.15	177.77		lb	
8-Jul-05	8:26:48	0.10	110.00	623.82	0.97	31.21	176.99		lb	
8-Jul-05	8:26:53	-0.01	110.00	623.82	0.97	31.03	175.99		lb	
8-Jul-05	8:26:58	0.06	110.00	621.85	0.96	31.14	176.05		lb	
8-Jul-05	8:28:47	0.10	110.00	308.68	0.95	31.20	87.56		ce	co=306
8-Jul-05	8:28:52	0.04	110.00	306.62	0.98	31.11	86.72		ce	co=306
8-Jul-05	8:28:57	0.07	110.00	305.64	0.97	31.16	86.58		ce	co=306
8-Jul-05	8:29:02	0.01	110.00	305.64	0.94	31.07	86.34		ce	co=306
8-Jul-05	8:29:07	0.04	110.00	302.69	0.96	31.11	85.61		ce	co=306
8-Jul-05	8:29:12	-0.01	110.00	302.69	0.96	31.04	85.41		ce	co=306
8-Jul-05	8:29:17	0.08	110.00	305.64	0.96	31.17	86.60		ce	co=306
8-Jul-05	8:29:22	0.05	110.00	305.64	0.98	31.13	86.50		ce	co=306
8-Jul-05	8:29:27	0.09	110.00	306.72	0.94	31.18	86.95		ce	co=306
8-Jul-05	8:29:32	0.04	110.00	306.72	0.94	31.12	86.76		ce	co=306
8-Jul-05	8:29:37	-0.02	110.00	306.62	0.94	31.02	86.46		ce	co=306
8-Jul-05	8:29:42	0.05	110.00	306.62	0.94	31.12	86.75		ce	co=306
8-Jul-05	8:29:47	0.06	110.00	305.64	0.98	31.14	86.52		ce	co=306
8-Jul-05	8:29:52	0.01	110.00	305.73	0.94	31.07	86.35		ce	co=306
8-Jul-05	8:29:57	-0.02	110.00	304.65	0.94	31.02	85.92		ce	co=306
8-Jul-05	8:30:02	0.00	110.00	304.65	0.94	31.05	86.01		ce	co=306
8-Jul-05	8:30:07	0.07	110.00	305.64	0.97	31.16	86.58		ce	co=306
8-Jul-05	8:30:12	-0.02	110.00	305.73	0.95	31.03	86.23		ce	co=306
8-Jul-05	8:30:17	0.03	110.00	306.62	0.96	31.10	86.70		ce	co=306
8-Jul-05	8:30:22	0.03	110.00	306.62	0.94	31.09	86.66		ce	co=306
8-Jul-05	8:30:27	0.05	110.00	305.73	0.97	31.13	86.52		ce	co=306
8-Jul-05	8:30:35	0.03	110.00	305.64	0.94	31.10	86.41		lb	
8-Jul-05	8:30:40	0.04	110.00	305.64	0.97	31.11	86.45		lb	
8-Jul-05	8:30:45	0.04	110.00	303.67	0.97	31.12	85.90		lb	
8-Jul-05	8:30:50	0.02	110.00	303.67	0.94	31.08	85.80		lb	
8-Jul-05	8:30:55	0.09	110.00	304.65	0.96	31.19	86.38		lb	
8-Jul-05	8:31:00	-0.01	110.00	304.65	0.93	31.03	85.95		lb	
8-Jul-05	8:31:05	0.07	110.00	305.54	0.96	31.16	86.54		lb	
8-Jul-05	8:31:10	0.01	110.00	305.64	0.93	31.06	86.31		lb	
8-Jul-05	8:31:15	-0.01	110.00	304.75	0.94	31.04	86.01		lb	
8-Jul-05	8:31:20	0.08	110.00	304.75	0.96	31.18	86.38		lb	
8-Jul-05	8:31:25	-0.01	110.00	304.65	0.93	31.04	85.97		lb	

Source Testing And Consulting Services, Inc.

Scrubber B - Power Boiler 3

8-Jul-05	RAYONIER	Fuel:	Bark	Unit #	SCRUBBER B					
Parameter	O2	NOx	CO	CO2	NOx	CO	0.00	0.00	Comments	
Units	%V	ppmV	ppmV	%	@15%O2	@15%O2	0.00	0.00		
8-Jul-05	8:33:21	0.02	94.76	95.52	0.93	26.77	26.99		ce nx=94.4	
8-Jul-05	8:33:26	0.01	94.93	95.52	0.93	26.81	26.98		ce nx=94.4	
8-Jul-05	8:33:31	-0.03	94.93	95.52	0.94	26.77	26.93		ce nx=94.4	
8-Jul-05	8:33:36	-0.01	95.11	95.52	0.95	26.84	26.96		ce nx=94.4	
8-Jul-05	8:33:41	0.03	95.11	95.52	0.93	26.89	27.00		ce nx=94.4	
8-Jul-05	8:33:46	0.01	95.11	95.52	0.93	26.87	26.98		ce nx=94.4	
8-Jul-05	8:33:51	0.04	95.11	95.62	0.96	26.90	27.05		ce nx=94.4	
8-Jul-05	8:33:56	0.02	95.11	97.49	0.93	26.87	27.55		ce nx=94.4	
8-Jul-05	8:34:01	0.04	95.05	97.59	0.93	26.88	27.60		ce nx=94.4	
8-Jul-05	8:34:06	0.05	95.06	96.51	0.96	26.90	27.31		ce nx=94.4	
8-Jul-05	8:34:11	0.02	95.05	96.51	0.93	26.86	27.27		ce nx=94.4	
8-Jul-05	8:34:16	0.00	94.99	96.51	0.93	26.82	27.25		lb	
8-Jul-05	8:34:21	0.05	94.99	96.51	0.96	26.88	27.31		lb	
8-Jul-05	8:34:26	0.04	94.99	96.51	0.93	26.87	27.29		lb	
8-Jul-05	8:34:31	0.06	95.05	96.51	0.94	26.91	27.32		lb	
8-Jul-05	8:34:36	0.04	95.06	96.51	0.95	26.88	27.29		lb	
8-Jul-05	8:34:41	0.04	95.05	96.51	0.95	26.89	27.30		lb	
8-Jul-05	8:39:19	0.01	44.81	46.48	0.92	12.65	13.13		ce nx=44.6	
8-Jul-05	8:39:24	0.06	44.81	46.48	0.92	12.69	13.16		ce nx=44.6	
8-Jul-05	8:39:29	0.02	44.81	46.48	0.92	12.66	13.13		ce nx=44.6	
8-Jul-05	8:39:34	0.01	44.81	46.48	0.92	12.66	13.13		ca nx=44.6	
8-Jul-05	8:39:39	0.07	44.81	47.57	0.95	12.69	13.47		ce nx=44.6	
8-Jul-05	8:39:44	0.00	44.81	46.48	0.92	12.65	13.12		ce nx=44.6	
8-Jul-05	8:39:49	0.00	44.81	46.48	0.93	12.65	13.12		ce nx=44.6	
8-Jul-05	8:39:54	0.00	44.81	46.48	0.92	12.65	13.12		ce nx=44.6	
8-Jul-05	8:39:59	0.05	44.81	46.48	0.94	12.68	13.16		ce nx=44.6	
8-Jul-05	8:40:04	0.01	44.75	46.48	0.92	12.64	13.13		ce nx=44.6	
8-Jul-05	8:40:09	0.08	44.75	46.48	0.96	12.68	13.17		ce nx=44.6	
8-Jul-05	8:40:14	0.08	44.75	46.48	0.95	12.68	13.17		ce nx=44.6	
8-Jul-05	8:40:19	0.01	44.76	46.48	0.92	12.64	13.13		ce nx=44.6	
8-Jul-05	8:40:24	0.05	44.75	46.48	0.96	12.66	13.15		ce nx=44.6	
8-Jul-05	8:40:29	0.01	44.75	46.48	0.92	12.64	13.13		ce nx=44.6	
8-Jul-05	8:40:34	-0.02	44.75	46.48	0.94	12.62	13.11		ce nx=44.6	
8-Jul-05	8:40:41	0.04	44.75	46.48	0.95	12.66	13.15		lb	
8-Jul-05	8:40:46	-0.01	44.75	46.58	0.93	12.63	13.14		lb	
8-Jul-05	8:40:51	0.07	44.75	46.48	0.93	12.67	13.16		lb	
8-Jul-05	8:40:56	0.00	44.71	46.58	0.93	12.62	13.15		lb	
8-Jul-05	8:41:01	0.05	44.70	46.48	0.93	12.64	13.15		lb	
8-Jul-05	8:41:06	0.01	44.73	46.48	0.92	12.63	13.13		lb	
8-Jul-05	8:41:11	0.05	44.75	46.58	0.93	12.67	13.18		lb	
8-Jul-05	8:52:38	12.49	46.58	398.72	9.21	32.68	279.73		ce co2=9.1	
8-Jul-05	8:52:43	12.49	46.57	255.63	9.22	32.67	179.29		ce co2=9.1	
8-Jul-05	8:52:48	12.45	27.11	94.55	9.23	18.93	66.04		ce co2=9.1	
8-Jul-05	8:52:53 lb		27.11	94.55	9.22	18.92	65.98		ce co2=9.1	
8-Jul-05	8:53:19	12.52	1.38	1.38	9.23	0.97	0.97		lb	
8-Jul-05	8:53:24	12.52	1.38	0.39	9.24	0.97	0.28		lb	
8-Jul-05	8:53:29	12.44	1.38	0.39	9.25	0.96	0.27		lb	
8-Jul-05	8:55:03	12.46	1.14	0.29	18.16	0.80	0.21		ce co2=18.2	
8-Jul-05	8:55:08	12.52	0.74	0.39	18.19	0.52	0.28		ce co2=18.2	
8-Jul-05	8:55:13	12.49	0.73	0.39	18.24	0.51	0.28		ce co2=18.2	
8-Jul-05	8:55:18	12.48	0.73	0.39	18.24	0.51	0.28		ce co2=18.2	
8-Jul-05	8:55:23	12.53	0.50	0.49	18.16	0.35	0.35		lb	
8-Jul-05	8:55:28	12.45	0.49	0.39	18.17	0.34	0.27		lb	
8-Jul-05	8:55:33	12.46	0.50	0.39	18.16	0.35	0.27		lb	
8-Jul-05	8:55:38	12.48	0.49	0.39	18.22	0.34	0.28		lb	

Source Testing And Consulting Services, Inc.

Scrubber B - Power Boiler 3

8-Jul-05		RAYONIER		Fuel: Bark		Unit #		SCRUBBER B		
Parameter	O2	NOx	CO	CO2	NOx	CO	0.00	0.00	Comments	
Units	%V	ppmV	ppmV	%	@15%O2	@15%O2	0.00	0.00		
8-Jul-05	8:59:39	12.02	53.72	276.66	8.66	35.71	183.88		SCRUBBER START	
8-Jul-05	9:00:39	11.91	44.18	354.79	8.52	29.00	232.92		SCRUBBER B R1	
8-Jul-05	9:01:39	13.61	56.78	267.62	7.44	45.92	216.46		SCRUBBER B R1	
8-Jul-05	9:02:39	14.21	55.83	281.57	6.80	49.24	248.33		SCRUBBER B R1	
8-Jul-05	9:03:39	13.73	55.54	254.64	7.00	45.71	209.60		SCRUBBER B R1	
8-Jul-05	9:04:39	12.70	57.53	259.66	7.96	41.38	186.78		SCRUBBER B R1	
8-Jul-05	9:05:39	13.28	59.06	264.67	7.68	45.73	204.93		SCRUBBER B R1	
8-Jul-05	9:06:39	13.90	57.59	250.71	7.05	48.54	211.29		SCRUBBER B R1	
8-Jul-05	9:07:39	13.06	57.95	231.55	7.69	43.62	174.28		SCRUBBER B R1	
8-Jul-05	9:08:39	12.39	63.40	195.58	8.12	43.95	135.57		SCRUBBER B R1	
8-Jul-05	9:09:39	12.51	61.52	210.52	8.10	43.24	147.97		SCRUBBER B R1	
8-Jul-05	9:10:39	11.90	59.53	217.59	8.69	39.03	142.67		SCRUBBER B R1	
8-Jul-05	9:11:39	11.57	51.73	337.69	8.76	32.72	213.54		SCRUBBER B R1	
8-Jul-05	9:12:39	11.58	65.34	199.61	8.95	41.39	126.46		SCRUBBER B R1	
8-Jul-05	9:13:39	10.71	64.05	255.63	9.55	37.08	148.01		SCRUBBER B R1	
8-Jul-05	9:14:39	10.33	40.88	1,001.08	9.90	22.82	558.88		SCRUBBER B R1	
8-Jul-05	9:15:39	11.30	33.68	1,000.98	9.19	20.71	615.49		SCRUBBER B R1	
8-Jul-05	9:16:39	10.93	66.57	224.67	9.49	39.38	132.90		SCRUBBER B R1	
8-Jul-05	9:17:39	11.27	48.45	342.60	9.13	29.69	209.96		SCRUBBER B R1	
8-Jul-05	9:18:39	11.43	62.11	273.61	9.04	38.72	170.55		SCRUBBER B R1	
8-Jul-05	9:19:39	11.68	59.88	206.59	8.67	38.30	132.13		SCRUBBER B R1	
8-Jul-05	9:20:39	11.78	58.89	206.59	8.50	38.11	133.70		SCRUBBER B R1	
8-Jul-05	9:21:39	10.99	55.83	406.68	9.17	33.23	242.07		SCRUBBER B R1	
8-Jul-05	9:22:39	12.45	55.96	247.67	8.34	39.09	173.02		SCRUBBER B R1	
8-Jul-05	9:23:39	12.92	63.40	203.64	7.81	46.86	150.51		SCRUBBER B R1	
8-Jul-05	9:24:39	10.84	53.42	403.74	9.24	31.32	236.76		SCRUBBER B R1	
8-Jul-05	9:25:39	11.74	38.72	650.81	8.74	24.94	419.23		SCRUBBER B R1	
8-Jul-05	9:26:39	12.22	55.08	262.70	8.42	37.45	178.61		SCRUBBER B R1	
8-Jul-05	9:27:39	12.72	60.18	232.73	8.06	43.41	167.88		SCRUBBER B R1	
8-Jul-05	9:28:39	13.02	58.76	233.61	7.69	43.99	174.88		SCRUBBER B R1	
8-Jul-05	9:29:39	11.23	57.19	371.70	9.02	34.89	226.78		SCRUBBER B R1	
8-Jul-05	9:30:39	10.47	48.23	653.86	9.81	27.28	369.80		SCRUBBER B R1	
8-Jul-05	9:31:39	11.37	44.24	464.87	9.20	27.38	287.72		SCRUBBER B R1	
8-Jul-05	9:32:39	11.93	51.21	354.69	8.81	33.70	233.43		SCRUBBER B R1	
8-Jul-05	9:33:39	11.30	55.83	248.65	8.73	34.30	152.75		SCRUBBER B R1	
8-Jul-05	9:34:39	11.49	50.39	523.74	8.84	31.58	328.21		SCRUBBER B R1	
8-Jul-05	9:35:39	12.10	59.82	232.63	8.46	40.11	155.96		SCRUBBER B R1	
8-Jul-05	9:36:39	11.74	62.58	207.67	8.75	40.29	133.70		SCRUBBER B R1	
8-Jul-05	9:37:39	12.64	62.41	220.64	7.98	44.55	157.51		SCRUBBER B R1	
8-Jul-05	9:38:39	12.07	61.59	209.63	8.51	41.13	139.99		SCRUBBER B R1	
8-Jul-05	9:39:39	11.28	59.12	234.60	9.07	36.26	143.90		SCRUBBER B R1	
8-Jul-05	9:40:39	11.79	55.02	240.69	8.57	35.61	155.79		SCRUBBER B R1	
8-Jul-05	9:41:39	12.83	60.41	220.64	7.96	44.19	161.39		SCRUBBER B R1	
8-Jul-05	9:42:39	11.95	62.53	223.59	8.46	41.24	147.47		SCRUBBER B R1	
8-Jul-05	9:43:39	13.21	60.19	244.64	7.60	46.17	187.67		SCRUBBER B R1	
8-Jul-05	9:44:39	12.32	60.65	245.63	8.13	41.73	168.99		SCRUBBER B R1	
8-Jul-05	9:45:39	11.15	54.90	309.71	9.25	33.23	187.46		SCRUBBER B R1	
8-Jul-05	9:46:39	12.43	53.32	268.63	8.38	37.12	187.01		SCRUBBER B R1	
8-Jul-05	9:47:39	12.43	58.41	206.61	8.25	40.69	143.92		SCRUBBER B R1	
8-Jul-05	9:48:39	13.19	57.25	220.66	7.73	43.79	168.79		SCRUBBER B R1	
8-Jul-05	9:49:39	13.26	57.25	210.64	7.60	44.19	162.57		SCRUBBER B R1	
8-Jul-05	9:50:39	13.49	57.66	197.66	7.50	45.93	157.47		SCRUBBER B R1	
8-Jul-05	9:51:39	13.30	57.61	203.56	7.49	44.72	158.02		SCRUBBER B R1	
8-Jul-05	9:52:39	12.84	56.55	211.72	7.88	41.37	154.89		SCRUBBER B R1	
8-Jul-05	9:53:39	13.28	56.66	206.61	7.59	43.86	159.92		SCRUBBER B R1	

Source Testing And Consulting Services, Inc.

Scrubber B - Power Boiler 3

8-Jul-05		RAYONIER		Fuel:		Bark		Unit #		SCRUBBER B	
Parameter	O2	NOx	CO	CO2	NOx	CO	0.00	0.00	Comments		
Units	%V	ppmV	ppmV	%	@15%O2	@15%O2	0.00	0.00			
8-Jul-05	9:54:39	12.52	57.02	181.64	8.12	40.12	127.82			SCRUBBER B R1	
8-Jul-05	9:55:39	11.89	55.26	201.69	8.55	36.18	132.06			SCRUBBER B R1	
8-Jul-05	9:56:39	11.77	68.90	202.58	8.53	44.51	130.86			SCRUBBER B R1	
8-Jul-05	9:57:39	12.27	97.31	234.62	8.20	66.51	160.36			SCRUBBER B R1	
8-Jul-05	9:58:39	12.91	56.43	210.64	7.62	41.69	155.62			SCRUBBER B R1	
8-Jul-05	9:59:39	11.84	57.61	195.70	8.57	37.51	127.41			SCRUBBER B R1	
8-Jul-05	10:02:51	20.09	9.95	0.49	0.92	72.38	3.58			O2=20	
8-Jul-05	10:02:56	19.98	0.68	0.29	0.89	4.35	1.89			O2=20	
8-Jul-05	10:03:01	20.04	0.68	0.39	0.92	4.65	2.70			O2=20	
8-Jul-05	10:03:06	20.02	0.50	0.49	0.89	3.36	3.30			O2=20	
8-Jul-05	10:03:11	20.04	0.50	0.39	0.91	3.44	2.70			O2=20	
8-Jul-05	10:04:24	12.56	0.62	0.39	0.88	0.44	0.28			O2=12.53	
8-Jul-05	10:04:29	12.63	0.56	0.49	0.90	0.40	0.35			O2=12.53	
8-Jul-05	10:04:34	12.51	0.56	0.49	0.88	0.39	0.35			O2=12.53	
8-Jul-05	10:04:39	12.58	0.56	0.49	0.91	0.40	0.35			O2=12.53	
8-Jul-05	10:04:44	12.56	0.43	0.39	0.88	0.31	0.28			O2=12.53	
8-Jul-05	10:04:49	12.51	0.44	0.49	0.89	0.31	0.35			O2=12.53	
8-Jul-05	10:04:54	12.60	0.44	0.39	0.91	0.31	0.28			O2=12.53	
8-Jul-05	10:07:45	0.04	44.41	47.57	0.91	12.56	13.45			NOX=44.6	
8-Jul-05	10:07:50	-0.01	44.41	47.47	0.91	12.53	13.39			NOX=44.6	
8-Jul-05	10:07:55	0.03	44.41	47.47	0.88	12.56	13.42			NOX=44.6	
8-Jul-05	10:08:00	0.07	44.41	47.47	0.89	12.58	13.44			NOX=44.6	
8-Jul-05	10:08:05	0.03	44.41	48.55	0.89	12.55	13.72			NOX=44.6	
8-Jul-05	10:08:10	0.03	44.40	48.55	0.88	12.55	13.72			NOX=44.6	
8-Jul-05	10:08:15	0.03	44.41	47.47	0.88	12.55	13.42			NOX=44.6	
8-Jul-05	10:08:20	0.04	44.41	47.47	0.88	12.56	13.42			NOX=44.6	
8-Jul-05	10:08:25	0.06	44.41	48.55	0.91	12.57	13.74			NOX=44.6	
8-Jul-05	10:08:30	0.10	44.40	48.55	0.90	12.59	13.77			NOX=44.6	
8-Jul-05	10:08:35	0.03	44.40	47.57	0.88	12.55	13.45			NOX=44.6	
8-Jul-05	10:08:40	0.05	44.41	47.57	0.91	12.57	13.46			NOX=44.6	
8-Jul-05	10:08:45	0.03	44.41	47.57	0.88	12.56	13.45			NOX=44.6	
8-Jul-05	10:08:50	0.05	44.41	47.47	0.91	12.57	13.43			NOX=44.6	
8-Jul-05	10:11:04	0.06	93.07	98.47	0.91	26.34	27.87			NOX=94.4	
8-Jul-05	10:11:09	-0.02	93.07	98.57	0.87	26.25	27.80			NOX=94.4	
8-Jul-05	10:11:14	-0.01	93.29	98.57	0.90	26.33	27.82			NOX=94.4	
8-Jul-05	10:11:19	-0.01	93.29	98.57	0.89	26.32	27.81			NOX=94.4	
8-Jul-05	10:11:24	0.07	93.29	98.57	0.89	26.43	27.92			NOX=94.4	
8-Jul-05	10:11:29	-0.02	93.29	98.57	0.87	26.31	27.80			NOX=94.4	
8-Jul-05	10:11:34	0.03	93.13	99.55	0.90	26.33	28.14			NOX=94.4	
8-Jul-05	10:11:39	0.05	93.12	99.55	0.90	26.35	28.17			NOX=94.4	
8-Jul-05	10:11:44	0.01	93.13	99.55	0.87	26.30	28.12			NOX=94.4	
8-Jul-05	10:11:49	-0.02	92.83	99.55	0.87	26.18	28.07			NOX=94.4	
8-Jul-05	10:11:54	0.06	92.82	98.57	0.87	26.28	27.91			NOX=94.4	
8-Jul-05	10:11:59	0.09	92.82	98.47	0.89	26.32	27.92			NOX=94.4	
8-Jul-05	10:12:04	0.06	92.64	97.49	0.87	26.23	27.60			NOX=94.4	
8-Jul-05	10:13:42	0.03	110.00	310.75	0.87	31.09	87.84			CO=306	
8-Jul-05	10:13:47	-0.02	110.00	311.73	0.87	31.03	87.92			CO=306	
8-Jul-05	10:13:52	0.05	110.00	309.67	0.91	31.12	87.61			CO=306	
8-Jul-05	10:13:57	0.02	110.00	309.67	0.87	31.08	87.48			CO=306	
8-Jul-05	10:14:02	0.02	110.00	309.67	0.87	31.08	87.48			CO=306	
8-Jul-05	10:14:07	0.03	110.00	309.76	0.88	31.09	87.56			CO=306	
8-Jul-05	10:16:19	0.03	110.00	890.96	0.90	31.09	251.83			CO=905	
8-Jul-05	10:16:24	0.05	110.00	873.96	0.87	31.13	247.34			CO=905	
8-Jul-05	10:16:29	0.05	110.00	873.86	0.90	31.12	247.23			CO=905	
8-Jul-05	10:16:34	0.06	110.00	872.00	0.90	31.13	248.81			CO=905	

Source Testing And Consulting Services, Inc.

Scrubber B - Power Boiler 3

8-Jul-05		RAYONIER			Fuel: Bark		Unit #		SCRUBBER B	
Parameter	O2	NOx	CO	CO2	NOx	CO	0.00	0.00	Comments	
Units	%V	ppmV	ppmV	%	@15%O2	@15%O2	0.00	0.00		
8-Jul-05	10:16:39	0.02	110.00	870.92	0.86	31.09	246.13			CO=905
8-Jul-05	10:16:44	0.01	110.00	882.91	0.88	31.07	249.40			CO=905
8-Jul-05	10:16:49	-0.02	110.00	883.00	0.86	31.02	249.02			CO=905
8-Jul-05	10:22:40	11.42	53.67	277.53	8.78	33.39	172.65			RUN2 START
8-Jul-05	10:23:40	11.42	53.20	250.60	9.00	33.10	155.94			RUN2
8-Jul-05	10:24:40	11.47	52.96	207.66	8.85	33.13	129.89			RUN2
8-Jul-05	10:25:40	11.72	48.51	322.74	8.63	31.17	207.38			RUN2
8-Jul-05	10:26:40	11.29	50.10	341.70	9.12	30.75	209.69			RUN2
8-Jul-05	10:27:40	12.27	58.24	193.60	8.25	39.80	132.30			RUN2
8-Jul-05	10:28:40	12.29	52.44	255.71	8.41	35.94	175.24			RUN2
8-Jul-05	10:28:40	13.45	58.24	210.60	7.50	46.14	166.85			RUN2
8-Jul-05	10:30:40	12.81	56.18	219.65	8.01	40.99	160.26			RUN2
8-Jul-05	10:31:40	11.92	58.59	206.58	8.52	38.51	135.79			RUN2
8-Jul-05	10:32:40	12.33	56.83	213.65	8.25	38.14	147.13			RUN2
8-Jul-05	10:33:40	12.30	56.89	197.63	8.34	39.02	135.55			RUN2
8-Jul-05	10:34:40	12.27	56.30	187.61	8.23	38.50	128.27			RUN2
8-Jul-05	10:35:40	12.17	53.02	207.56	8.31	35.83	140.28			RUN2
8-Jul-05	10:36:40	11.33	53.96	243.62	9.02	33.26	150.16			RUN2
8-Jul-05	10:37:40	11.45	53.73	195.67	8.76	33.54	122.17			RUN2
8-Jul-05	10:38:40	11.09	49.22	274.68	9.11	29.60	165.18			RUN2
8-Jul-05	10:39:40	11.12	44.22	423.67	9.27	26.67	255.49			RUN2
8-Jul-05	10:40:40	11.56	49.63	251.68	8.99	31.35	159.00			RUN2
8-Jul-05	10:41:40	11.09	47.63	375.71	9.37	28.64	225.88			RUN2
8-Jul-05	10:42:40	11.13	43.01	396.64	9.19	25.97	239.49			RUN2
8-Jul-05	10:43:40	12.32	43.70	254.60	8.36	30.05	175.06			RUN2
8-Jul-05	10:44:40	12.95	54.19	211.45	7.82	40.22	156.94			RUN2
8-Jul-05	10:45:40	12.28	54.66	197.59	8.19	37.40	135.21			RUN2
8-Jul-05	10:46:40	11.77	54.89	256.56	8.65	35.49	165.87			RUN2
8-Jul-05	10:47:40	11.69	51.79	232.58	8.69	33.19	149.04			RUN2
8-Jul-05	10:48:40	11.81	51.39	227.57	8.52	33.36	147.72			RUN2
8-Jul-05	10:49:40	11.90	49.27	264.62	8.70	32.32	173.55			RUN2
8-Jul-05	10:50:40	12.26	56.71	188.55	8.40	38.73	128.76			RUN2
8-Jul-05	10:51:40	11.82	59.41	174.60	8.54	38.58	113.39			RUN2
8-Jul-05	10:52:40	12.07	53.84	197.59	8.46	35.96	131.97			RUN2
8-Jul-05	10:53:40	11.53	53.72	219.61	8.93	33.84	138.33			RUN2
8-Jul-05	10:54:40	12.15	44.75	338.62	8.38	30.16	228.20			RUN2
8-Jul-05	10:55:40	13.41	53.48	197.40	7.37	42.14	155.55			RUN2
8-Jul-05	10:56:40	13.10	54.25	188.45	7.60	41.01	142.47			RUN2
8-Jul-05	10:57:40	13.33	55.00	204.57	7.69	42.86	159.42			RUN2
8-Jul-05	10:58:40	15.68	54.13	237.49	5.76	61.13	268.21			RUN2
8-Jul-05	10:59:40	16.74	35.08	312.68	4.68	49.75	443.42			RUN2
8-Jul-05	11:00:40	15.32	27.29	300.59	5.78	28.84	317.66			RUN2
8-Jul-05	11:01:40	15.35	44.87	221.57	5.83	47.71	235.60			RUN2
8-Jul-05	11:02:40	14.61	44.05	198.58	6.53	41.35	186.39			RUN2
8-Jul-05	11:03:40	13.86	50.56	173.56	6.98	42.39	145.53			RUN2
8-Jul-05	11:04:40	12.70	53.26	168.55	8.06	38.30	121.22			RUN2
8-Jul-05	11:05:40	12.30	56.71	167.57	8.03	38.92	115.00			RUN2
8-Jul-05	11:06:40	11.57	57.60	196.56	8.92	36.42	124.28			RUN2
8-Jul-05	11:07:40	11.33	52.96	215.63	8.93	32.65	132.94			RUN2
8-Jul-05	11:08:40	11.14	52.67	245.60	9.15	31.83	148.41			RUN2
8-Jul-05	11:09:40	11.38	51.85	232.63	8.99	32.15	144.24			RUN2
8-Jul-05	11:10:40	11.41	52.49	236.56	8.99	32.65	147.13			RUN2
8-Jul-05	11:11:40	10.81	51.21	318.72	9.39	29.96	186.45			RUN2
8-Jul-05	11:12:40	11.20	49.81	342.60	9.07	30.30	208.39			RUN2
8-Jul-05	11:13:40	12.55	57.01	236.56	8.08	40.30	167.23			RUN2

Source Testing And Consulting Services, Inc.

Scrubber B - Power Boiler 3

8-Jul-05	RAYONIER	Fuel:	Bark	Unit #	SCRUBBER B				
Parameter	O2	NOx	CO	CO2	NOx	CO	0.00	0.00	Comments
Units	%V	ppmV	ppmV	%	@15%O2	@15%O2	0.00	0.00	
8-Jul-05	11:14:40	12.80	59.35	221.62	7.94	43.23	161.42		RUN2
8-Jul-05	11:15:40	13.83	59.12	228.60	7.21	49.34	190.82		RUN2
8-Jul-05	11:16:40	15.55	57.83	272.63	5.82	63.73	300.47		RUN2
8-Jul-05	11:17:40	14.95	52.20	272.63	6.19	51.75	270.32		RUN2
8-Jul-05	11:18:40	15.27	52.27	261.62	5.77	54.81	274.36		RUN2
8-Jul-05	11:19:40	15.14	43.29	290.61	5.87	44.35	297.74		RUN2
8-Jul-05	11:20:40	14.97	44.47	257.69	6.17	44.28	256.57		RUN2
8-Jul-05	11:21:40	15.36	43.23	265.65	5.82	46.00	282.66		RUN2
8-Jul-05	11:23:47	12.58	22.83	15.48	0.89	16.20	10.98		O2=12.53
8-Jul-05	11:23:52	12.59	3.48	4.47	0.92	2.47	3.17		O2=12.53
8-Jul-05	11:23:57	12.53	1.03	4.47	0.90	0.72	3.15		O2=12.53
8-Jul-05	11:24:02	12.56	1.03	1.33	0.89	0.73	0.94		O2=12.53
8-Jul-05	11:24:07	12.58	1.04	1.42	0.91	0.74	1.01		O2=12.53
8-Jul-05	11:25:43	20.11	0.44	0.44	0.87	3.25	3.29		O2=20
8-Jul-05	11:25:48	20.10	0.39	0.54	0.90	2.88	4.00		O2=20
8-Jul-05	11:25:53	20.05	0.38	0.44	0.87	2.62	3.06		O2=20
8-Jul-05	11:25:58	20.03	0.38	0.44	0.87	2.57	3.01		O2=20
8-Jul-05	11:26:04	20.04	0.39	0.44	0.88	2.67	3.04		O2=20
8-Jul-05	11:26:09	20.08	0.38	0.44	0.91	2.72	3.18		O2=20
8-Jul-05	11:27:52	0.02	44.29	46.53	0.88	12.51	13.15		NOX=44.6
8-Jul-05	11:27:57	0.05	44.35	46.53	0.87	12.55	13.17		NOX=44.6
8-Jul-05	11:28:02	0.07	44.36	46.53	0.90	12.57	13.18		NOX=44.6
8-Jul-05	11:28:07	0.05	44.42	46.53	0.87	12.57	13.17		NOX=44.6
8-Jul-05	11:28:12	0.07	44.41	46.63	0.90	12.58	13.21		NOX=44.6
8-Jul-05	11:28:17	0.07	44.42	46.53	0.90	12.58	13.18		NOX=44.6
8-Jul-05	11:28:22	0.02	44.35	46.53	0.90	12.53	13.15		NOX=44.6
8-Jul-05	11:29:46	0.03	44.35	46.53	0.88	12.54	13.15		NOX=44.6
8-Jul-05	11:29:50	0.07	44.41	46.63	0.90	12.57	13.21		NOX=44.6
8-Jul-05	11:31:45 \		93.00	95.67	0.87	26.32	27.07		NOX=94.4
8-Jul-05	11:31:50	0.09	93.12	96.56	0.87	26.40	27.37		NOX=94.4
8-Jul-05	11:31:55	0.03	93.13	96.56	0.86	26.32	27.29		NOX=94.4
8-Jul-05	11:32:00	0.05	93.24	96.65	0.86	26.38	27.35		NOX=94.4
8-Jul-05	11:32:05	0.03	93.24	96.56	0.88	26.35	27.29		NOX=94.4
8-Jul-05	11:32:10	0.03	93.24	97.54	0.87	26.36	27.58		NOX=94.4
8-Jul-05	11:33:27	0.02	110.00	299.69	0.88	31.08	84.69		CO=306
8-Jul-05	11:33:32	0.02	110.00	300.67	0.89	31.08	84.94		CO=306
8-Jul-05	11:33:37	0.04	110.00	300.77	0.87	31.12	85.08		CO=306
8-Jul-05	11:33:43	0.05	110.00	298.71	0.89	31.12	84.51		CO=306
8-Jul-05	11:33:48	0.06	110.00	298.71	0.88	31.13	84.55		CO=306
8-Jul-05	11:37:50	14.53	64.93	89.58	7.36	60.12	82.95		RUN 3
8-Jul-05	11:38:50	11.34	53.38	196.60	8.84	32.94	121.33		RUN 3
8-Jul-05	11:39:50	11.07	43.53	451.82	9.04	26.13	271.24		RUN 3
8-Jul-05	11:40:50	12.40	46.17	309.72	8.47	32.05	214.95		RUN 3
8-Jul-05	11:41:50	11.89	55.84	174.59	8.45	36.54	114.26		RUN 3
8-Jul-05	11:42:50	11.22	55.55	264.70	8.91	33.87	161.41		RUN 3
8-Jul-05	11:43:50	11.11	48.33	344.67	9.09	29.14	207.78		RUN 3
8-Jul-05	11:44:50	10.71	51.10	323.74	9.62	29.57	187.35		RUN 3
8-Jul-05	11:45:50	10.50	51.56	603.83	9.49	29.26	342.68		RUN 3
8-Jul-05	11:46:50	10.76	40.02	718.92	9.58	23.28	418.27		RUN 3
8-Jul-05	11:47:50	11.02	49.09	251.60	9.03	29.32	150.28		RUN 3
8-Jul-05	11:48:50	11.49	56.60	234.69	8.91	35.47	147.10		RUN 3
8-Jul-05	11:49:50	12.44	58.59	198.62	8.06	40.85	138.48		RUN 3
8-Jul-05	11:50:50	12.54	58.53	183.59	8.16	41.28	129.50		RUN 3
8-Jul-05	11:51:50	12.31	61.70	192.63	8.35	42.40	132.38		RUN 3
8-Jul-05	11:52:50	12.65	62.05	196.56	8.03	44.36	140.51		RUN 3

Source Testing And Consulting Services, Inc.

Scrubber B - Power Boiler 3

8-Jul-05		RAYONIER			Fuel: Bark		Unit #		SCRUBBER B	
Parameter	O2	NOx	CO	CO2	NOx	CO	0.00	0.00	Comments	
Units	%V	ppmV	ppmV	%	@15%O2	@15%O2	0.00	0.00		
8-Jul-05	11:53:50	12.97	62.87	216.51	7.50	46.78	161.10			RUN 3
8-Jul-05	11:54:50	13.11	61.23	208.65	7.71	46.35	157.94			RUN 3
8-Jul-05	11:55:50	13.68	59.65	234.60	7.01	48.73	191.65			RUN 3
8-Jul-05	11:56:50	13.43	57.42	212.58	7.58	45.35	167.90			RUN 3
8-Jul-05	11:57:50	15.14	55.37	252.68	6.05	56.67	258.60			RUN 3
8-Jul-05	11:58:50	14.56	49.87	250.61	6.21	46.43	233.32			RUN 3
8-Jul-05	11:59:50	14.12	55.14	227.62	6.67	47.96	198.01			RUN 3
8-Jul-05	12:00:50	13.01	58.48	190.57	7.72	43.71	142.45			RUN 3
8-Jul-05	12:01:50	12.46	59.06	203.54	8.14	41.27	142.23			RUN 3
8-Jul-05	12:02:50	12.14	55.02	227.62	8.36	37.04	153.26			RUN 3
8-Jul-05	12:03:50	13.38	55.30	221.62	7.39	43.39	173.87			RUN 3
8-Jul-05	12:04:50	12.46	54.90	167.57	8.09	38.38	117.15			RUN 3
8-Jul-05	12:05:50	12.89	55.49	209.63	7.84	40.88	154.42			RUN 3
8-Jul-05	12:06:50	12.36	54.96	202.56	8.29	37.97	139.94			RUN 3
8-Jul-05	12:07:50	12.24	54.20	191.55	8.28	36.93	130.49			RUN 3
8-Jul-05	12:08:50	12.51	54.78	178.58	7.96	38.52	125.57			RUN 3
8-Jul-05	12:09:50	11.55	59.49	169.63	8.70	37.54	107.06			RUN 3
8-Jul-05	12:10:50	11.18	44.29	432.73	9.26	26.88	262.68			RUN 3
8-Jul-05	12:11:50	10.74	48.98	324.72	9.43	28.43	188.49			RUN 3
8-Jul-05	12:12:50	10.79	44.76	483.74	9.46	26.11	282.23			RUN 3
8-Jul-05	12:13:50	10.26	47.64	596.86	9.81	26.41	330.86			RUN 3
8-Jul-05	12:14:50	10.74	35.62	718.82	9.57	20.68	417.36			RUN 3
8-Jul-05	12:15:50	11.18	43.23	478.82	9.18	26.23	290.51			RUN 3
8-Jul-05	12:16:50	10.58	44.71	631.74	9.56	25.57	361.29			RUN 3
8-Jul-05	12:17:50	11.56	44.87	342.60	8.86	28.35	216.45			RUN 3
8-Jul-05	12:18:50	11.59	53.84	205.60	8.54	34.13	130.34			RUN 3
8-Jul-05	12:19:50	10.93	55.08	540.74	9.53	32.61	320.15			RUN 3
8-Jul-05	12:20:50	10.76	45.29	673.81	9.59	26.34	391.88			RUN 3
8-Jul-05	12:21:50	12.19	49.45	228.60	8.27	33.50	154.86			RUN 3
8-Jul-05	12:22:50	11.64	59.41	226.54	8.55	37.86	144.38			RUN 3
8-Jul-05	12:23:50	12.87	55.83	236.66	8.02	41.00	173.80			RUN 3
8-Jul-05	12:24:50	12.49	58.54	246.68	8.03	41.07	173.06			RUN 3
8-Jul-05	12:25:50	13.48	60.35	262.60	7.36	47.99	208.82			RUN 3
8-Jul-05	12:26:50	14.75	55.19	296.71	6.42	52.91	284.45			RUN 3
8-Jul-05	12:27:50	14.57	59.23	318.72	6.50	55.22	297.13			RUN 3
8-Jul-05	12:28:50	14.63	53.55	313.71	6.33	50.38	295.21			RUN 3
8-Jul-05	12:29:50	15.75	43.88	341.62	5.37	50.30	391.61			RUN 3
8-Jul-05	12:30:50	15.47	40.36	359.71	5.31	43.86	390.88			RUN 3
8-Jul-05	12:31:50	14.65	40.42	323.74	6.13	38.16	305.60			RUN 3
8-Jul-05	12:32:50	14.34	50.74	246.59	6.32	45.62	221.70			RUN 3
8-Jul-05	12:33:50	13.77	51.79	227.62	7.05	42.86	188.36			RUN 3
8-Jul-05	12:34:50	14.27	53.02	225.65	6.32	47.16	200.70			RUN 3
8-Jul-05	12:35:50	13.35	51.50	213.66	7.42	40.23	166.92			RUN 3
8-Jul-05	12:36:50	11.39	55.02	187.62	8.20	34.15	116.45			RUN 3
8-Jul-05	12:37:50	11.19	62.40	172.58	8.94	37.93	104.89			RUN 3
8-Jul-05	12:38:50	11.09	61.23	112.53	8.81	36.84	67.71			RUN 3
8-Jul-05	12:42:19	0.03	43.41	47.57	0.87	12.27	13.45			NOX=44.4
8-Jul-05	12:42:24	0.07	43.53	47.47	0.90	12.33	13.44			NOX=44.4
8-Jul-05	12:42:29	0.03	43.53	47.47	0.86	12.30	13.42			NOX=44.4
8-Jul-05	12:42:34	0.03	43.53	47.47	0.86	12.30	13.42			NOX=44.4
8-Jul-05	12:42:39	0.06	43.65	47.57	0.90	12.36	13.47			NOX=44.4
8-Jul-05	12:42:44	0.05	43.65	47.57	0.89	12.35	13.46			NOX=44.4
8-Jul-05	12:42:49	0.03	43.65	47.47	0.86	12.34	13.42			NOX=44.4
8-Jul-05	12:42:54	0.09	43.76	47.47	0.90	12.41	13.46			NOX=44.4
8-Jul-05	12:42:59	0.09	43.76	47.47	0.89	12.41	13.46			NOX=44.4

Source Testing And Consulting Services, Inc.

Scrubber B - Power Boiler 3

8-Jul-05		RAYONIER		Fuel: Bark		Unit #		SCRUBBER B		Comments
Parameter		O2	NOx	CO	CO2	NOx	CO	0.00	0.00	
Units		%V	ppmV	ppmV	%	@15%O2	@15%O2	0.00	0.00	
8-Jul-05	12:43:04	0.07	43.81	47.47	0.86	12.41	13.45			NOX=44.4
8-Jul-05	12:43:09	0.03	43.81	47.47	0.88	12.39	13.42			NOX=44.4
8-Jul-05	12:47:20	0.02	94.13	95.53	0.87	26.60	27.00			NOX=94.4
8-Jul-05	12:47:25	0.03	94.19	94.55	0.86	26.62	26.73			NOX=94.4
8-Jul-05	12:47:30	0.05	94.19	95.63	0.89	26.65	27.06			NOX=94.4
8-Jul-05	12:47:35	0.03	94.19	95.53	0.89	26.63	27.01			NOX=94.4
8-Jul-05	12:47:40	0.06	94.19	94.55	0.87	26.67	26.77			NOX=94.4
8-Jul-05	12:47:45	0.04	94.19	94.55	0.87	26.64	26.75			NOX=94.4
8-Jul-05	12:47:50	0.09	94.24	95.53	0.88	26.71	27.08			NOX=94.4
8-Jul-05	12:47:55	0.05	94.25	95.53	0.88	26.67	27.04			NOX=94.4
8-Jul-05	12:48:00	0.05	94.25	95.53	0.88	26.67	27.04			NOX=94.4
8-Jul-05	12:48:05	-0.03	94.25	95.53	0.85	26.57	26.93			NOX=94.4
8-Jul-05	12:48:10	0.04	94.25	94.55	0.86	26.65	26.74			NOX=94.4
8-Jul-05	12:48:15	0.00	94.25	94.55	0.85	26.61	26.70			NOX=94.4
8-Jul-05	12:48:20	0.04	94.78	95.53	0.89	26.81	27.03			NOX=94.4
8-Jul-05	12:48:25	0.08	94.78	95.53	0.88	26.86	27.07			NOX=94.4
8-Jul-05	12:48:30	0.00	94.77	95.53	0.86	26.75	26.97			NOX=94.4
8-Jul-05	12:48:35	0.02	94.77	95.63	0.86	26.78	27.03			NOX=94.4
8-Jul-05	12:48:40	-0.02	94.78	95.53	0.86	26.73	26.94			NOX=94.4
8-Jul-05	12:48:45	0.08	94.78	95.53	0.87	26.86	27.07			NOX=94.4
8-Jul-05	12:48:50	0.04	94.78	95.53	0.88	26.81	27.02			NOX=94.4
8-Jul-05	12:48:55	0.01	94.83	95.53	0.85	26.78	26.98			NOX=94.4
8-Jul-05	12:49:00	0.05	94.83	95.63	0.88	26.84	27.07			NOX=94.4
8-Jul-05	12:49:05	0.01	94.83	95.53	0.88	26.78	26.98			NOX=94.4
8-Jul-05	12:49:10	0.05	94.84	94.45	0.88	26.83	26.72			NOX=94.4
8-Jul-05	12:49:15	0.01	94.83	94.55	0.85	26.78	26.70			NOX=94.4
8-Jul-05	12:49:20	0.04	94.83	94.55	0.88	26.82	26.74			NOX=94.4
8-Jul-05	12:49:25	0.02	94.83	94.55	0.86	26.79	26.71			NOX=94.4
8-Jul-05	12:49:30	0.04	94.88	94.45	0.89	26.84	26.72			NOX=94.4
8-Jul-05	12:49:35	-0.03	94.89	94.55	0.86	26.75	26.65			NOX=94.4
8-Jul-05	12:49:40	0.00	94.88	94.55	0.86	26.79	26.69			NOX=94.4
8-Jul-05	12:49:45	0.09	94.88	94.55	0.87	26.90	26.80			NOX=94.4
8-Jul-05	12:49:50	0.02	94.89	94.55	0.85	26.81	26.72			NOX=94.4
8-Jul-05	12:49:55	0.09	94.88	94.55	0.87	26.90	26.80			NOX=94.4
8-Jul-05	12:50:00	0.06	94.88	95.53	0.88	26.86	27.04			NOX=94.4
8-Jul-05	12:50:05	-0.03	94.89	95.53	0.86	26.75	26.93			NOX=94.4
8-Jul-05	12:50:10	0.01	94.84	95.53	0.86	26.79	26.98			NOX=94.4
8-Jul-05	12:50:15	0.01	94.84	95.53	0.86	26.78	26.98			NOX=94.4
8-Jul-05	12:50:20	0.03	94.83	95.43	0.85	26.81	26.99			NOX=94.4
8-Jul-05	12:50:25	0.04	94.84	95.53	0.89	26.82	27.02			NOX=94.4
8-Jul-05	12:50:30	0.01	94.84	95.53	0.85	26.78	26.98			NOX=94.4
8-Jul-05	12:50:35	0.01	94.88	95.53	0.89	26.80	26.98			NOX=94.4
8-Jul-05	12:50:40	0.01	94.88	96.52	0.85	26.80	27.26			NOX=94.4
8-Jul-05	12:50:45	0.01	94.88	96.61	0.85	26.80	27.29			NOX=94.4
8-Jul-05	12:50:50	0.02	94.89	95.53	0.86	26.81	26.99			NOX=94.4
8-Jul-05	12:50:55	0.04	94.89	95.53	0.88	26.85	27.03			NOX=94.4
8-Jul-05	12:53:49	0.08	110.00	297.71	0.87	31.17	84.37			CO=306
8-Jul-05	12:53:54	-0.02	110.00	293.68	0.85	31.02	82.82			CO=306
8-Jul-05	12:53:59	0.08	110.00	294.66	0.85	31.17	83.50			CO=306
8-Jul-05	12:54:04	-0.02	110.00	294.66	0.85	31.02	83.08			CO=306
8-Jul-05	12:54:09	0.01	110.00	294.66	0.85	31.06	83.21			CO=306
8-Jul-05	12:54:14	0.01	110.00	294.66	0.89	31.07	83.22			CO=306
8-Jul-05	12:54:19	0.03	110.00	296.72	0.87	31.10	83.90			CO=306
8-Jul-05	12:54:24	0.02	110.00	296.72	0.85	31.08	83.83			CO=306
8-Jul-05	12:54:29	0.05	110.00	295.74	0.89	31.12	83.67			CO=306

Source Testing And Consulting Services, Inc.

Scrubber B - Power Boiler 3

8-Jul-05		RAYONIER		Fuel:	Bark	Unit #		SCRUBBER B		
Parameter		O2	NOx	CO	CO2	NOx	CO	0.00	0.00	Comments
Units		%V	ppmV	ppmV	%	@15%O2	@15%O2	0.00	0.00	
8-Jul-05	12:57:30	12.52	0.62	0.49	0.88	0.44	0.35			O2=12.53
8-Jul-05	12:57:35	12.53	0.61	0.39	0.87	0.43	0.28			O2=12.53
8-Jul-05	12:57:40	12.51	0.62	0.49	0.89	0.44	0.35			O2=12.53
8-Jul-05	12:57:45	12.46	0.61	0.29	0.89	0.43	0.21			O2=12.53
8-Jul-05	12:57:50	12.55	0.62	0.39	0.88	0.44	0.28			O2=12.53
8-Jul-05	12:57:55	12.45	0.62	0.49	0.85	0.43	0.34			O2=12.53
8-Jul-05	12:58:48	19.87	0.96	1.38	0.86	5.49	7.85			O2=20
8-Jul-05	12:58:53	19.95	1.03	1.38	0.85	6.42	8.56			O2=20
8-Jul-05	12:58:58	19.93	1.02	1.38	0.88	6.22	8.37			O2=20
8-Jul-05	12:59:03	19.87	1.03	1.38	0.89	5.92	7.89			O2=20
8-Jul-05	12:59:08	19.95	1.03	0.39	0.88	6.39	2.43			O2=20

Source Testing And Consulting Services, Inc.

Scrubber B - Power Boiler 3

8-Jul-05		RAYONIER		Fuel:		oil/bark		Unit #	SCRUBBER B		
Parameter	O2	NOx	CO	CO2	NOx	CO	0.00	0.00	Comments		
Units	%V	ppmV	ppmV	%	@15%O2	@15%CO2	0.00	0.00			
8-Jul-05	13:49:12	0.03	45.36	45.50	0.85	12.82	12.86			NOX=44.6 CO=48.3	SCRUBBER B
8-Jul-05	13:49:17	0.07	45.35	45.60	0.89	12.85	12.92			NOX=44.6 CO=48.3	PRE OIL TESTS
8-Jul-05	13:49:22	0.05	45.41	45.60	0.86	12.85	12.90			NOX=44.6 CO=48.3	
8-Jul-05	13:49:27	0.03	45.41	46.58	0.86	12.84	13.17			NOX=44.6 CO=48.3	
8-Jul-05	13:49:32	0.09	45.41	46.49	0.88	12.87	13.18			NOX=44.6 CO=48.3	
8-Jul-05	13:49:37	0.06	45.46	46.49	0.89	12.87	13.16			NOX=44.6 CO=48.3	
8-Jul-05	13:49:42	0.07	45.46	46.58	0.89	12.88	13.20			NOX=44.6 CO=48.3	
8-Jul-05	13:52:58	0.01	94.42	97.38	0.88	26.66	27.50			NOX=94.4 CO=96.8	
8-Jul-05	13:53:04	0.07	94.53	96.37	0.88	26.78	27.30			NOX=94.4 CO=96.8	
8-Jul-05	13:53:09	0.02	94.53	96.27	0.85	26.71	27.20			NOX=94.4 CO=96.8	
8-Jul-05	13:53:14	0.06	94.59	96.37	0.85	26.78	27.28			NOX=94.4 CO=96.8	
8-Jul-05	13:53:19	0.03	94.59	96.37	0.88	26.74	27.24			NOX=94.4 CO=96.8	
8-Jul-05	13:54:00	12.49	94.41	69.54	0.87	66.56	49.03			O2=12.53	
8-Jul-05	13:54:06	12.49	94.42	69.54	0.89	66.26	48.80			O2=12.53	
8-Jul-05	13:54:11	12.61	66.39	39.68	0.88	47.24	28.23			O2=12.53	
8-Jul-05	13:54:16	12.53	66.39	16.91	0.85	46.81	11.92			O2=12.53	
8-Jul-05	13:54:21	12.59	66.39	17.01	0.88	47.13	12.07			O2=12.53	
8-Jul-05	13:54:26	12.55	66.40	5.67	0.85	46.94	4.01			O2=12.53	
8-Jul-05	13:54:31	12.55	66.39	5.57	0.86	46.93	3.94			O2=12.53	
8-Jul-05	13:54:36	12.64	20.26	1.42	0.88	14.47	1.01			O2=12.53	
8-Jul-05	13:54:41	12.62	20.26	1.42	0.86	14.43	1.01			O2=12.53	
8-Jul-05	13:55:29	20.07	0.90	1.42	0.87	6.41	10.05			O2=20	
8-Jul-05	13:55:34	20.09	0.86	0.40	0.85	6.24	2.96			O2=20	
8-Jul-05	13:55:39	20.13	0.85	0.40	0.89	6.47	3.10			O2=20	
8-Jul-05	13:55:44	20.17	0.85	0.40	0.87	6.84	3.28			O2=20	
8-Jul-05	13:55:49	20.10	0.56	0.40	0.85	4.12	2.98			O2=20	
8-Jul-05	13:58:33	12.99	63.28	30.37	7.14	47.18	22.64			SCRUBBER B OIL RUN 1	START
8-Jul-05	13:58:33	13.16	63.58	32.39	7.19	48.48	24.70			SCRUBBER B OIL RUN 1	
8-Jul-05	14:00:33	13.31	63.81	31.38	7.12	49.59	24.39			SCRUBBER B OIL RUN 1	
8-Jul-05	14:01:33	13.52	63.52	30.37	6.89	50.78	24.28			SCRUBBER B OIL RUN 1	
8-Jul-05	14:02:33	13.34	62.70	31.48	7.03	48.90	24.55			SCRUBBER B OIL RUN 1	
8-Jul-05	14:03:33	12.87	63.18	31.38	7.41	46.42	23.06			SCRUBBER B OIL RUN 1	
8-Jul-05	14:04:33	12.60	63.81	38.52	7.59	45.35	27.37			SCRUBBER B OIL RUN 1	
8-Jul-05	14:05:33	12.55	63.99	42.67	7.63	45.22	30.15			SCRUBBER B OIL RUN 1	
8-Jul-05	14:06:33	12.61	63.40	39.63	7.63	45.12	28.21			SCRUBBER B OIL RUN 1	
8-Jul-05	14:07:33	12.84	63.23	40.64	7.55	46.26	29.74			SCRUBBER B OIL RUN 1	
8-Jul-05	14:08:33	13.14	62.82	35.48	7.24	47.75	26.97			SCRUBBER B OIL RUN 1	
8-Jul-05	14:09:33	13.06	61.29	35.48	7.26	46.10	26.68			SCRUBBER B OIL RUN 1	
8-Jul-05	14:10:33	12.84	61.75	38.62	7.51	45.21	28.27			SCRUBBER B OIL RUN 1	
8-Jul-05	14:11:33	12.59	61.93	38.62	7.62	43.95	27.41			SCRUBBER B OIL RUN 1	
8-Jul-05	14:12:33	12.47	63.57	43.68	7.70	44.48	30.56			SCRUBBER B OIL RUN 1	
8-Jul-05	14:13:33	12.30	63.34	40.64	7.89	43.44	27.88			SCRUBBER B OIL RUN 1	
8-Jul-05	14:14:33	12.26	62.99	41.66	7.90	43.01	28.44			SCRUBBER B OIL RUN 1	
8-Jul-05	14:15:33	12.12	62.81	46.82	7.93	42.22	31.48			SCRUBBER B OIL RUN 1	
8-Jul-05	14:16:33	11.89	63.11	48.94	8.22	41.31	32.03			SCRUBBER B OIL RUN 1	
8-Jul-05	14:17:33	11.70	62.99	52.99	8.28	40.39	33.98			SCRUBBER B OIL RUN 1	
8-Jul-05	14:18:33	12.15	63.69	41.66	7.98	42.94	28.08			SCRUBBER B OIL RUN 1	
8-Jul-05	14:19:33	12.03	64.57	38.62	8.07	42.93	25.68			SCRUBBER B OIL RUN 1	
8-Jul-05	14:20:33	12.00	65.11	38.62	8.03	43.17	25.60			SCRUBBER B OIL RUN 1	
8-Jul-05	14:21:33	12.16	64.82	35.38	7.98	43.83	23.89			SCRUBBER B OIL RUN 1	
8-Jul-05	14:22:33	12.07	64.40	35.48	8.03	43.01	23.69			SCRUBBER B OIL RUN 1	
8-Jul-05	14:23:33	12.05	65.80	36.49	8.01	43.85	24.32			SCRUBBER B OIL RUN 1	
8-Jul-05	14:24:33	11.90	66.86	38.62	8.10	43.82	25.31			SCRUBBER B OIL RUN 1	
8-Jul-05	14:25:33	11.75	67.21	37.51	8.25	43.36	24.20			SCRUBBER B OIL RUN 1	
8-Jul-05	14:26:33	11.86	67.55	36.49	8.24	44.08	23.81			SCRUBBER B OIL RUN 1	
8-Jul-05	14:27:33	11.84	67.33	34.47	8.16	43.85	22.45			SCRUBBER B OIL RUN 1	
8-Jul-05	14:28:33	11.80	68.38	36.39	8.21	44.34	23.60			SCRUBBER B OIL RUN 1	
8-Jul-05	14:29:33	11.85	67.80	39.53	8.17	44.19	25.76			SCRUBBER B OIL RUN 1	
8-Jul-05	14:30:33	11.86	66.97	40.64	8.17	43.71	26.53			SCRUBBER B OIL RUN 1	
8-Jul-05	14:31:33	11.79	66.91	37.51	8.21	43.33	24.29			SCRUBBER B OIL RUN 1	
8-Jul-05	14:32:33	11.29	67.33	40.64	8.48	41.33	24.95			SCRUBBER B OIL RUN 1	
8-Jul-05	14:33:33	11.21	68.44	42.67	8.65	41.65	25.97			SCRUBBER B OIL RUN 1	

Source Testing And Consulting Services, Inc.

Scrubber B - Power Boiler 3

8-Jul-05	RAYONIER	Fuel: oil/bark			Unit #			SCRUBBER B		
Parameter	O2	NOx	CO	CO2	NOx	CO	0.00	0.00	Comments	
Units	%V	ppmV	ppmV	%	@15%O2	@15%O2	0.00	0.00		
8-Jul-05 14:34:33	10.95	67.74	55.12	8.83	40.18	32.69			SCRUBBER B OIL RUN 1	
8-Jul-05 14:35:33	10.74	68.32	64.33	9.03	39.66	37.35			SCRUBBER B OIL RUN 1	
8-Jul-05 14:36:33	10.85	68.85	77.79	8.97	40.42	45.67			SCRUBBER B OIL RUN 1	
8-Jul-05 14:37:33	11.34	69.19	60.18	8.60	42.72	37.16			SCRUBBER B OIL RUN 1	
8-Jul-05 14:38:33	10.86	68.71	78.81	8.97	40.36	46.29			SCRUBBER B OIL RUN 1	
8-Jul-05 14:39:33	10.59	67.86	98.12	9.11	38.85	50.45			SCRUBBER B OIL RUN 1	
8-Jul-05 14:40:33	10.58	67.67	89.13	9.18	38.69	50.96			SCRUBBER B OIL RUN 1	
8-Jul-05 14:41:33	10.81	67.38	97.23	8.92	39.41	56.87			SCRUBBER B OIL RUN 1	
8-Jul-05 14:42:33	10.85	68.68	92.17	8.98	39.14	54.11			SCRUBBER B OIL RUN 1	
8-Jul-05 14:43:33	11.16	68.86	71.52	8.76	40.50	43.32			SCRUBBER B OIL RUN 1	
8-Jul-05 14:44:33	11.94	68.91	51.88	8.16	44.08	34.18			SCRUBBER B OIL RUN 1	
8-Jul-05 14:45:33	12.89	66.04	39.63	7.51	48.62	29.18			SCRUBBER B OIL RUN 1	
8-Jul-05 14:46:33	12.81	64.87	30.32	7.48	47.29	22.10			SCRUBBER B OIL RUN 1	
8-Jul-05 14:47:33	12.49	62.81	35.48	7.79	44.06	24.89			SCRUBBER B OIL RUN 1	
8-Jul-05 14:48:33	12.52	62.82	36.49	7.74	44.21	25.68			SCRUBBER B OIL RUN 1	
8-Jul-05 14:49:33	12.44	63.05	34.47	7.74	43.95	24.03			SCRUBBER B OIL RUN 1	
8-Jul-05 14:50:33	12.25	62.92	34.47	7.94	42.90	23.50			SCRUBBER B OIL RUN 1	
8-Jul-05 14:51:33	12.37	63.05	34.47	7.89	43.60	23.83			SCRUBBER B OIL RUN 1	
8-Jul-05 14:52:33	12.40	64.10	33.46	7.81	44.50	23.23			SCRUBBER B OIL RUN 1	
8-Jul-05 14:53:33	12.05	65.04	33.46	7.91	43.35	22.30			SCRUBBER B OIL RUN 1	
8-Jul-05 14:54:33	12.17	65.69	38.52	8.05	44.41	26.04			SCRUBBER B OIL RUN 1	
8-Jul-05 14:55:33	12.12	65.74	39.53	7.91	44.20	26.58			SCRUBBER B OIL RUN 1	
8-Jul-05 14:56:33	12.14	66.10	36.49	8.03	43.84	24.58			SCRUBBER B OIL RUN 1	
8-Jul-05 14:57:33	12.32	65.27	35.38	7.78	44.89	24.33			SCRUBBER B OIL RUN 1	
8-Jul-05 14:58:33	12.32	65.69	35.48	7.78	44.89	24.33			SCRUBBER B OIL RUN 1	
8-Jul-05 15:00:27	20.15	0.60	0.46	0.89	4.73	3.57			O2=20	
8-Jul-05 15:00:32	20.12	0.55	0.35	0.85	4.13	2.69			O2=20	
8-Jul-05 15:00:37	20.17	0.55	0.46	0.86	4.41	3.69			O2=20	
8-Jul-05 15:00:42	20.11	0.55	0.35	0.85	4.10	2.66			O2=20	
8-Jul-05 15:01:45	12.60	0.50	1.37	0.85	0.35	0.97			O2=12.53	
8-Jul-05 15:01:50	12.69	0.50	0.35	0.88	0.36	0.25			O2=12.53	
8-Jul-05 15:01:55	12.69	0.50	0.35	0.87	0.36	0.25			O2=12.53	
8-Jul-05 15:02:00	12.65	0.50	0.35	0.88	0.35	0.25			O2=12.53	
8-Jul-05 15:02:05	12.66	0.49	0.35	0.89	0.35	0.25			O2=12.53	
8-Jul-05 15:04:06	0.11	94.47	95.48	0.88	28.81	27.10			NO=94.4 CO=96.8	
8-Jul-05 15:04:12	0.00	94.41	94.50	0.88	28.65	26.68			NO=94.4 CO=96.8	
8-Jul-05 15:04:17	0.02	94.35	94.50	0.86	26.66	26.70			NO=94.4 CO=96.8	
8-Jul-05 15:04:22	0.11	94.35	94.50	0.84	26.78	26.82			NO=94.4 CO=96.8	
8-Jul-05 15:04:27	0.00	94.35	97.33	0.85	26.64	27.48			NO=94.4 CO=96.8	
8-Jul-05 15:04:32	0.06	94.35	96.22	0.85	26.72	27.24			NO=94.4 CO=96.8	
8-Jul-05 15:04:37	0.08	94.53	96.32	0.88	28.78	27.29			NO=94.4 CO=96.8	
8-Jul-05 15:08:34	11.92	64.75	45.81	8.12	42.56	30.10			RUN 2	
8-Jul-05 15:08:34	11.98	65.39	41.66	8.00	43.28	27.56			RUN 2	
8-Jul-05 15:10:34	11.45	66.86	46.82	8.50	41.73	29.23			RUN 2	
8-Jul-05 15:11:34	11.43	68.51	55.12	8.45	42.69	34.34			RUN 2	
8-Jul-05 15:12:34	11.22	69.84	49.96	8.53	42.56	30.44			RUN 2	
8-Jul-05 15:13:34	11.24	70.08	61.29	8.57	42.80	37.43			RUN 2	
8-Jul-05 15:14:34	11.14	69.96	63.42	8.66	42.31	38.35			RUN 2	
8-Jul-05 15:15:34	10.98	68.91	76.68	8.80	40.98	45.60			RUN 2	
8-Jul-05 15:16:34	11.27	67.82	66.46	8.80	41.60	40.70			RUN 2	
8-Jul-05 15:17:34	11.18	67.56	66.46	8.64	41.01	40.34			RUN 2	
8-Jul-05 15:18:34	11.39	67.09	58.26	8.54	41.61	36.13			RUN 2	
8-Jul-05 15:19:34	11.55	66.86	52.99	8.41	42.19	33.45			RUN 2	
8-Jul-05 15:20:34	11.40	65.57	52.99	8.43	40.74	32.93			RUN 2	
8-Jul-05 15:21:34	11.70	65.69	50.97	8.36	42.12	32.68			RUN 2	
8-Jul-05 15:22:34	11.96	65.74	47.83	8.14	43.37	31.56			RUN 2	
8-Jul-05 15:23:34	11.80	66.28	40.54	8.14	42.99	26.30			RUN 2	
8-Jul-05 15:24:34	12.00	67.15	43.78	8.11	44.51	29.02			RUN 2	
8-Jul-05 15:25:34	11.39	66.57	50.06	8.32	41.29	31.05			RUN 2	
8-Jul-05 15:26:34	11.54	68.16	47.93	8.36	42.87	30.22			RUN 2	
8-Jul-05 15:27:34	11.23	67.16	45.80	8.52	40.89	28.02			RUN 2	
8-Jul-05 15:28:34	11.34	68.34	46.92	8.56	42.16	28.94			RUN 2	
8-Jul-05 15:28:34	11.31	68.80	49.04	8.48	42.32	30.17			RUN 2	

Source Testing And Consulting Services, Inc.

Scrubber B - Power Boiler 3

8-Jul-05	RAYONIER	Fuel: oil/bark				Unit #		SCRUBBER B		
Parameter	O2	NOx	CO	CO2	NOx	CO	0.00	0.00	Comments	
Units	%V	ppmV	ppmV	%	@15%O2	@15%O2	0.00	0.00		
8-Jul-05	15:30:34	11.24	69.03	51.07	8.56	42.14	31.18		RUN 2	
8-Jul-05	15:31:34	11.79	68.33	44.79	8.21	44.23	29.00		RUN 2	
8-Jul-05	15:32:34	12.19	66.33	35.58	7.93	44.91	24.09		RUN 2	
8-Jul-05	15:33:34	12.27	65.93	37.60	7.90	45.07	25.71		RUN 2	
8-Jul-05	15:34:34	12.42	65.63	29.41	7.76	45.65	20.45		RUN 2	
8-Jul-05	15:35:34	12.70	63.93	33.56	7.60	45.98	24.14		RUN 2	
8-Jul-05	15:36:34	12.81	63.28	26.27	7.43	46.17	19.16		RUN 2	
8-Jul-05	15:37:34	13.12	62.41	26.27	7.30	47.34	19.93		RUN 2	
8-Jul-05	15:38:34	13.18	62.12	24.24	7.22	47.49	18.53		RUN 2	
8-Jul-05	15:39:34	13.26	61.58	23.13	7.13	47.54	17.86		RUN 2	
8-Jul-05	15:40:34	13.22	60.83	23.23	7.18	46.73	17.85		RUN 2	
8-Jul-05	15:41:34	13.42	61.42	22.22	7.06	48.47	17.54		RUN 2	
8-Jul-05	15:42:34	13.37	62.12	21.21	7.03	48.69	16.62		RUN 2	
8-Jul-05	15:43:34	13.26	62.59	19.08	7.11	48.35	14.74		RUN 2	
8-Jul-05	15:44:34	13.20	63.57	20.04	7.11	48.71	15.36		RUN 2	
8-Jul-05	15:45:34	13.20	64.22	19.03	7.19	49.22	14.59		RUN 2	
8-Jul-05	15:46:34	13.05	64.98	20.04	7.27	48.85	15.07		RUN 2	
8-Jul-05	15:47:34	12.88	65.10	21.05	7.43	47.88	15.48		RUN 2	
8-Jul-05	15:48:34	12.68	65.27	22.17	7.54	46.86	15.91		RUN 2	
8-Jul-05	15:49:34	12.44	65.74	22.07	7.75	45.84	15.39		RUN 2	
8-Jul-05	15:50:34	12.21	66.85	24.19	7.88	45.39	16.42		RUN 2	
8-Jul-05	15:51:34	12.27	67.22	26.22	7.88	45.94	17.92		RUN 2	
8-Jul-05	15:52:34	12.10	67.21	28.34	7.98	45.07	19.01		RUN 2	
8-Jul-05	15:53:34	11.91	66.51	31.38	8.14	43.65	20.59		RUN 2	
8-Jul-05	15:54:34	12.09	66.16	33.50	7.97	44.32	22.44		RUN 2	
8-Jul-05	15:55:34	11.97	65.51	36.54	7.98	43.30	24.15		RUN 2	
8-Jul-05	15:56:34	11.79	65.22	34.41	8.02	42.25	22.29		RUN 2	
8-Jul-05	15:57:34	12.25	40.83	31.38	7.99	27.84	21.39		RUN 2	
8-Jul-05	15:58:34	12.25	41.83	31.38	7.97	27.84	21.39		RUN 2	
8-Jul-05	15:59:34	11.84	64.81	37.55	8.02	42.22	24.47		RUN 2	
8-Jul-05	16:00:34	11.84	64.81	37.55	7.97	42.22	24.47		RUN 2	
8-Jul-05	16:01:34	11.84	64.81	37.55	7.97	42.22	24.47		RUN 2	
8-Jul-05	16:02:34	11.37	64.75	46.86	7.98	40.10	29.02		RUN 2	
8-Jul-05	16:03:34	11.74	66.51	42.82	7.98	70.88	27.59		RUN 2	
8-Jul-05	16:04:34	11.93	66.51	32.30	8.22	43.73	21.23		RUN 2	
8-Jul-05	16:05:34	12.04	66.69	32.40	8.39	44.41	21.57		RUN 2	
8-Jul-05	16:06:34	12.38	66.22	29.26	8.34	45.87	20.27		RUN 2	
8-Jul-05	16:07:34	11.81	65.58	33.41	8.18	42.56	21.68		RUN 2	
8-Jul-05	16:08:34	11.58	65.58	39.48	7.89	60.81	25.01		RUN 2	
8-Jul-05	16:15:07	0.07	94.18	96.08	7.41	26.68	27.22		NOX=94.4 CO=96.8	
8-Jul-05	16:15:12	0.11	94.12	97.12	5.07	26.71	27.56		NOX=94.4 CO=96.8	
8-Jul-05	16:15:17	0.05	94.13	97.01	4.50	26.63	27.45		NOX=94.4 CO=96.8	
8-Jul-05	16:15:22	0.03	94.13	97.12	3.93	26.61	27.46		NOX=94.4 CO=96.8	
8-Jul-05	16:15:27	0.04	94.12	97.12	3.43	26.62	27.47		NOX=94.4 CO=96.8	
8-Jul-05	16:16:42	12.51	55.48	9.80	1.29	39.00	6.89		O2=12.53	
8-Jul-05	16:16:48	12.53	8.76	2.48	1.23	6.17	1.75		O2=12.53	
8-Jul-05	16:16:53	12.59	8.76	0.31	1.22	6.22	0.22		O2=12.53	
8-Jul-05	16:16:58	12.57	8.76	0.21	1.17	6.20	0.15		O2=12.53	
8-Jul-05	16:17:03	12.57	0.96	0.31	1.18	0.68	0.22		O2=12.53	
8-Jul-05	16:17:08	12.57	0.95	0.41	1.17	0.68	0.29		O2=12.53	
8-Jul-05	16:17:13	12.54	0.67	0.31	1.13	0.47	0.22		O2=12.53	
8-Jul-05	16:17:18	12.53	0.67	0.31	1.13	0.47	0.22		O2=12.53	
8-Jul-05	16:17:23	12.60	0.66	0.31	1.11	0.47	0.22		O2=12.53	
8-Jul-05	16:17:28	12.59	0.55	0.31	1.11	0.39	0.22		O2=12.53	
8-Jul-05	16:17:33	12.65	0.55	0.21	1.13	0.39	0.15		O2=12.53	
8-Jul-05	16:19:19	20.12	0.55	0.41	1.03	4.14	3.11		O2=20	
8-Jul-05	16:19:24	20.07	0.54	0.21	0.99	3.83	1.46		O2=20	
8-Jul-05	16:19:29	20.12	0.55	0.31	1.02	4.17	2.35		O2=20	
8-Jul-05	16:19:34	20.14	0.55	0.41	0.88	4.28	3.21		O2=20	
8-Jul-05	16:19:39	20.13	0.55	0.41	1.02	4.20	3.15		O2=20	
8-Jul-05	16:19:44	20.16	0.55	0.41	1.01	4.39	3.29		O2=20	
8-Jul-05	16:19:49	20.05	0.37	0.41	0.99	2.60	2.87		O2=20	

Source Testing And Consulting Services, Inc.

IDLE

7/14/2005	RAYONIER			Fuel:	Bark & Oil			Unit #	SCRUBBER B	
Parameter	O2	NOx	CO	CO2	NOx	CO		0	0	Comments
Units	%V	ppmV	ppmV	%	@3%O2	@3%O2		0	0	
14-Jul-05	7:54:36	-0.01	93.71	98.20	0.92	26.44	27.71			CE NOX=92.9 CO=98%
14-Jul-05	7:54:42	-0.01	93.66	98.10	0.21	26.42	27.68			CE NOX=92.9 CO=98%
14-Jul-05	7:54:47	0.03	93.71	98.20	0.20	26.49	27.76			CE NOX=92.9 CO=98%
14-Jul-05	7:54:52	-0.01	93.71	98.20	0.94	26.45	27.71			CE NOX=92.9 CO=98%
14-Jul-05	7:54:57	0.01	93.71	99.23	0.99	26.47	28.03			CE NOX=92.9 CO=98%
14-Jul-05	7:55:02	0.03	93.71	99.33	0.90	26.49	28.08			CE NOX=92.9 CO=98%
14-Jul-05	7:55:07	0.03	93.71	98.20	0.08	26.49	27.76			CE NOX=92.9 CO=98%
14-Jul-05	7:55:12	-0.01	93.71	98.20	0.91	26.44	27.71			CE NOX=92.9 CO=98%
14-Jul-05	7:55:17	0.03	93.13	97.17	0.34	26.33	27.47			CE NOX=92.9 CO=98%
14-Jul-05	7:55:26	0.03	93.12	97.17	0.41	26.32	27.47			LB
14-Jul-05	7:55:31	0.00	93.12	97.17	0.86	26.29	27.43			LB
14-Jul-05	7:55:36	0.02	93.12	97.17	0.12	26.32	27.46			LB
14-Jul-05	7:55:41	0.00	93.12	97.17	0.00	26.29	27.43			LB
14-Jul-05	7:55:46	0.00	93.18	97.17	0.80	26.30	27.43			LB
14-Jul-05	7:55:51	0.01	93.19	97.06	0.91	26.32	27.42			LB
14-Jul-05	8:01:48	0.03	48.64	47.73	7.24	13.75	13.49			CE NOX=48.2 CO=47.9
14-Jul-05	8:01:53	0.02	48.63	47.73	6.92	13.74	13.49			CE NOX=48.2 CO=47.9
14-Jul-05	8:01:58	0.02	48.63	47.73	7.17	13.74	13.49			CE NOX=48.2 CO=47.9
14-Jul-05	8:02:03	0.01	48.63	47.73	7.13	13.74	13.48			CE NOX=48.2 CO=47.9
14-Jul-05	8:02:08	0.01	48.63	47.73	6.85	13.73	13.48			CE NOX=48.2 CO=47.9
14-Jul-05	8:02:13	-0.01	48.63	47.73	6.85	13.72	13.47			CE NOX=48.2 CO=47.9
14-Jul-05	8:02:18	0.02	48.63	47.84	6.93	13.74	13.52			CE NOX=48.2 CO=47.9
14-Jul-05	8:02:23	0.01	48.63	47.84	7.13	13.73	13.51			CE NOX=48.2 CO=47.9
14-Jul-05	8:02:27	0.03	48.63	47.73	7.09	13.75	13.49			LB
14-Jul-05	8:02:32	0.03	48.63	47.73	6.89	13.74	13.49			LB
14-Jul-05	8:02:37	0.01	48.63	47.73	7.28	13.73	13.48			LB
14-Jul-05	8:02:42	-0.01	48.64	47.73	6.87	13.72	13.47			LB
14-Jul-05	8:02:47	0.02	48.63	47.84	6.83	13.74	13.51			LB
14-Jul-05	8:02:52	-0.01	48.57	47.73	6.68	13.71	13.47			LB
14-Jul-05	8:07:41	20.01	0.32	0.46	7.07	2.12	3.08			CE O2=20.00
14-Jul-05	8:07:46	20.04	0.31	0.26	7.57	2.12	1.77			CE O2=20.00
14-Jul-05	8:07:51	19.99	0.32	0.26	7.13	2.07	1.67			CE O2=20.00
14-Jul-05	8:07:56	19.99	0.32	0.52	7.21	2.11	3.35			CE O2=20.00
14-Jul-05	8:08:01	19.98	0.32	0.52	7.21	2.08	3.30			CE O2=20.00
14-Jul-05	8:08:06	20.05	0.32	0.52	7.46	2.26	3.60			CE O2=20.00
14-Jul-05	8:08:11	19.95	0.32	0.52	7.51	2.02	3.21			LB
14-Jul-05	8:08:16	20.04	0.32	0.41	7.21	2.22	2.82			LB
14-Jul-05	8:08:21	20.04	0.32	0.41	6.75	2.22	2.83			LB
14-Jul-05	8:08:26	19.96	0.32	0.52	7.16	2.03	3.22			LB
14-Jul-05	8:08:31	19.99	0.31	0.52	6.78	2.04	3.35			LB
14-Jul-05	8:08:36	20.02	0.32	0.41	7.47	2.18	2.77			LB
14-Jul-05	8:09:43	12.58	0.31	0.41	7.17	0.22	0.29			CE O2=12.53
14-Jul-05	8:09:48	12.50	0.38	0.31	7.19	0.27	0.22			CE O2=12.53
14-Jul-05	8:09:53	12.56	0.38	0.41	7.02	0.27	0.29			CE O2=12.53
14-Jul-05	8:09:58	12.57	0.38	0.52	6.95	0.27	0.37			CE O2=12.53
14-Jul-05	8:10:03	12.51	0.38	0.41	7.03	0.27	0.29			CE O2=12.53
14-Jul-05	8:10:08	12.54	0.38	0.41	7.38	0.27	0.29			CE O2=12.53
14-Jul-05	8:10:13	12.49	0.38	0.52	7.17	0.27	0.36			CE O2=12.53
14-Jul-05	8:10:18	12.56	0.38	0.52	7.35	0.27	0.36			CE O2=12.53
14-Jul-05	8:10:25	12.52	0.32	0.52	7.24	0.23	0.36			LB
14-Jul-05	8:10:30	12.54	0.32	0.52	7.33	0.23	0.36			LB
14-Jul-05	8:10:35	12.50	0.32	0.41	6.92	0.23	0.29			LB
14-Jul-05	8:10:40	12.55	0.32	0.52	7.38	0.23	0.36			LB
14-Jul-05	8:10:45	12.58	0.32	0.52	7.18	0.23	0.37			LB
14-Jul-05	8:10:50	12.47	0.32	0.41	6.94	0.23	0.29			LB
14-Jul-05	8:10:55	12.58	0.32	0.52	7.00	0.23	0.37			LB
14-Jul-05	8:11:00	12.50	0.32	0.52	6.87	0.23	0.36			LB
14-Jul-05	8:15:21	0.10	110.00	891.99	7.00	31.20	253.00			CE CO=905
14-Jul-05	8:15:26	0.08	110.00	895.01	7.20	31.17	250.81			CE CO=905
14-Jul-05	8:15:31	-0.01	110.00	895.01	7.01	31.04	249.75			CE CO=905

Source Testing And Consulting Services, Inc.

IDLE

7/14/2005	RAYONIER			Fuel: Bark & Oil			Unit #	SCRUBBER B		
Parameter	O2	NOx	CO	CO2	NOx	CO	0	0	Comments	
Units	%V	ppmV	ppmV	%	@3%O2	@3%O2	0	0		
14-Jul-05	8:15:38	0.08	110.00	898.94	7.37	31.17	251.89		CE CO=905	
14-Jul-05	8:15:41	0.04	110.00	899.04	6.94	31.11	251.42		CE CO=905	
14-Jul-05	8:15:46	0.07	110.00	892.02	7.28	31.16	244.15		CE CO=905	
14-Jul-05	8:15:51	0.03	110.00	893.00	6.87	31.10	243.97		CE CO=905	
14-Jul-05	8:15:56	0.06	110.00	896.98	7.28	31.15	251.16		CE CO=905	
14-Jul-05	8:16:01	0.07	110.00	896.98	6.93	31.16	251.22		CE CO=905	
14-Jul-05	8:16:06	0.06	110.00	912.03	7.32	31.14	261.59		CE CO=905	
14-Jul-05	8:16:11	0.04	110.00	914.95	6.99	31.11	261.01		CE CO=905	
14-Jul-05	8:16:19	0.08	110.00	918.06	7.00	31.18	267.86		LB	
14-Jul-05	8:16:24	0.07	110.00	921.20	7.29	31.16	262.33		LB	
14-Jul-05	8:16:29	0.00	110.00	916.00	7.03	31.05	261.41		LB	
14-Jul-05	8:16:34	0.07	110.00	903.98	7.28	31.16	256.09		LB	
14-Jul-05	8:16:39	0.07	110.00	903.98	7.33	31.15	256.00		LB	
14-Jul-05	8:16:44	0.00	110.00	891.02	6.95	31.08	246.48		LB	
14-Jul-05	8:16:49	0.02	110.00	891.02	7.14	31.09	246.71		LB	
14-Jul-05	8:20:29	0.09	110.00	594.89	6.98	31.18	168.65		CE CO=619	
14-Jul-05	8:20:34	-0.01	110.00	591.84	7.18	31.04	167.00		CE CO=619	
14-Jul-05	8:20:39	0.02	110.00	591.94	6.97	31.08	167.24		CE CO=619	
14-Jul-05	8:20:44	0.00	110.00	618.77	7.01	31.05	174.66		CE CO=619	
14-Jul-05	8:20:49	0.03	110.00	618.87	7.01	31.10	174.95		CE CO=619	
14-Jul-05	8:20:54	0.09	110.00	614.94	7.05	31.18	174.33		CE CO=619	
14-Jul-05	8:20:59	0.02	110.00	614.84	7.00	31.09	173.75		LB	
14-Jul-05	8:21:04	0.09	110.00	604.91	7.05	31.18	171.49		LB	
14-Jul-05	8:21:09	0.09	110.00	604.91	7.33	31.18	171.51		LB	
14-Jul-05	8:21:14	0.04	110.00	596.86	7.14	31.12	168.85		LB	
14-Jul-05	8:21:19	0.02	110.00	596.76	6.95	31.09	168.64		LB	
14-Jul-05	8:21:24	-0.02	110.00	600.88	7.02	31.02	169.47		LB	
14-Jul-05	8:21:29	0.03	110.00	600.88	6.89	31.10	169.87		LB	
14-Jul-05	8:21:34	0.04	110.00	601.97	7.18	31.11	170.27		LB	
14-Jul-05	8:24:50	0.00	110.00	298.67	7.03	31.08	84.33		CE CO=306	
14-Jul-05	8:24:55	0.01	110.00	297.69	6.99	31.07	84.08		CE CO=306	
14-Jul-05	8:25:00	0.06	110.00	297.69	7.17	31.14	84.28		CE CO=306	
14-Jul-05	8:25:05	0.09	110.00	303.78	6.80	31.19	86.14		CE CO=306	
14-Jul-05	8:25:10	0.03	110.00	303.69	7.09	31.10	85.87		CE CO=306	
14-Jul-05	8:25:15	0.01	110.00	300.74	6.74	31.07	84.94		CE CO=306	
14-Jul-05	8:25:20	0.01	110.00	300.64	6.73	31.06	84.90		CE CO=306	
14-Jul-05	8:25:26	0.04	110.00	298.77	6.81	31.11	84.49		LB	
14-Jul-05	8:25:31	0.06	110.00	298.77	7.13	31.14	84.58		LB	
14-Jul-05	8:25:36	-0.03	110.00	297.69	7.15	31.01	83.91		LB	
14-Jul-05	8:25:41	0.03	110.00	297.69	6.87	31.09	84.15		LB	
14-Jul-05	8:25:46	0.09	110.00	302.70	7.02	31.19	85.84		LB	
14-Jul-05	8:25:51	-0.03	110.00	302.70	6.99	31.01	85.34		LB	
14-Jul-05	8:35:38	12.40	0.50	0.34	9.00	0.34	0.24		CO2=9	
14-Jul-05	8:35:43	12.44	0.50	0.44	9.01	0.35	0.31		CO2=9	
14-Jul-05	8:35:48	12.47	0.44	0.44	9.01	0.31	0.31		CO2=9	
14-Jul-05	8:35:53	12.40	0.44	0.44	9.01	0.30	0.31		CO2=9	
14-Jul-05	8:35:58	12.44	0.44	0.25	9.00	0.31	0.17		CO2=9	
14-Jul-05	8:36:03	12.47	0.43	0.44	9.00	0.30	0.31		CO2=9	
14-Jul-05	8:36:08	12.42	0.43	0.44	8.99	0.30	0.31		CO2=9	
14-Jul-05	8:36:13	12.45	0.44	0.34	9.03	0.31	0.24		CO2=9	
14-Jul-05	8:36:18	12.42	0.44	0.34	9.03	0.30	0.24		CO2=9	
14-Jul-05	8:36:23	12.39	0.44	0.34	9.00	0.30	0.24		CO2=9	
14-Jul-05	8:36:28	12.35	0.43	0.34	9.01	0.30	0.24		CO2=9	
14-Jul-05	8:36:33	12.35	0.43	0.44	9.01	0.30	0.31		CO2=9	
14-Jul-05	8:36:38	12.36	0.43	0.44	8.99	0.30	0.31		CO2=9	
14-Jul-05	8:36:43	12.39	0.44	0.44	8.99	0.30	0.31		CO2=9	
14-Jul-05	8:36:48	12.40	0.43	0.44	9.02	0.30	0.31		CO2=9	
14-Jul-05	8:36:53	12.39	0.43	0.34	8.99	0.30	0.24		CO2=9	
14-Jul-05	8:37:04	12.47	0.43	0.34	9.02	0.30	0.24		LB	
14-Jul-05	8:37:09	12.36	0.44	0.34	9.00	0.30	0.24		LB	

Source Testing And Consulting Services, Inc.

IDLE

7/14/2005	RAYONIER			Fuel:	Bark & Oil			Unit #	SCRUBBER B	
Parameter	O2	NOx	CO	CO2	NOx	CO	0	0	Comments	
Units	%V	ppmV	ppmV	%	@3%O2	@3%O2	0	0	0	
14-Jul-05	8:37:14	12.43	0.44	0.34	9.03	0.30	0.24		LB	
14-Jul-05	8:37:19	12.42	0.43	0.34	8.96	0.30	0.24		LB	
14-Jul-05	8:37:51	12.39	0.43	0.34	17.98	0.30	0.24		CE CO2=18.1	
14-Jul-05	8:37:58	13.02	0.40	0.05	17.91	0.30	0.04		CE CO2=18.1	
14-Jul-05	8:38:01	12.29	0.44	0.34	18.00	0.30	0.24		CE CO2=18.1	
14-Jul-05	8:38:08	11.37	0.43	0.44	18.05	0.26	0.27		CE CO2=18.1	
14-Jul-05	8:38:15	12.25	0.43	0.44	17.99	0.29	0.30		LB	
14-Jul-05	8:38:20	12.39	0.44	0.44	18.05	0.30	0.31		LB	
14-Jul-05	8:38:25	11.72	0.40	0.15	17.73	0.26	0.09		LB	
14-Jul-05	8:38:30	13.45	0.39	-0.05	17.44	0.31	-0.04		LB	
14-Jul-05	8:38:35	11.68	0.44	0.44	18.06	0.28	0.28		LB	
14-Jul-05	8:38:40	10.84	0.44	0.34	17.98	0.26	0.20		LB	
14-Jul-05	8:38:45	11.78	0.34	-0.54	18.15	0.22	-0.35		LB	
14-Jul-05	8:59:45	12.22	77.47	49.43	7.71	159.72	101.91		SCRUBER B RUN1 BARK/OIL	
14-Jul-05	9:00:45	12.38	78.47	49.53	7.51	164.42	103.79		SCRUBER B RUN1	
14-Jul-05	9:01:45	12.37	78.17	48.55	7.51	164.13	101.94		SCRUBER B RUN1	
14-Jul-05	9:02:45	12.18	75.24	48.58	7.65	154.47	95.63		SCRUBER B RUN1	
14-Jul-05	9:03:45	12.38	76.77	42.46	7.60	160.95	89.02		SCRUBER B RUN1	
14-Jul-05	9:04:45	12.55	75.42	39.51	7.41	161.76	84.74		SCRUBER B RUN1	
14-Jul-05	9:05:47	12.55	75.30	39.51	7.47	161.36	84.66		SCRUBER B RUN1	
14-Jul-05	9:06:47	12.33	75.95	48.49	7.60	158.58	97.05		SCRUBER B RUN1	
14-Jul-05	9:07:47	12.25	74.59	49.43	7.62	154.40	102.32		SCRUBER B RUN1	
14-Jul-05	9:08:47	12.41	73.65	48.49	7.51	155.24	98.00		SCRUBER B RUN1	
14-Jul-05	9:09:47	12.29	74.83	43.44	7.64	155.48	90.27		SCRUBER B RUN1	
14-Jul-05	9:10:47	12.23	75.88	48.36	7.69	156.72	99.88		SCRUBER B RUN1	
14-Jul-05	9:11:47	11.85	74.24	44.43	7.96	148.80	87.85		SCRUBER B RUN1	
14-Jul-05	9:12:47	12.20	75.36	58.48	7.65	155.03	120.31		SCRUBER B RUN1	
14-Jul-05	9:13:47	12.09	77.65	47.47	7.74	157.78	96.47		SCRUBER B RUN1	
14-Jul-05	9:14:47	12.49	76.47	41.38	7.50	162.79	88.09		SCRUBER B RUN1	
14-Jul-05	9:15:47	12.23	74.89	42.46	7.66	154.67	87.70		SCRUBER B RUN1	
14-Jul-05	9:16:47	12.44	74.82	41.38	7.55	158.25	87.53		SCRUBER B RUN1	
14-Jul-05	9:17:47	12.35	75.07	48.46	7.61	157.24	101.49		SCRUBER B RUN1	
14-Jul-05	9:18:48	12.17	74.77	44.43	7.68	153.38	91.14		SCRUBER B RUN1	
14-Jul-05	9:19:48	12.34	75.77	45.41	7.58	158.52	95.00		SCRUBER B RUN1	
14-Jul-05	9:20:48	12.30	75.54	41.48	7.70	157.17	88.31		SCRUBER B RUN1	
14-Jul-05	9:21:48	12.17	76.82	46.39	7.79	157.51	95.12		SCRUBER B RUN1	
14-Jul-05	9:22:48	12.30	76.53	55.44	7.69	159.33	115.41		SCRUBER B RUN1	
14-Jul-05	9:23:48	12.07	74.59	46.39	7.71	151.15	94.01		SCRUBER B RUN1	
14-Jul-05	9:24:48	12.14	75.77	49.44	7.70	154.83	101.02		SCRUBER B RUN1	
14-Jul-05	9:25:48	12.10	77.06	54.45	7.67	156.76	110.77		SCRUBER B RUN1	
14-Jul-05	9:26:48	12.10	75.42	51.41	7.88	153.46	104.60		SCRUBER B RUN1	
14-Jul-05	9:27:48	12.26	75.54	63.50	7.54	156.54	131.59		SCRUBER B RUN1	
14-Jul-05	9:28:48	12.17	76.25	47.57	7.71	156.28	97.50		SCRUBER B RUN1	
14-Jul-05	9:29:48	11.81	78.63	52.48	7.90	154.86	103.36		SCRUBER B RUN1	
14-Jul-05	9:30:48	11.73	80.34	65.55	8.03	156.79	127.92		SCRUBER B RUN1	
14-Jul-05	9:31:48	12.06	79.64	67.52	7.76	161.19	138.66		SCRUBER B RUN1	
14-Jul-05	9:32:48	12.66	77.52	59.58	7.32	168.42	129.39		SCRUBER B RUN1	
14-Jul-05	9:33:48	12.87	76.66	47.47	7.09	170.98	105.88		SCRUBER B RUN1	
14-Jul-05	9:34:48	12.98	73.54	40.49	7.00	168.22	91.52		SCRUBER B RUN1	
14-Jul-05	9:35:48	13.29	68.80	33.51	6.80	161.77	78.80		SCRUBER B RUN1	
14-Jul-05	9:36:48	13.38	94.59	28.50	6.68	225.04	67.80		SCRUBER B RUN1	
14-Jul-05	9:37:48	13.49	110.00	31.45	6.59	265.60	75.94		SCRUBER B RUN1 **	
14-Jul-05	9:38:48	13.72	67.45	27.42	6.40	168.15	68.36		SCRUBER B RUN1	
14-Jul-05	9:39:48	13.82	64.69	23.39	6.34	163.45	59.10		SCRUBER B RUN1	
14-Jul-05	9:40:48	13.61	63.52	23.49	6.49	155.90	57.65		SCRUBER B RUN1	
14-Jul-05	9:41:48	13.42	64.87	26.44	6.65	155.25	63.27		SCRUBER B RUN1	
14-Jul-05	9:42:48	13.47	68.38	27.52	6.64	164.73	66.29		SCRUBER B RUN1	
14-Jul-05	9:43:48	13.36	69.61	23.49	6.75	165.29	55.77		SCRUBER B RUN1	
14-Jul-05	9:44:48	13.20	70.20	26.44	6.81	163.28	61.49		SCRUBER B RUN1	
14-Jul-05	9:45:48	13.34	69.15	24.47	6.77	163.65	57.92		SCRUBER B RUN1	

Source Testing And Consulting Services, Inc.

IDLE

7/14/2005	RAYONIER		Fuel:	Bark & Oil		Unit #		SCRUBBER B		
Parameter	O2	NOx	CO	CO2	NOx	CO	0	0	Comments	
Units	%V	ppmV	ppmV	%	@3%O2	@3%O2	0	0		
14-Jul-05 9:46:48	13.21	68.86	25.45	6.81	160.30	59.28			SCRUBBER B RUN1	
14-Jul-05 9:47:48	13.19	68.56	27.52	6.80	159.26	63.92			SCRUBBER B RUN1	
14-Jul-05 9:48:48	13.18	67.86	24.42	6.83	157.30	56.61			SCRUBBER B RUN1	
14-Jul-05 9:49:48	12.98	67.45	30.42	7.05	152.41	68.74			SCRUBBER B RUN1	
14-Jul-05 9:50:48	12.81	67.86	35.53	7.14	150.13	78.60			SCRUBBER B RUN1	
14-Jul-05 9:51:48	12.90	66.81	37.40	7.16	149.48	83.68			SCRUBBER B RUN1	
14-Jul-05 9:52:48	12.72	66.28	37.50	7.29	145.00	82.03			SCRUBBER B RUN1	
14-Jul-05 9:53:48	12.82	67.97	40.35	7.16	150.55	89.37			SCRUBBER B RUN1	
14-Jul-05 9:54:48	12.82	68.10	39.46	7.14	150.93	87.46			SCRUBBER B RUN1	
14-Jul-05 9:55:48	12.61	69.03	43.39	7.36	149.10	93.72			SCRUBBER B RUN1	
14-Jul-05 9:56:48	12.72	69.44	42.51	7.28	152.02	93.05			SCRUBBER B RUN1	
14-Jul-05 9:57:48	12.89	70.49	38.48	7.05	157.54	85.99			SCRUBBER B RUN1	
14-Jul-05 9:58:48	12.83	69.67	36.41	7.22	154.55	80.78			SCRUBBER B RUN1	
14-Jul-05 9:59:48	12.77	70.03	38.38	7.19	154.28	84.55			SCRUBBER B RUN1	
14-Jul-05 10:00:48	12.57	70.20	41.43	7.33	150.86	89.03			SCRUBBER B RUN1	STOP
	12.63	73.88	41.74	7.32	160.31	89.44			AVG	
14-Jul-05 10:04:13	12.55	1.15	0.44	0.87	2.46	0.95			O2=12.53	
14-Jul-05 10:04:18	12.52	1.09	0.44	0.90	2.32	0.95			O2=12.53	
14-Jul-05 10:04:23	12.55	0.97	0.44	0.87	2.08	0.95			O2=12.53	
14-Jul-05 10:04:28	12.52	0.97	0.44	0.87	2.07	0.94			O2=12.53	
14-Jul-05 10:04:33	12.52	0.97	0.44	0.89	2.07	0.94			O2=12.53	
14-Jul-05 10:04:38	12.54	0.97	0.44	0.89	2.07	0.95			O2=12.53	
14-Jul-05 10:04:43	12.49	0.97	0.34	0.86	2.06	0.73			O2=12.53	
14-Jul-05 10:08:54	0.09	93.36	95.98	0.87	80.31	82.56			NOX=92.9 CO=96	
14-Jul-05 10:08:59	0.00	93.36	97.11	0.84	79.96	83.18			NOX=92.9 CO=96	
14-Jul-05 10:09:04	0.09	93.35	97.01	0.88	80.31	83.45			NOX=92.9 CO=96	
14-Jul-05 10:09:09	0.09	93.35	96.08	0.87	80.30	82.64			NOX=92.9 CO=96	
14-Jul-05 10:09:14	0.11	93.41	96.08	0.86	80.42	82.72			NOX=92.9 CO=96	
14-Jul-05 10:09:19	0.05	93.41	95.98	0.84	80.19	82.39			NOX=92.9 CO=96	
14-Jul-05 10:10:20	12.18	93.23	89.68	9.01	191.36	184.06			CO2=9	
14-Jul-05 10:10:25	12.28	93.23	67.60	9.00	193.65	140.40			CO2=9	
14-Jul-05 10:10:30	12.33	93.24	38.29	8.99	194.83	80.00			CO2=9	
14-Jul-05 10:10:35	12.45	53.19	38.18	9.02	112.73	80.92			CO2=9	
14-Jul-05 10:10:40	12.40	53.19	16.20	9.00	112.01	34.12			CO2=9	
14-Jul-05 10:14:53	0.07	48.62	47.68	0.85	41.79	40.98			NOX=48.2 CO=47.9	
14-Jul-05 10:14:59	0.09	48.62	48.71	0.85	41.82	41.90			NOX=48.2 CO=47.9	
14-Jul-05 10:15:04	0.00	48.62	48.71	0.81	41.84	41.72			NOX=48.2 CO=47.9	
14-Jul-05 10:15:09	0.03	48.62	47.78	0.82	41.89	40.97			NOX=48.2 CO=47.9	
14-Jul-05 10:15:14	0.06	48.68	47.78	0.85	41.82	41.05			NOX=48.2 CO=47.9	
14-Jul-05 10:15:19	0.04	48.68	47.68	0.81	41.77	40.91			NOX=48.2 CO=47.9	
14-Jul-05 10:18:11	12.05	76.00	57.40	7.85	153.78	116.14			SCRUBBER B RUN 2	START
14-Jul-05 10:19:11	12.98	75.53	44.42	7.18	170.65	100.37			SCRUBBER B RUN 2	
14-Jul-05 10:20:12	12.89	76.70	38.43	7.24	171.38	85.87			SCRUBBER B RUN 2	
14-Jul-05 10:21:12	12.61	76.88	37.35	7.41	166.02	80.66			SCRUBBER B RUN 2	
14-Jul-05 10:22:12	12.77	77.35	46.49	7.34	170.22	102.31			SCRUBBER B RUN 2	
14-Jul-05 10:23:12	12.92	77.81	49.44	7.19	174.61	110.94			SCRUBBER B RUN 2	
14-Jul-05 10:24:12	13.23	78.06	39.41	6.95	182.24	92.01			SCRUBBER B RUN 2	
14-Jul-05 10:25:12	13.50	75.47	30.37	6.79	182.58	73.47			SCRUBBER B RUN 2	
14-Jul-05 10:26:12	13.32	74.12	30.47	6.87	175.11	71.99			SCRUBBER B RUN 2	
14-Jul-05 10:27:12	13.35	74.35	28.40	6.85	176.18	67.31			SCRUBBER B RUN 2	
14-Jul-05 10:28:12	13.41	75.71	32.38	6.89	180.94	77.39			SCRUBBER B RUN 2	
14-Jul-05 10:29:12	13.26	75.48	28.45	7.00	176.89	66.68			SCRUBBER B RUN 2	
14-Jul-05 10:30:12	12.90	76.78	38.48	7.29	171.86	86.13			SCRUBBER B RUN 2	
14-Jul-05 10:31:12	13.07	80.05	39.46	7.12	182.90	90.16			SCRUBBER B RUN 2	
14-Jul-05 10:32:12	13.01	78.93	38.48	7.22	178.99	87.26			SCRUBBER B RUN 2	
14-Jul-05 10:33:12	12.87	78.35	35.43	7.32	174.68	79.00			SCRUBBER B RUN 2	
14-Jul-05 10:34:12	12.83	77.11	34.45	7.38	170.93	76.36			SCRUBBER B RUN 2	
14-Jul-05 10:35:12	12.95	77.52	33.47	7.27	174.55	75.35			SCRUBBER B RUN 2	
14-Jul-05 10:36:12	12.41	77.41	44.47	7.59	163.16	93.74			SCRUBBER B RUN 2	
14-Jul-05 10:37:12	12.61	79.41	44.47	7.52	171.49	96.04			SCRUBBER B RUN 2	

Source Testing And Consulting Services, Inc.

IDLE

7/14/2005	RAYONIER		Fuel:		Bark & Oil		Unit #	SCRUBBER B	
Parameter	O2	NOx	CO	CO2	NOx	CO	0	0	Comments
Units	%V	ppmV	ppmV	%	@3%O2	@3%O2	0	0	
14-Jul-05	10:38:12	12.70	78.88	36.51	7.44	172.28	79.75		SCRUBBER B RUN 2
14-Jul-05	10:39:12	12.74	76.36	33.47	7.37	167.49	73.40		SCRUBBER B RUN 2
14-Jul-05	10:40:12	12.85	76.82	35.43	7.33	170.92	78.83		SCRUBBER B RUN 2
14-Jul-05	10:41:12	12.67	76.88	38.48	7.48	167.12	83.64		SCRUBBER B RUN 2
14-Jul-05	10:42:12	12.59	77.71	37.40	7.45	167.47	80.59		SCRUBBER B RUN 2
14-Jul-05	10:43:12	12.43	77.30	43.49	7.63	163.39	91.93		SCRUBBER B RUN 2
14-Jul-05	10:44:12	12.55	78.47	48.50	7.58	168.20	103.98		SCRUBBER B RUN 2
14-Jul-05	10:45:12	12.45	78.35	41.53	7.60	165.95	87.95		SCRUBBER B RUN 2
14-Jul-05	10:46:12	12.65	78.23	41.53	7.44	169.75	90.10		SCRUBBER B RUN 2
14-Jul-05	10:47:12	12.81	77.88	34.45	7.38	172.21	76.18		SCRUBBER B RUN 2
14-Jul-05	10:48:12	12.56	77.52	41.48	7.58	166.46	89.07		SCRUBBER B RUN 2
14-Jul-05	10:49:12	12.64	78.11	42.46	7.50	169.28	92.02		SCRUBBER B RUN 2
14-Jul-05	10:50:12	12.68	76.76	41.48	7.44	167.10	90.29		SCRUBBER B RUN 2
14-Jul-05	10:51:12	13.24	75.59	33.42	7.03	176.70	78.12		SCRUBBER B RUN 2
14-Jul-05	10:52:12	13.50	74.00	26.34	6.78	179.01	63.72		SCRUBBER B RUN 2
14-Jul-05	10:53:12	13.85	70.55	24.47	6.50	179.11	62.13		SCRUBBER B RUN 2
14-Jul-05	10:54:12	14.17	66.56	22.41	6.17	178.94	59.57		SCRUBBER B RUN 2
14-Jul-05	10:55:12	14.29	61.93	21.33	6.16	167.81	57.79		SCRUBBER B RUN 2
14-Jul-05	10:56:12	14.28	60.65	24.47	6.18	164.05	66.19		SCRUBBER B RUN 2
14-Jul-05	10:57:12	14.39	60.46	26.44	6.02	166.13	72.64		SCRUBBER B RUN 2
14-Jul-05	10:58:12	14.31	59.76	26.44	6.15	162.41	71.86		SCRUBBER B RUN 2
14-Jul-05	10:59:12	14.22	59.76	26.44	6.13	160.08	70.83		SCRUBBER B RUN 2
14-Jul-05	11:00:12	14.36	59.18	30.37	6.08	161.92	83.10		SCRUBBER B RUN 2
14-Jul-05	11:01:12	14.19	59.30	39.41	6.24	158.21	105.16		SCRUBBER B RUN 2
14-Jul-05	11:02:12	14.05	60.05	40.40	6.29	156.89	105.54		SCRUBBER B RUN 2
14-Jul-05	11:03:12	13.98	60.52	35.38	6.42	156.66	91.59		SCRUBBER B RUN 2
14-Jul-05	11:04:12	13.96	61.70	40.40	6.37	159.10	104.15		SCRUBBER B RUN 2
14-Jul-05	11:05:12	13.92	59.70	39.31	6.37	153.11	100.83		SCRUBBER B RUN 2
14-Jul-05	11:06:12	13.80	60.36	43.44	6.50	152.07	109.45		SCRUBBER B RUN 2
14-Jul-05	11:07:12	13.82	60.88	38.43	6.45	153.92	97.16		SCRUBBER B RUN 2
14-Jul-05	11:08:12	13.87	60.35	46.58	6.54	153.70	118.83		SCRUBBER B RUN 2
14-Jul-05	11:09:12	13.82	60.13	43.54	6.63	147.80	107.02		SCRUBBER B RUN 2
14-Jul-05	11:10:12	13.31	61.00	54.55	6.83	143.93	128.89		SCRUBBER B RUN 2
14-Jul-05	11:11:12	13.12	60.53	52.58	7.09	139.25	120.96		SCRUBBER B RUN 2
14-Jul-05	11:12:12	12.97	61.70	54.55	7.19	139.35	123.19		SCRUBBER B RUN 2
14-Jul-05	11:13:12	12.92	62.88	57.59	7.24	140.96	129.11		SCRUBBER B RUN 2
14-Jul-05	11:14:12	13.06	63.52	57.49	7.08	144.98	131.23		SCRUBBER B RUN 2
14-Jul-05	11:15:12	12.93	62.82	57.59	7.18	141.05	129.31		SCRUBBER B RUN 2
14-Jul-05	11:16:12	12.96	62.30	55.53	7.21	140.40	125.14		SCRUBBER B RUN 2
14-Jul-05	11:17:12	12.88	62.05	68.50	7.42	135.12	149.16		SCRUBBER B RUN 2
14-Jul-05	11:18:12	12.59	63.16	72.53	7.42	135.99	156.16		SCRUBBER B RUN 2 STOP
		13.21	70.49	40.13	7.00	163.99	92.87		AVG
14-Jul-05	11:22:04	0.04	93.11	98.44	0.84	79.91	82.76		NOX=92.9 CO=96.0
14-Jul-05	11:22:09	0.04	93.24	95.43	0.84	80.00	81.88		NOX=92.9 CO=96.0
14-Jul-05	11:22:14	0.09	93.23	95.43	0.87	80.20	82.10		NOX=92.9 CO=96.0
14-Jul-05	11:22:19	0.13	93.28	93.33	0.85	80.38	80.42		NOX=92.9 CO=96.0
14-Jul-05	11:22:24	0.07	93.28	93.43	0.88	80.18	80.31		NOX=92.9 CO=96.0
14-Jul-05	11:25:08	12.61	0.48	0.50	0.83	1.04	1.08		O2=12.53
14-Jul-05	11:25:13	12.60	0.48	0.40	0.85	1.04	0.86		O2=12.53
14-Jul-05	11:25:18	12.51	0.48	0.40	0.83	1.03	0.86		O2=12.53
14-Jul-05	11:25:23	12.56	0.48	0.40	0.83	1.03	0.86		O2=12.53
14-Jul-05	11:25:28	12.54	0.42	0.50	0.83	0.91	1.07		O2=12.53
14-Jul-05	11:25:33	12.65	0.42	0.50	0.86	0.92	1.09		O2=12.53
14-Jul-05	11:26:17	12.46	0.48	0.40	8.98	1.02	0.85		CO2=9
14-Jul-05	11:26:22	12.50	0.49	0.40	9.03	1.04	0.85		CO2=9
14-Jul-05	11:26:27	12.48	0.48	0.50	9.00	1.02	1.08		CO2=9
14-Jul-05	11:26:32	12.56	0.48	0.60	9.02	1.03	1.29		CO2=9
14-Jul-05	11:26:37	12.45	0.48	0.40	9.00	1.02	0.85		CO2=9
14-Jul-05	11:26:42	12.52	0.48	0.40	9.03	1.03	0.86		CO2=9
14-Jul-05	11:26:47	12.48	0.47	0.50	9.03	1.00	1.06		CO2=9

Source Testing And Consulting Services, Inc.

IDLE

7/14/2005	RAYONIER	Fuel:	Bark & Oil	Unit #	SCRUBBER B				
Parameter	O2	NOx	CO	CO2	NOx	CO	0	0	Comments
Units	%V	ppmV	ppmV	%	@3%O2	@3%O2	0	0	0
14-Jul-05 11:31:28	0.08	48.51	47.78	0.87	41.66	41.03			NOX=48.2 CO=47.9
14-Jul-05 11:31:32	0.07	48.52	47.78	0.89	41.70	41.07			NOX=48.2 CO=47.9
14-Jul-05 11:31:37	0.01	48.51	47.78	0.87	41.57	40.94			NOX=48.2 CO=47.9
14-Jul-05 11:31:42	0.03	48.52	47.88	0.88	41.62	41.07			NOX=48.2 CO=47.9
14-Jul-05 11:31:47	0.07	48.51	47.78	0.89	41.70	41.07			NOX=48.2 CO=47.9
14-Jul-05 11:31:52	0.03	48.52	47.88	0.85	41.81	41.08			NOX=48.2 CO=47.9
14-Jul-05 11:31:57	0.09	48.58	47.78	0.88	41.79	41.10			NOX=48.2 CO=47.9
14-Jul-05 11:32:02	0.06	48.58	47.78	0.85	41.71	41.03			NOX=48.2 CO=47.9
14-Jul-05 11:38:59	11.86	69.03	54.07	7.71	136.73	107.10			SCRUBBER B RUN 3 START
14-Jul-05 11:40:00	11.37	68.39	75.12	8.29	128.51	141.16			SCRUBBER B RUN 3
14-Jul-05 11:41:00	12.10	70.79	60.47	7.82	144.01	123.02			SCRUBBER B RUN 3
14-Jul-05 11:42:00	11.60	72.83	66.66	8.02	140.15	128.27			SCRUBBER B RUN 3
14-Jul-05 11:43:00	11.88	71.49	70.89	8.00	141.79	140.61			SCRUBBER B RUN 3
14-Jul-05 11:44:00	12.04	70.14	56.24	7.88	141.62	113.55			SCRUBBER B RUN 3
14-Jul-05 11:45:00	11.85	69.80	56.51	8.04	138.10	111.81			SCRUBBER B RUN 3
14-Jul-05 11:46:00	12.08	69.84	47.57	7.90	141.77	96.55			SCRUBBER B RUN 3
14-Jul-05 11:47:00	11.83	69.26	75.57	8.01	136.64	149.09			SCRUBBER B RUN 3
14-Jul-05 11:48:00	11.81	70.49	56.61	8.11	135.81	109.06			SCRUBBER B RUN 3
14-Jul-05 11:49:00	11.77	69.56	71.54	8.10	136.43	140.32			SCRUBBER B RUN 3
14-Jul-05 11:50:00	11.58	69.44	56.51	8.23	133.36	108.52			SCRUBBER B RUN 3
14-Jul-05 11:51:00	11.11	68.85	99.55	8.57	125.86	181.98			SCRUBBER B RUN 3
14-Jul-05 11:52:00	11.14	68.20	112.53	8.54	125.11	206.41			SCRUBBER B RUN 3
14-Jul-05 11:53:00	11.15	69.03	102.60	8.51	126.75	188.40			SCRUBBER B RUN 3
14-Jul-05 11:54:00	11.10	69.03	117.54	8.57	126.02	214.58			SCRUBBER B RUN 3
14-Jul-05 11:55:02	11.05	69.82	89.53	8.66	126.50	182.67			SCRUBBER B RUN 3
14-Jul-05 11:58:02	11.48	68.97	114.59	8.28	130.73	217.20			SCRUBBER B RUN 3
14-Jul-05 11:57:02	11.83	69.80	91.49	8.13	137.82	180.66			SCRUBBER B RUN 3
14-Jul-05 11:58:02	12.81	70.67	76.56	7.39	156.37	169.39			SCRUBBER B RUN 3
14-Jul-05 11:59:02	12.70	68.20	53.56	7.42	148.87	116.91			SCRUBBER B RUN 3
14-Jul-05 12:00:02	12.70	68.82	48.55	7.43	145.47	106.00			SCRUBBER B RUN 3
14-Jul-05 12:01:02	12.58	64.64	42.55	7.44	139.09	91.57			SCRUBBER B RUN 3
14-Jul-05 12:02:02	12.46	64.46	53.56	7.55	136.69	113.58			SCRUBBER B RUN 3
14-Jul-05 12:03:02	12.27	64.69	66.53	7.69	134.14	137.95			SCRUBBER B RUN 3
14-Jul-05 12:04:02	12.00	64.64	69.58	7.96	129.99	139.93			SCRUBBER B RUN 3
14-Jul-05 12:05:02	12.42	65.57	64.57	7.62	138.40	136.28			SCRUBBER B RUN 3
14-Jul-05 12:06:02	12.26	64.75	66.53	7.70	134.23	137.92			SCRUBBER B RUN 3
14-Jul-05 12:07:02	11.89	64.40	73.51	7.96	128.00	146.10			SCRUBBER B RUN 3
14-Jul-05 12:08:02	12.13	66.34	86.58	7.86	135.41	176.73			SCRUBBER B RUN 3
14-Jul-05 12:09:02	11.81	66.38	80.59	8.07	130.75	158.72			SCRUBBER B RUN 3
14-Jul-05 12:10:02	11.82	66.92	104.57	8.08	131.90	206.11			SCRUBBER B RUN 3
14-Jul-05 12:11:02	11.75	68.56	99.55	8.08	134.04	194.65			SCRUBBER B RUN 3
14-Jul-05 12:12:02	11.73	68.15	139.55	8.08	133.08	272.49			SCRUBBER B RUN 3
14-Jul-05 12:13:02	11.88	68.14	86.58	8.03	135.16	171.73			SCRUBBER B RUN 3
14-Jul-05 12:14:02	11.95	68.57	92.58	7.93	137.19	185.23			SCRUBBER B RUN 3
14-Jul-05 12:15:02	11.95	69.21	96.60	7.95	138.40	193.19			SCRUBBER B RUN 3
14-Jul-05 12:16:02	11.71	68.51	84.52	8.09	133.48	164.68			SCRUBBER B RUN 3
14-Jul-05 12:17:02	11.87	68.04	96.51	8.05	134.80	191.21			SCRUBBER B RUN 3
14-Jul-05 12:18:02	11.90	66.87	81.47	7.96	133.03	162.08			SCRUBBER B RUN 3
14-Jul-05 12:19:02	11.79	67.92	96.51	8.03	133.44	189.61			SCRUBBER B RUN 3
14-Jul-05 12:20:02	11.52	68.20	95.62	8.27	130.11	182.41			SCRUBBER B RUN 3
14-Jul-05 12:21:02	11.80	69.21	101.62	8.11	136.08	199.81			SCRUBBER B RUN 3
14-Jul-05 12:22:02	12.05	70.26	91.59	7.85	142.10	185.25			SCRUBBER B RUN 3
14-Jul-05 12:23:02	12.28	69.38	61.52	7.75	144.01	127.69			SCRUBBER B RUN 3
14-Jul-05 12:24:02	12.14	67.92	57.59	7.85	138.83	117.72			SCRUBBER B RUN 3
14-Jul-05 12:25:02	12.48	66.93	58.47	7.59	142.23	124.27			SCRUBBER B RUN 3
14-Jul-05 12:26:02	12.55	66.44	44.52	7.51	142.37	95.39			SCRUBBER B RUN 3
14-Jul-05 12:27:02	12.44	68.15	44.52	7.57	144.13	94.14			SCRUBBER B RUN 3
14-Jul-05 12:28:02	12.53	68.27	49.53	7.52	146.07	105.97			SCRUBBER B RUN 3
14-Jul-05 12:29:02	12.81	68.09	35.48	7.29	150.72	78.54			SCRUBBER B RUN 3
14-Jul-05 12:30:02	12.97	67.92	33.51	7.21	153.38	75.68			SCRUBBER B RUN 3

Source Testing And Consulting Services, Inc.

IDLE

7/14/2005		RAYONIER		Fuel: Bark & Oil		Unit #		SCRUBBER B	
Parameter	O2	NOx	CO	CO2	NOx	CO	0	0	Comments
Units	%V	ppmV	ppmV	%	@3%O2	@3%O2	0	0	
14-Jul-05	12:31:02	12.44	67.68	47.57	7.59	143.25	100.67		SCRUBBER B RUN 3
14-Jul-05	12:32:02	12.11	69.44	65.35	7.88	141.35	133.03		SCRUBBER B RUN 3
14-Jul-05	12:33:02	12.37	71.66	53.46	7.69	150.37	112.18		SCRUBBER B RUN 3
14-Jul-05	12:34:02	12.31	73.24	45.60	7.67	152.68	95.05		SCRUBBER B RUN 3
14-Jul-05	12:35:02	12.42	73.13	59.65	7.67	154.28	125.86		SCRUBBER B RUN 3
14-Jul-05	12:36:02	12.48	71.91	60.54	7.59	152.86	128.69		SCRUBBER B RUN 3
14-Jul-05	12:37:02	12.38	72.43	51.50	7.67	152.15	108.18		SCRUBBER B RUN 3
14-Jul-05	12:41:14	12.56	3.43	1.38	0.93	7.36	2.95		o2=12.53
14-Jul-05	12:41:19	12.48	3.44	1.38	0.90	7.32	2.93		o2=12.53
14-Jul-05	12:41:24	12.52	2.26	1.38	0.89	4.83	2.94		o2=12.53
14-Jul-05	12:41:29	12.61	2.26	1.38	0.92	4.88	2.97		o2=12.53
14-Jul-05	12:41:34	12.49	2.26	0.49	0.89	4.81	1.05		o2=12.53
14-Jul-05	12:41:39	12.50	2.02	0.49	0.92	4.31	1.05		o2=12.53
14-Jul-05	12:41:44	12.51	2.02	0.49	0.89	4.32	1.05		o2=12.53
14-Jul-05	12:41:49	12.60	2.02	0.49	0.91	4.37	1.06		o2=12.53
14-Jul-05	12:41:54	12.55	1.80	0.49	0.93	3.86	1.05		o2=12.53
14-Jul-05	12:41:59	12.49	1.80	0.49	0.91	3.83	1.05		o2=12.53
14-Jul-05	12:42:04	12.55	1.82	0.49	0.93	3.48	1.05		o2=12.53
14-Jul-05	12:44:41	0.10	93.00	97.20	0.84	80.03	83.65		NOX=92.9 CO=96
14-Jul-05	12:44:47	0.07	93.12	96.07	0.86	80.04	82.58		NOX=92.9 CO=96
14-Jul-05	12:44:52	0.04	93.11	96.17	0.84	79.91	82.54		NOX=92.9 CO=96
14-Jul-05	12:44:57	0.02	93.11	96.07	0.84	79.83	82.37		NOX=92.9 CO=96
14-Jul-05	12:45:02	0.07	93.11	97.20	0.87	80.03	83.55		NOX=92.9 CO=96
14-Jul-05	12:45:07	0.07	93.11	97.20	0.87	80.03	83.55		NOX=92.9 CO=96
14-Jul-05	12:45:12	0.00	93.11	97.20	0.83	79.74	83.25		NOX=92.9 CO=96
14-Jul-05	12:47:10	0.00	48.51	47.78	0.83	41.55	40.92		NOX=48.2 CO=47.9
14-Jul-05	12:47:16	0.04	48.58	46.74	0.87	41.68	40.11		NOX=48.2 CO=47.9
14-Jul-05	12:47:21	0.03	48.58	46.74	0.86	41.66	40.09		NOX=48.2 CO=47.9
14-Jul-05	12:47:26	0.03	48.57	46.74	0.83	41.65	40.09		NOX=48.2 CO=47.9
14-Jul-05	12:47:31	0.04	48.57	46.74	0.83	41.68	40.12		NOX=48.2 CO=47.9
14-Jul-05	12:47:36	0.05	48.58	47.88	0.83	41.71	41.11		NOX=48.2 CO=47.9
14-Jul-05	12:47:41	0.04	48.58	47.78	0.83	41.68	40.99		NOX=48.2 CO=47.9
14-Jul-05	12:47:46	0.02	48.57	47.78	0.85	41.64	40.96		NOX=48.2 CO=47.9
14-Jul-05	12:48:39	12.44	0.68	15.22	9.01	102.97	32.19		CO2=9
14-Jul-05	12:48:44	12.41	0.06	5.62	8.98	54.97	11.86		CO2=9
14-Jul-05	12:48:49	12.41	0.06	5.73	8.98	54.96	12.08		CO2=9
14-Jul-05	12:48:54	12.44	0.02	1.39	8.99	4.27	2.95		CO2=9
14-Jul-05	12:48:59	12.53	0.02	1.19	9.02	4.32	2.54		CO2=9
14-Jul-05	12:49:04	12.50	0.02	0.46	9.02	4.30	0.99		CO2=9
14-Jul-05	12:49:09	12.50	0.73	0.57	9.01	1.56	1.21		CO2=9
14-Jul-05	12:49:14	12.43	0.73	0.36	9.00	1.55	0.76		CO2=9
14-Jul-05	12:49:19	12.49	0.73	0.36	8.99	1.56	0.77		CO2=9

Source Testing And Consulting Services, Inc.

SRB

6/8/2005		RAYONIER							Unit #	SRB	0	Comments
Parameter	O2	NOx	SO2	CO	CO2	NOX	SO2			0		
Units	%V	ppmV	ppmV	ppmV	%	@7%O2	@7%O2			0		
6/8/05	8:59:24	5.06	596.17	134.67	2.06	15.10	523.04	118.15			SRB RA 1 PM R1	START PM RUN 1
6/8/05	9:00:24	4.96	607.17	140.07	2.06	15.16	529.57	122.17			SRB RA 1 PM R1	
6/8/05	9:01:24	5.11	613.17	141.84	1.97	15.07	539.88	124.89			SRB RA 1 PM R1	
6/8/05	9:02:24	5.14	613.17	144.79	2.06	15.07	540.64	127.66			SRB RA 1 PM R1	
6/8/05	9:03:24	5.13	624.18	147.05	2.06	15.08	550.00	129.58			SRB RA 1 PM R1	
6/8/05	9:04:24	5.09	599.21	149.51	2.06	15.12	526.94	131.47			SRB RA 1 PM R1	
6/8/05	9:05:24	5.05	592.24	154.32	2.16	15.15	519.43	135.35			SRB RA 1 PM R1	
6/8/05	9:06:24	5.01	591.16	154.91	2.16	15.17	517.04	135.49			SRB RA 1 PM R1	
6/8/05	9:07:24	5.11	595.28	157.76	2.06	15.14	524.05	138.89			SRB RA 1 PM R1	
6/8/05	9:08:24	5.08	597.25	162.19	2.06	15.12	524.72	142.49			SRB RA 1 PM R1	
6/8/05	9:09:24	5.07	603.24	170.74	2.06	15.16	529.74	149.93			SRB RA 1 PM R1	
6/8/05	9:10:24	5.10	604.32	171.33	2.06	15.18	531.51	150.68			SRB RA 1 PM R1	
6/8/05	9:11:24	5.00	595.18	173.88	2.06	15.24	520.48	152.06			SRB RA 1 PM R1	
6/8/05	9:12:24	5.01	612.29	179.39	2.06	15.23	535.52	156.89			SRB RA 1 PM R1	
6/8/05	9:13:24	4.97	605.21	186.66	2.06	15.26	528.18	162.90			SRB RA 1 PM R1	
6/8/05	9:14:24	5.01	611.20	203.44	3.05	15.27	534.65	177.96			SRB RA 1 PM R1	
6/8/05	9:15:24	5.00	596.17	201.12	2.06	15.27	521.18	175.82			SRB RA 1 PM R1	
6/8/05	9:16:24	4.99	601.28	206.71	3.05	15.30	525.32	180.60			SRB RA 1 PM R1	
6/8/05	9:17:24	5.04	603.24	210.93	1.97	15.26	528.59	184.83			SRB RA 1 PM R1	
6/8/05	9:18:24	4.74	595.07	211.98	1.92	15.02	511.96	182.37			SRB RA 1 PM R1	
6/8/05	9:19:24	4.74	606.07	215.12	1.92	15.05	521.35	185.05			SRB RA 1 PM R1	
6/8/05	9:20:24	4.69	601.06	214.93	1.82	15.05	515.31	184.26			SRB RA 1 PM R1	
6/8/05	9:21:24	4.73	605.09	217.68	3.88	15.00	520.26	187.16			SRB RA 1 PM R1	
6/8/05	9:38:38	4.81	604.11	244.98	1.82	14.92	522.04	211.69			RA R2 PM R1	START CEM CAL
6/8/05	9:39:38	4.72	611.09	253.33	1.92	15.03	524.86	217.58			RA R2 PM R1	
6/8/05	9:40:38	5.11	584.06	259.52	2.80	14.74	514.06	228.42			RA R2 PM R1	
6/8/05	9:41:38	4.73	586.12	270.33	1.82	15.03	503.99	232.45			RA R2 PM R1	
6/8/05	9:42:38	4.86	596.05	279.87	1.82	14.94	516.37	242.46			RA R2 PM R1	
6/8/05	9:43:38	4.67	586.12	284.78	1.92	15.07	501.93	243.88			RA R2 PM R1	
6/8/05	9:44:38	4.64	589.07	286.94	1.82	15.12	503.62	245.32			RA R2 PM R1	
6/8/05	9:45:38	4.57	568.14	288.22	25.01	15.17	483.46	245.26			RA R2 PM R1	
6/8/05	9:46:38	4.66	579.14	293.33	5.95	15.08	495.73	251.08			RA R2 PM R1	
6/8/05	9:47:38	4.62	582.09	294.51	1.92	15.10	497.13	251.52			RA R2 PM R1	
6/8/05	9:48:38	4.87	578.06	296.48	1.82	14.96	501.18	257.04			RA R2 PM R1	
6/8/05	9:49:38	4.71	597.03	287.73	1.82	14.99	512.59	247.04			RA R2 PM R1	
6/8/05	9:50:38	4.65	582.09	279.38	6.83	15.12	497.80	238.92			RA R2 PM R1	
6/8/05	9:51:38	4.58	573.15	284.58	2.90	15.15	488.16	242.39			RA R2 PM R1	
6/8/05	9:52:38	4.55	570.10	280.26	1.82	15.14	484.76	238.31			RA R2 PM R1	
6/8/05	9:53:38	4.58	574.13	283.31	1.92	15.14	489.00	241.30			RA R2 PM R1	
6/8/05	9:54:38	4.65	573.15	286.94	1.82	15.07	490.38	245.50			RA R2 PM R1	
6/8/05	9:55:38	4.56	573.15	291.37	2.90	15.14	487.43	247.79			RA R2 PM R1	

Source Testing And Consulting Services, Inc.
SRB

6/8/2005		RAYONIER						Unit #	SRB	0 Comments	
Parameter	O2	NOx	SO2	CO	CO2	NOX	SO2	0			
Units	%V	ppmV	ppmV	ppmV	%	@7%O2	@7%O2	0			
6/8/05	9:56:38	4.66	585.14	293.92	1.82	15.07	500.79	251.55	RA R2	PM R1	
6/8/05	9:57:38	4.66	583.08	295.30	1.92	15.07	499.17	252.80	RA R2	PM R1	
6/8/05	9:58:38	4.48	584.06	297.46	2.90	15.20	494.33	251.76	RA R2	PM R1	
6/8/05	9:59:38	4.50	576.20	302.37	5.85	15.19	488.48	256.34	RA R2	PM R1	
6/8/05	10:00:38	4.52	576.10	306.90	2.80	15.14	488.91	260.45	RA R2	PM R1	STOP
6/8/05	10:20:09	4.49	568.13	250.90	10.81	15.14	481.37	212.58	RAR3	PMR2	START
6/8/05	10:21:09	4.47	568.13	245.98	7.96	15.13	480.73	208.14	RAR3	PMR2	END PM RUN 1
6/8/05	10:22:09	4.43	568.14	222.37	16.86	15.21	479.38	187.63	RAR3	PMR2	PM R2 START
6/8/05	10:23:09	4.50	581.11	216.96	8.80	15.20	492.53	183.89	RAR3	PMR2	11.05
6/8/05	10:24:09	4.50	583.08	213.23	5.95	15.17	494.05	180.67	RAR3	PMR2	
6/8/05	10:25:09	4.58	593.10	208.91	7.91	15.13	505.27	177.97	RAR3	PMR2	
6/8/05	10:26:09	4.39	590.15	204.29	10.66	15.31	496.99	172.04	RAR3	PMR2	
6/8/05	10:27:09	4.52	574.13	198.09	57.35	15.22	487.20	168.10	RAR3	PMR2	
6/8/05	10:28:09	4.57	582.09	195.24	14.69	15.19	495.44	166.18	RAR3	PMR2	
6/8/05	10:29:09	4.47	572.17	192.88	19.80	15.33	483.94	163.14	RAR3	PMR2	
6/8/05	10:30:09	4.51	582.19	189.35	10.76	15.26	493.89	160.63	RAR3	PMR2	
6/8/05	10:31:09	4.55	579.05	186.50	26.00	15.27	492.18	158.52	RAR3	PMR2	
6/8/05	10:32:09	4.48	575.11	183.35	17.84	15.29	486.72	155.17	RAR3	PMR2	
6/8/05	10:33:09	4.47	586.12	180.70	10.76	15.34	495.96	152.90	RAR3	PMR2	
6/8/05	10:34:09	4.47	600.57	176.86	6.73	13.85	478.82	141.01	RAR3	PMR2	
6/8/05	10:35:09	4.39	592.02	175.88	20.89	15.35	498.57	148.12	RAR3	PMR2	
6/8/05	10:36:09	4.58	605.09	173.42	16.86	15.24	515.25	147.68	RAR3	PMR2	
6/8/05	10:37:09	4.35	588.48	172.83	11.75	15.41	494.19	145.14	RAR3	PMR2	
6/8/05	10:38:09	4.56	579.14	169.20	89.49	15.28	492.56	143.90	RAR3	PMR2	
6/8/05	10:39:09	4.59	594.18	167.92	9.78	15.25	506.27	143.07	RAR3	PMR2	
6/8/05	10:40:09	4.43	594.38	167.72	17.94	15.37	501.67	141.56	RAR3	PMR2	
6/8/05	10:41:09	4.51	588.19	165.17	42.12	15.36	498.98	140.12	RAR3	PMR2	STOP
		4.72	590.07	218.39	8.47	15.14	506.73	187.29			
6/8/05	10:54:06	4.47	600.08	147.53	9.78	15.10	507.81	124.84	RAR4	START	
6/8/05	10:55:06	4.39	609.12	156.35	23.93	15.15	512.85	131.64	RAR4		
6/8/05	10:56:06	4.51	610.10	143.50	53.22	15.07	517.46	121.71	RAR4		
6/8/05	10:57:06	4.18	596.15	142.02	156.22	15.34	495.52	118.05	RAR4		
6/8/05	10:58:06	4.32	564.21	145.54	576.59	15.27	473.14	122.04	RAR4		
6/8/05	10:59:06	4.41	587.11	141.21	82.41	15.18	494.83	119.02	RAR4		
6/8/05	11:00:06	4.30	584.16	140.72	162.42	15.26	489.21	117.85	RAR4		
6/8/05	11:01:06	4.45	591.14	138.85	72.39	15.15	499.42	117.31	RAR4		
6/8/05	11:02:06	4.35	589.14	137.17	79.26	15.24	494.81	115.21	RAR4		
6/8/05	11:03:06	4.38	585.11	135.21	93.51	15.22	492.45	113.80	RAR4		
6/8/05	11:04:06	4.40	601.13	133.44	37.10	15.14	506.46	112.42	RAR4		
6/8/05	11:05:06	4.34	598.08	132.65	91.35	15.23	501.87	111.31	RAR4		PM RUN 2
6/8/05	11:06:06	4.42	602.11	130.98	52.14	15.18	507.89	110.49	RAR4		START 11:05

Source Testing And Consulting Services, Inc.
SRB

6/8/2005		RAYONIER						Unit #	SRB	0	Comments
Parameter	O2	NOx	SO2	CO	CO2	NOX	SO2	0	Comments		
Units	%V	ppmV	ppmV	ppmV	%	@7%O2	@7%O2	0			
6/8/05	11:07:06	4.33	586.09	130.49	151.20	15.21	491.74	109.48	RAR4		
6/8/05	11:08:06	4.43	583.05	123.31	40.15	15.16	492.03	104.06	RAR4		
6/8/05	11:09:06	4.40	576.17	124.92	54.20	15.18	485.36	105.23	RAR4		
6/8/05	11:10:06	4.73	584.13	123.33	28.94	14.94	502.08	106.01	RAR4		
6/8/05	11:11:06	4.32	588.06	129.59	149.04	15.32	492.95	108.63	RAR4		
6/8/05	11:12:06	4.32	576.07	128.33	175.28	15.30	483.04	107.61	RAR4		
6/8/05	11:13:06	4.33	582.16	126.56	179.41	15.34	488.22	106.14	RAR4		
6/8/05	11:14:06	4.25	584.03	124.89	207.52	15.31	487.48	104.24	RAR4		
6/8/05	11:15:06	4.28	585.11	119.91	231.89	15.35	489.46	100.31	RAR4	CAL	
6/8/05	11:26:34	4.28	577.10	111.47	199.80	14.99	482.76	93.25	RA R5 PM R2	START	
6/8/05	11:27:34	4.19	563.15	117.86	257.20	15.09	468.39	98.03	RA R5 PM R2		
6/8/05	11:28:34	4.21	562.06	112.09	225.75	15.11	468.11	93.35	RA R5 PM R2		
6/8/05	11:29:34	4.21	567.08	127.49	128.06	15.04	472.14	106.15	RA R5 PM R2		
6/8/05	11:30:34	4.22	553.12	123.88	206.59	15.07	460.86	103.22	RA R5 PM R2		
6/8/05	11:31:34	4.32	571.20	120.17	188.60	15.02	478.89	100.75	RA R5 PM R2		
6/8/05	11:32:34	4.21	567.08	125.48	147.13	15.11	472.28	104.50	RA R5 PM R2		
6/8/05	11:33:34	4.22	579.17	118.33	173.27	15.10	482.71	98.62	RA R5 PM R2		
6/8/05	11:34:34	4.28	577.10	111.59	215.63	15.05	482.62	93.32	RA R5 PM R2		
6/8/05	11:35:34	4.21	578.18	113.49	183.49	15.14	481.53	94.52	RA R5 PM R2		
6/8/05	11:36:34	4.21	588.21	114.10	168.35	15.12	489.74	95.00	RA R5 PM R2		
6/8/05	11:37:34	4.28	582.21	115.31	110.96	15.11	486.89	96.43	RA R5 PM R2		
6/8/05	11:38:34	4.32	572.19	114.41	246.09	15.04	479.79	95.93	RA R5 PM R2		
6/8/05	11:39:34	4.23	574.25	111.02	73.22	15.10	478.89	92.58	RA R5 PM R2		
6/8/05	11:40:34	4.22	575.14	111.46	88.35	15.09	479.21	92.87	RA R5 PM R2		
6/8/05	11:41:34	4.26	575.21	113.33	84.32	15.06	480.39	94.65	RA R5 PM R2		
6/8/05	11:42:34	4.28	573.14	114.22	158.32	15.05	479.37	95.53	RA R5 PM R2		
6/8/05	11:43:34	4.34	585.13	111.38	69.48	15.01	491.22	93.50	RA R5 PM R2		
6/8/05	11:44:34	4.25	589.06	110.27	72.43	15.09	491.82	92.06	RA R5 PM R2		
6/8/05	11:45:34	4.34	582.08	111.59	80.29	15.01	488.66	93.68	RA R5 PM R2		
6/8/05	11:46:34	4.26	588.18	121.51	100.54	15.07	491.44	101.53	RA R5 PM R2	CAL	
6/8/05	11:47:34	4.32	585.13	111.22	101.62	15.04	490.42	93.22	RA R5 PM R2	STOP	
6/8/05	12:00:10	4.36	559.19	108.35	126.09	14.99	469.99	91.07	RA R6 PM R2	START	
6/8/05	12:01:10	4.30	563.12	111.31	128.05	15.02	471.55	93.21	RA R6 PM R2		
6/8/05	12:02:10	4.29	562.14	101.59	221.61	15.04	470.45	85.02	RA R6 PM R2		
6/8/05	12:03:10	4.31	559.19	114.34	116.85	15.07	468.39	95.78	RA R6 PM R2		
6/8/05	12:04:10	4.21	558.11	110.62	181.42	15.16	464.74	92.11	RA R6 PM R2		
6/8/05	12:05:10	4.27	570.10	107.00	130.12	15.12	476.54	89.44	RA R6 PM R2		
6/8/05	12:06:10	4.25	575.11	104.83	228.79	15.13	480.10	87.51	RA R6 PM R2		
6/8/05	12:07:10	4.21	573.14	104.15	256.20	15.14	477.26	86.72	RA R6 PM R2		
6/8/05	12:08:10	4.24	585.13	105.03	158.32	15.10	488.32	87.65	RA R6 PM R2	END PM R2	
6/8/05	12:09:10	4.19	565.08	103.65	256.20	15.16	470.13	86.24	RA R6 PM R2	12:08	
6/8/05	12:10:10	4.00	564.10	104.88	372.27	15.04	463.92	86.26	RA R6 PM R2		

Source Testing And Consulting Services, Inc.

SRB

6/8/2005		RAYONIER						Unit #	SRB	0	Comments
Parameter	O2	NOx	SO2	CO	CO2	NOX	SO2	0	Comments		
Units	%V	ppmV	ppmV	ppmV	%	@7%O2	@7%O2	0			
6/8/05	12:11:10	4.28	567.15	102.62	124.02	15.05	474.22	85.81	RA R6 PM R2		
6/8/05	12:12:10	4.24	562.14	114.29	190.65	15.03	469.13	95.38	RA R6 PM R2		
6/8/05	12:13:10	4.28	569.11	116.95	183.48	15.03	476.00	97.82	RA R6 PM R2		
6/8/05	12:14:11	4.28	556.14	109.78	287.36	15.01	465.02	91.79	RA R6 PM R2		
6/8/05	12:15:11	4.25	563.12	112.25	231.83	15.11	470.09	93.71	RA R6 PM R2		
6/8/05	12:16:11	4.23	572.16	110.68	168.35	15.10	477.00	92.27	RA R6 PM R2		
6/8/05	12:17:19	4.22	575.11	110.88	208.44	15.10	479.18	92.38	RA R6 PM R2		
6/8/05	12:18:20	4.15	567.15	110.68	321.56	15.13	470.74	91.87	RA R6 PM R2		
6/8/05	12:19:20	4.30	558.11	110.19	569.41	15.04	467.28	92.26	RA R6 PM R2		
6/8/05	12:20:20	4.24	557.12	118.32	-0.29	15.09	464.81	98.72	RA R6 PM R2		
6/8/05	12:21:20	4.30	559.09	119.01	170.31	15.10	468.17	99.66	RA R6 PM R2 STOP		
		4.29	576.79	119.84	160.89	15.12	482.84	100.35	AVG		
6/8/05	12:53:19	4.73	626.14	25.16	1.87	14.74	538.36	21.63	RAR7 PM R3 START START PM RUN 3 12:49		
6/8/05	12:54:19	4.72	629.19	19.75	1.87	14.77	540.65	16.97	RAR7 PM R3		
6/8/05	12:55:19	4.80	631.06	16.22	1.87	14.75	544.90	14.00	RAR7 PM R3		
6/8/05	12:56:19	4.71	633.12	13.46	1.87	14.84	543.45	11.56	RAR7 PM R3		
6/8/05	12:57:19	4.81	628.21	11.20	1.87	14.80	542.69	9.68	RAR7 PM R3		
6/8/05	12:58:19	4.79	634.10	8.75	1.87	14.83	547.11	7.55	RAR7 PM R3		
6/8/05	12:59:19	4.77	632.14	6.49	1.87	14.84	544.84	5.59	RAR7 PM R3		
6/8/05	13:00:19	4.89	635.09	4.32	1.87	14.72	551.24	3.75	RAR7 PM R3		
6/8/05	13:01:19	4.92	637.15	2.75	1.87	14.77	554.05	2.39	RAR7 PM R3		
6/8/05	13:02:19	4.86	639.12	2.89	1.87	14.80	553.97	2.50	RAR7 PM R3		
6/8/05	13:03:19	4.91	637.15	2.49	1.97	14.77	553.80	2.17	RAR7 PM R3		
6/8/05	13:04:21	4.92	631.16	2.08	2.85	14.80	548.92	1.81	RAR7 PM R3		
6/8/05	13:05:21	4.87	637.15	2.47	1.87	14.82	552.52	2.15	RAR7 PM R3		
6/8/05	13:06:21	4.84	631.16	3.87	1.87	14.83	546.15	3.35	RAR7 PM R3		
6/8/05	13:07:21	4.99	633.22	6.39	1.87	14.74	553.36	5.58	RAR7 PM R3		
6/8/05	13:08:22	4.90	641.08	5.80	1.87	14.80	557.04	5.04	RAR7 PM R3		
6/8/05	13:09:21	4.84	638.13	6.19	1.87	14.83	552.36	5.36	RAR7 PM R3		
6/8/05	13:10:24	5.04	647.17	6.58	1.87	14.73	567.13	5.77	RAR7 PM R3		
6/8/05	13:11:24	5.06	656.12	6.29	1.87	14.70	575.86	5.52	RAR7 PM R3		
6/8/05	13:12:24	4.99	654.15	6.78	2.85	14.69	571.65	5.93	RAR7 PM R3		
6/8/05	13:13:24	5.01	657.10	8.06	1.87	14.72	574.85	7.05	RAR7 PM R3 STOP		
6/8/05	13:33:22	4.86	624.16	40.64	34.06	14.59	540.97	35.22	RA R8 PM R3 START		
6/8/05	13:34:21	4.97	633.20	31.21	1.92	14.52	552.37	27.22	RA R8 PM R3		
6/8/05	13:35:21	4.91	631.14	31.21	1.82	14.54	548.70	27.13	RA R8 PM R3		
6/8/05	13:36:21	4.89	626.12	31.60	1.82	14.58	543.59	27.43	RA R8 PM R3		
6/8/05	13:37:21	4.87	618.07	32.19	1.92	14.59	536.10	27.92	RA R8 PM R3		
6/8/05	13:38:21	4.87	623.18	31.89	1.92	14.60	540.45	27.66	RA R8 PM R3		
6/8/05	13:39:21	4.93	617.08	31.60	1.92	14.52	537.15	27.51	RA R8 PM R3		
6/8/05	13:40:21	4.81	615.12	31.11	1.82	14.65	531.35	26.87	RA R8 PM R3		

Source Testing And Consulting Services, Inc.

SRB

6/8/2005		RAYONIER							Unit #	SRB	0	Comments
Parameter	O2	NOx	SO2	CO	CO2	NOX	SO2			0		
Units	%V	ppmV	ppmV	ppmV	%	@7%O2	@7%O2			0		
6/8/05	13:41:21	4.90	619.15	30.42	1.82	14.54	537.87	26.43			RA R8 PM R3	
6/8/05	13:42:22	4.88	622.06	29.73	1.82	14.61	539.61	25.79			RA R8 PM R3	
6/8/05	13:43:22	4.95	624.03	28.16	1.82	14.53	543.81	24.54			RA R8 PM R3	
6/8/05	13:44:22	4.88	624.13	26.88	1.82	14.65	541.56	23.32			RA R8 PM R3	
6/8/05	13:45:22	4.90	620.10	26.19	1.92	14.64	538.73	22.75			RA R8 PM R3	
6/8/05	13:46:22	4.88	623.15	24.91	1.82	14.63	540.71	21.62			RA R8 PM R3	
6/8/05	13:47:22	4.78	620.10	24.13	0.93	14.67	534.70	20.81			RA R8 PM R3	
6/8/05	13:48:22	4.86	624.13	23.73	1.92	14.61	540.90	20.57			RA R8 PM R3	
6/8/05	13:49:22	4.82	622.06	22.56	1.82	14.63	537.63	19.49			RA R8 PM R3	
6/8/05	13:50:22	4.88	618.03	22.06	0.93	14.57	536.19	19.14			RA R8 PM R3	
6/8/05	13:51:22	4.89	617.15	21.67	1.92	14.60	535.84	18.82			RA R8 PM R3	
6/8/05	13:52:22	4.87	627.08	21.08	1.82	14.57	543.79	18.28			RA R8 PM R3	
6/8/05	13:53:22	4.91	626.09	20.79	1.82	14.59	544.19	18.07			RA R8 PM R3	
6/8/05	13:54:22	4.95	635.04	20.39	1.82	14.57	553.49	17.77			RA R8 PM R3	
		4.88	630.21	17.96	2.61	14.68	546.85	15.57			AVG	
									STOP		STOP PM R3	

**Rayonier - Fernandina - Alternate Approach to Calculating Heat Input & NOX lb/MMBtu
B-Scrubber - July 8, 2005 Tests - BARK only.**

Parameter	Units	Run 1	Run 2	Run 3	Average
Inputs					
O2	%V,d	12.2	12.6	12.4	12.4
NOX	ppmVd	56.7	51.2	52.6	53.5
NOX	ppmVd @3%O2	116.7	110.4	110.8	112.6
Vol. Flow	dscfm	83,235	86,528	89,438	86400.33
Oil Fd	dscf/MMBtu@0%O2	9190	9190	9190	9190
Bark Fd	dscf/MMBtu@0%O2	9600	9600	9600	9600
Oil Flow	lb/hr or gal/hr				
Oil GCV	Btu/gal or Btu/lb				
Calculated Values					
Heat Input from Oil:	MMBtu/hr Gross	0	1	5	2.0
Volumetric Flow From Oil Only	dscfm	0.0	385.7	1883.0	756.2
From Bark Only	dscfm	83235.0	86142.3	87555.0	85644.1
Heat Input From Bark	MMBtu/hr	216.6	213.8	222.6	217.6
Total Heat Input	MMBtu/hr	216.6	214.8	227.6	219.6
Weighted Fd	dscf/MMBtu@0%O2	9600.0	9598.1	9591.0	9596.4
NOX	Fd Method lb/MMBtu	0.1561	0.1477	0.1481	0.1507
NOX	ppmV@3%O2	116.7	110.4	110.8	112.6
NOX	from Heat Input lb/hr	33.8	31.7	33.7	33.1
NOX	from Flow lb/hr	33.8	31.7	33.7	33.1
Check OK - JWM					

Reference: Source Testing And Consulting Services, Inc. 2005

**Rayonier - Fernandina - Alternate Approach to Calculating Heat Input & NOX lb/MMBtu
B-Scrubber - July 8, 2005 Tests OIL and BARK**

Parameter	Units	Run 1	Run 2	Average
Inputs				
O2	%V,d	12.0	12.0	12
NOX	ppmVd	64.9	65.0	65.0
NOX	ppmVd @3%O2	130.5	130.7	130.6
Vol. Flow	dscfm	93,666	96,033	94849.5
Oil Fd	dscf/MMBtu@0%O2	9190	9190	9190
Bark Fd	dscf/MMBtu@0%O2	9600	9600	9600
Oil Flow	lb/hr or gal/hr			
Oil GCV	Btu/gal or Btu/lb			
Calculated Values				
Heat Input from Oil:	MMBtu/hr Gross	124	125	124.5
Volumetric Flow From Oil Only	dscfm	44600.8	44960.4	44780.6
From Bark Only	dscfm	49065.2	51072.6	50068.9
Heat Input From Bark	MMBtu/hr	130.6	135.9	133.3
Total Heat Input	MMBtu/hr	254.6	260.9	257.8
Weighted Fd	dscf/MMBtu@0%O2	9400.3	9403.6	9401.9
NOX	Fd Method lb/MMBtu	0.1711	0.1714	0.1712
NOX	ppmV@3%O2	130.5	130.7	130.6
NOX	from Heat Input lb/hr	43.5	44.7	44.1
NOX	from Flow lb/hr	43.5	44.7	44.1

Reference: Source Testing And Consulting Services, Inc. 2005

**Rayonier - Fernandina - Alternate Approach to Calculating Heat Input & NOX lb/MMBtu
B-Scrubber - July 14, 2005 Tests - BARK & Oil**

Parameter	Units	Run 1	Run 2	Run 3	Average
Inputs					
O2	%V,d	12.6	13.2	12.4	12.7
NOX	ppmVd	73.2	69.8	72	71.7
NOX	ppmVd @3%O2	157.9	162.3	151.6	157.3
Vol. Flow	dscfm	92,671	94,189	91,300	92720.02
Oil Fd	dscf/MMBtu@0%O2	9190	9190	9190	9190
Bark Fd	dscf/MMBtu@0%O2	9600	9600	9600	9600
Oil Flow	gal/hr	894.6	904.7	921.6	907.0
Oil GCV	Btu/gal	163105	163105	163105	163105
Calculated Values					
Heat Input from Oil:	MMBtu/hr Gross	145.9	147.6	150.3	147.9
Volumetric Flow From Oil Only	dscfm	56276.7	61348.2	56613.5	58079.5
From Bark Only	dscfm	36394.2	32840.9	34686.5	34640.6
Heat Input From Bark	MMBtu/hr	90.3	75.6	88.2	84.7
Total Heat Input	MMBtu/hr	236.2	223.2	238.5	232.6
Weighted Fd	dscf/MMBtu@0%O2	9346.8	9328.9	9341.6	9339.1
NOX	Fd Method lb/MMBtu	0.2057	0.2110	0.1975	0.2047
NOX	ppmV@3%O2	157.9	162.3	151.6	157.3
NOX	from Heat Input lb/hr	48.6	47.1	47.1	47.6
NOX	from Flow lb/hr	48.6	47.1	47.1	47.6

Reference: Source Testing And Consulting Services, Inc. 2005

APPENDIX B
CALIBRATION DATA AND CERTIFICATES

SCRUBBER B
No. 3 Boiler
RAYONIER
Bias/Drift Correction Calculation Spreadsheet

	Scrubber B			Scrubber B			
	BARK			OIL/BARK			
	Date	7/8/05	7/8/05	7/8/05	Date	7/8/05	7/8/05
	Start	8:59	10:22	11:38	Start	13:58	15:08
	Stop	9:59	11:22	12:38	Stop	14:58	16:08
REFERENCE METHOD							
BIAS ADJUSTED VALUES	PRELIM	1	2	3	PRELIM	1	2
O2 (%V,dry)	#N/A	12.2	12.6	12.4	#N/A	12.0	12.0
NOX (ppmV,dry)	#N/A	56.7	51.2	52.6	#N/A	64.9	65.0
CO (ppmV,dry)	#N/A	292.6	243.6	293.6	#N/A	44.4	38.5
RAW AVERAGES	PRELIM	1	2	3	PRELIM	1	2
O2 (%V,dry)	#N/A	12.18	12.64	12.45	#N/A	12.10	12.10
NOX (ppmV,dry)	#N/A	57.2	51.7	53.1	#N/A	65.1	65.1
CO(ppmvw)	#N/A	293.0	244.0	294.0	#N/A	44.4	38.5
ZERO BIAS	PRELIM	1	2	3	PRELIM	1	2
O2 (%V,dry)	0.02	0.04	0.03	0.02	0.06	0.05	0.06
NOX (ppmV,dry)	0.5	0.5	0.4	0.6	0.8	0.5	0.5
CO(ppmvw)	0.4	0.4	0.4	0.4	0.6	0.5	0.4
BIAS CHECKS	PRELIM	1	2	3	PRELIM	1	2
O2 (%V,dry)	12.52	12.56	12.57	12.50	12.57	12.60	12.60
NOX (ppmV,dry)	44.7	44.4	44.4	43.6	94.4	94.4	94.1
CO(ppmvw)	305.0	310.0	300.0	295.0	96.6	95.6	96.8
BIAS VALUES	PRELIM	1	2	3	PRELIM	1	2
O2 (%V,dry)	12.53	12.53	12.53	12.53	12.53	12.53	12.53
NOX (ppmV,dry)	44.4	44.4	44.4	44.4	94.4	94.4	94.4
CO(ppmvw)	305.0	306.0	306.0	306.0	96.8	96.8	96.8
ZERO Drift/Bias (% of scale)	SCALE	1	2	3	SCALE	1	2
O2 (%V,dry)	25	0.08%	-0.04%	-0.04%	25	-0.04%	0.04%
NOX (ppmV,dry)	100	0.00%	-0.10%	0.20%	100	-0.30%	0.02%
CO(ppmvw)	1000	0.00%	0.00%	0.00%	100	-0.10%	-0.10%
UPSCALE Drift/Bias (% of scale)	SCALE	1	2	3	SCALE	1	2
O2 (%V,dry)	25	0.16%	0.04%	-0.28%	25	0.12%	0.00%
NOX (ppmV,dry)	100	-0.30%	0.00%	-0.80%	100	0.00%	-0.30%
CO(ppmvw)	1000	0.50%	-1.00%	-0.50%	100	-1.00%	1.20%

Reference: Source Testing And Consulting Services, Inc - July 2005

SCRUBBER B
No. 3 Boiler
RAYONIER
Bias/Drift Correction Calculation Spreadsheet

	Scrubber B			
	BARK & OIL			
	Date	7/14/05	7/14/05	7/14/05
	Start	9:00	10:18	11:37
	Stop	10:00	11:18	12:38
REFERENCE METHOD				
BIAS ADJUSTED VALUES	PRELIM	1	2	3
O2 (%V,dry)	#N/A	12.6	13.2	12.4
NOX (ppmV,dry)	#N/A	73.2	69.8	72.0
CO (ppmV,dry)	#N/A	41.2	39.7	50.9
RAW AVERAGES	PRELIM	1	2	3
O2 (%V,dry)	#N/A	12.63	13.21	12.38
NOX (ppmV,dry)	#N/A	73.9	70.5	72.4
CO(ppmvw)	#N/A	41.7	40.1	51.5
ZERO BIAS	PRELIM	1	2	3
O2 (%V,dry)	0.01	0.05	0.07	0.06
NOX (ppmV,dry)	0.3	1.0	0.5	0.3
CO(ppmvw)	0.5	0.43	0.5	0.8
BIAS CHECKS	PRELIM	1	2	3
O2 (%V,dry)	12.53	12.53	12.58	12.53
NOX (ppmV,dry)	93.2	93.4	93.2	93.1
CO(ppmvw)	97.2	96.4	94.8	96.7
BIAS VALUES	PRELIM	1	2	3
O2 (%V,dry)	12.53	12.53	12.53	12.53
NOX (ppmV,dry)	92.9	92.9	92.9	92.9
CO(ppmvw)	96.0	96.0	96.0	96.0
ZERO Drift/Bias (% of scale)	SCALE	1	2	3
O2 (%V,dry)	25	0.16%	0.08%	-0.04%
NOX (ppmV,dry)	100	0.69%	-0.55%	-0.12%
CO(ppmvw)	100	-0.06%	0.02%	0.36%
UPSCALE Drift/Bias (% of scale)	SCALE	1	2	3
O2 (%V,dry)	25	0.00%	0.20%	-0.20%
NOX (ppmV,dry)	100	0.20%	-0.20%	-0.10%
CO(ppmvw)	100	-0.80%	-1.60%	1.90%

Reference: Source Testing And Consulting Services, Inc - July 2005

RAYONIER
SULFITE RECOVERY BOILER
SO2 RELATIVE ACCURACY TEST AUDIT
O2 Nox Bias/Drift Correction Calculation Spreadsheet

Nox RUN #		1	2	3
	Start	9:00	10:54	12:53
	End	10:41	12:21	14:31
REFERENCE METHOD				
BIAS ADJUSTED VALUES		PRELIM		
O2(%V,dry)	#N/A	4.5	4.1	4.9
NOX(ppmV,dry)	#N/A	590.3	576.2	637.3
SO2(ppmV,dry)	#N/A	216.5	119.8	53.0
RAW AVERAGES		PRELIM		
O2(%V,dry)	#N/A	4.7	4.3	5.0
NOX(ppmV,dry)	#N/A	590.2	576.8	639.7
SO2(ppmV,dry)	#N/A	218.4	119.8	52.4
ZERO BIAS		PRELIM		
O2(%V,dry)	0.2	0.2	0.2	0.2
NOX(ppmV,dry)	1.1	2.3	1.0	3.1
SO2(ppmV,dry)	1.1	0.5	-2.0	0.2
BIAS CHECKS		PRELIM		
O2(%V,dry)	12.6	12.6	12.5	12.5
NOX(ppmV,dry)	911.0	903.0	913.0	908.0
SO2(ppmV,dry)	455.0	455.0	453.0	454.0
BIAS VALUES		PRELIM		
O2(%V,dry)	12.5	12.5	12.5	12.5
NOX(ppmV,dry)	908.0	908.0	908.0	908.0
SO2(ppmV,dry)	452.0	452.0	452.0	452.0
Zero Drift/Bias (% of scale)		SCALE		
O2(%V,dry)	25	0.00%	0.00%	0.00%
NOX(ppmV,dry)	1000	0.12%	-0.13%	0.21%
SO2(ppmV,dry)	500	-0.12%	-0.50%	0.44%
Upscale Drift/Bias (% of scale)		SCALE		
O2(%V,dry)	25	0.00%	-0.40%	0.00%
NOX(ppmV,dry)	1000	-0.80%	1.00%	-0.50%
SO2(ppmV,dry)	500	0.00%	-0.40%	0.20%

Reference: Source Testing And Consulting Services, Inc - JUNE 2005
Each Nox run equivalent to the average of three RA runs.



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CERTIFICATE OF ANALYSIS: EPA PROTOCOL GAS MIXTURE

Customer:	National Welders, Durham, NC	Reference #	88-96915
NSG PO#	4850658	Certification Date:	04/14/05
Customer PO#		Expiration Date:	04/14/08
Cylinder #	CC47767	Pressure, psig*	2000

ANALYTICAL INFORMATION

METHOD: This standard was analyzed according to EPA Traceability Protocol for Assay and Certification of Gaseous Calibration Standards: Procedure G1 (September 1997)

ANALYZED CYLINDER

<u>Components</u>	<u>Certified Concentration</u>	<u>Analytical Accuracy**</u>
Oxygen	12.53%	+/-1%

Balance - Nitrogen

REFERENCE STANDARD

<u>Type/SRM Sample #</u>	<u>Cylinder #</u>	<u>Concentration</u>	
GMIS (Traceable to SRM # 2659a)	CC46336	20.03 %	O2/N2

INSTRUMENTATION

<u>Instrument/Model/Serial #</u>	<u>Last Date Calibrated</u>	<u>Analytical Method</u>
Horiba MPA - 510 O2 41499150042	03/17/05	Paramagnetic

Analyst: Brian P. Moore Brian P. Moore

This report states accurately the results of the investigation made upon the material submitted to the analytical laboratory. Every effort has been made to determine objectively the information requested. However, in connection with this report, National Specialty Gases shall have no liability in excess of established charge for this service. Assayed at National Specialty Gases, 630 United Drive, Durham, NC 27713 (919) 544-3772

*Do not use this standard when cylinder pressure is below 150 psig.

**Analytical accuracy includes typical known error sources which, at least, include precision of the analytical instrument.



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CERTIFICATE OF ANALYSIS: EPA PROTOCOL GAS MIXTURE

Customer:	National Welders, Durham, NC	Reference #	88-93852
NSG PO#	4814344	Certification Date:	10/25/04
Customer PO#		Expiration Date:	10/25/06
Cylinder #	XC033413B	Pressure, psig*	2000

ANALYTICAL INFORMATION

METHOD: This standard was analyzed according to EPA Traceability Protocol for Assay and Certification of Gaseous Calibration Standards: Procedure G1 (September 1997)

ANALYZED CYLINDER

<u>Components</u>	<u>Certified Concentration</u>	<u>Analytical Accuracy**</u>
Nitric Oxide	92.9 ppm	+/-1%
Carbon Monoxide	98.0 ppm	+/-1%
Balance - Nitrogen	Trace Gas - Nitrogen Dioxide	< 0.1 ppm

REFERENCE STANDARD

<u>Type/SRM Sample #</u>	<u>Cylinder #</u>	<u>Concentration</u>
GMIS (Traceable to SRM # 1684b)	CC103803	100.5 ppm NO/N2
GMIS (Traceable to SRM # 1679c)	CC181905	98.5 ppm CO/N2

INSTRUMENTATION

<u>Instrument/Model/Serial #</u>	<u>Last Date Calibrated</u>	<u>Analytical Method</u>
KVB Analect EN-844	10/01/04	Fourier Transform Infrared
Rosemount 880A CO 00172	10/05/04	Non-dispersive Infrared

Analyst: Jeremy Kenworthy

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CERTIFICATE OF ANALYSIS: EPA PROTOCOL GAS MIXTURE

Customer:	National Welders, Durham, NC	Reference #	88-91339
NSG PO#	4436836	Certification Date:	06/24/04
Customer PO#		Expiration Date:	06/24/06
Cylinder #	CC47341	Pressure, psig*	2000

ANALYTICAL INFORMATION

METHOD: This standard was analyzed according to EPA Traceability Protocol for Assay and Certification of Gaseous Calibration Standards: Procedure G1 (September 1997)

ANALYZED CYLINDER

<u>Components</u>	<u>Certified Concentration</u>	<u>Analytical Accuracy**</u>
Carbon Monoxide	47.9 ppm	+/-1%
Nitric Oxide	47.0 ppm	+/-1%
Balance - Nitrogen	Trace Gas - Nitrogen Dioxide	1.2 ppm

REFERENCE STANDARD

<u>Type/SRM Sample #</u>	<u>Cylinder #</u>	<u>Concentration</u>
GMIS (Traceable to SRM # 1678c)	CC41286	50.64 ppm CO/N2
GMIS (Traceable to SRM # 1683b)	CC59951	48.74 ppm NO/N2

INSTRUMENTATION

<u>Instrument/Model/Serial #</u>	<u>Last Date Calibrated</u>	<u>Analytical Method</u>
Rosemount 880A CO 00172	05/25/04	Non-dispersive Infrared
TECO 42CHL NOX CHL-63965-341	05/19/04	Chemiluminescence

Analyst: _____ Richard Sykes

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NSG 020149L



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CERTIFICATE OF ANALYSIS: EPA PROTOCOL GAS MIXTURE

Customer:	National Welders, Raleigh, NC	Reference #	88-87977
NSG PO#	4179631	Certification Date:	12/15/03
Customer PO#		Expiration Date:	12/15/05
Cylinder #	CC36113	Pressure, psig*	2000

ANALYTICAL INFORMATION

METHOD: This standard was analyzed according to EPA Traceability Protocol for Assay and certification of Gaseous Calibration Standards: Procedure G-1; September 1997.

ANALYZED CYLINDER

<u>Components</u>	<u>Certified Concentration</u>	<u>Analytical Accuracy**</u>
Nitric Oxide	908 ppm	+/-1%
Carbon Monoxide	905 ppm	+/-1%
Balance - Nitrogen	Trace Gas - Nitrogen Dioxide	< 1.0 ppm

REFERENCE STANDARD

<u>Type/SRM Sample #</u>	<u>Cylinder #</u>	<u>Concentration</u>
GMIS (Traceable to SRM # 1687b)	CC129690	997 ppm NO/N2
GMIS (Traceable to SRM # 1681b)	CC21531	975.8 ppm CO/N2

INSTRUMENTATION

<u>Instrument/Model/Serial #</u>	<u>Last Date Calibrated</u>	<u>Analytical Method</u>
KVB Analect EN-844	12/01/03	Fourier Transform Infrared
Rosemount 880A CO 00172	11/21/03	Non-dispersive Infrared

Analyst: Jeremy Kenworthy Jeremy Kenworthy

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CERTIFICATE OF ANALYSIS: EPA PROTOCOL GAS MIXTURE

Customer:	National Welders, Raleigh, NC	Reference #	88-88043
NSG PO#	4179631	Certification Date:	12/19/03
Customer PO#		Expiration Date:	12/19/05
Cylinder #	CC51105	Pressure, psig*	2000

ANALYTICAL INFORMATION

METHOD: This standard was analyzed according to EPA Traceability Protocol for Assay and certification of Gaseous Calibration Standards: Procedure G-1: September 1997.

ANALYZED CYLINDER

<u>Components</u>	<u>Certified Concentration</u>	<u>Analytical Accuracy**</u>
Nitric Oxide	178.9 ppm	+/-1%
Carbon Monoxide	306 ppm	+/-1%
Balance - Nitrogen	Trace Gas - Nitrogen Dioxide	0.2 ppm

REFERENCE STANDARD

<u>Type/SRM Sample #</u>	<u>Cylinder #</u>	<u>Concentration</u>
GMIS (Traceable to SRM # 1885b)	CC109646	205.2 ppm NO/N2
GMIS (Traceable to SRM # 2836a)	CC104276	251.5 ppm CO/N2

INSTRUMENTATION

<u>Instrument/Model/Serial #</u>	<u>Last Date Calibrated</u>	<u>Analytical Method</u>
KVB Analect EN-844	12/01/03	Fourier Transform Infrared
Rosemount 880A CO 00172	11/21/03	Non-dispersive Infrared

Analyst: Jeremy Kenworthy Jeremy Kenworthy

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CERTIFICATE OF ANALYSIS: EPA PROTOCOL GAS MIXTURE

Customer:	National Welders, Raleigh, NC	Reference #	88-87982
NSG PO#	4170631	Certification Date:	12/12/03
Customer PO#		Expiration Date:	12/12/05
Cylinder #	SG9163408BAL	Pressure, psig*	2000

ANALYTICAL INFORMATION

METHOD: This standard was analyzed according to EPA Traceability Protocol for Assay and certification of Gaseous Calibration
 Standards: Procedure G-1: September 1997.

ANALYZED CYLINDER

<u>Components</u>	<u>Certified Concentration</u>	<u>Analytical Accuracy**</u>
Nitric Oxide	454 ppm	+/-1%
Carbon Monoxide	619 ppm	+/-1%
Balance - Nitrogen	Trace Gas - Nitrogen Dioxide	< 1.0 ppm

REFERENCE STANDARD

<u>Type/SRM Sample #</u>	<u>Cylinder #</u>	<u>Concentration</u>
GMIS (Traceable to SRM # 1686b)	CC16989	502.6 ppm NO/N2
GMIS (Traceable to SRM # 1680b)	CC47351	497.7 ppm CO/N2

INSTRUMENTATION

<u>Instrument/Model/Serial #</u>	<u>Last Date Calibrated</u>	<u>Analytical Method</u>
KVB Analect EN-844	12/01/03	Fourier Transform Infrared
Rosemount 880A CO 00172	11/21/03	Non-dispersive Infrared

Analyst: Jeremy Kenworthy Jeremy Kenworthy

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CERTIFICATE OF ANALYSIS: EPA PROTOCOL GAS MIXTURE

Customer:	National Welders, Durham, NC	Reference #	88-91270
NSG PO#	4436836	Certification Date:	06/21/04
Customer PO#		Expiration Date:	06/21/07
Cylinder #	CC41520	Pressure, psig*	2000

ANALYTICAL INFORMATION

METHOD: This standard was analyzed according to EPA Traceability Protocol for Assay and Certification of Gaseous Calibration Standards: Procedure G1 (September 1997)

ANALYZED CYLINDER

<u>Components</u>	<u>Certified Concentration</u>	<u>Analytical Accuracy**</u>
Oxygen	12.41%	+/-1%
Carbon Dioxide	9.09%	+/-1%
Balance - Nitrogen		

REFERENCE STANDARD

<u>Type/SRM Sample #</u>	<u>Cylinder #</u>	<u>Concentration</u>
GMIS (Traceable to SRM # 2659a)	CC64388	24.74 % O2/N2
GMIS (Traceable to SRM # 1674b)	CC52150	9.93 % CO2/N2

INSTRUMENTATION

<u>Instrument/Model/Serial #</u>	<u>Last Date Calibrated</u>	<u>Analytical Method</u>
Horiba MPA - 510 O2 41499150042	06/09/04	Paramagnetic
Horiba VIA-510 CO2 42399380022	06/04/04	Non-dispersive Infrared

Analyst: Richard Sykes Richard Sykes

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CERTIFICATE OF ANALYSIS: EPA PROTOCOL GAS MIXTURE

Customer:	National Welders, Durham, NC	Reference #	88-93853
NSG PO#	4614344	Certification Date:	10/25/04
Customer PO#		Expiration Date:	10/25/06
Cylinder #	CC44386	Pressure, psig*	2000

ANALYTICAL INFORMATION

METHOD: This standard was analyzed according to EPA Traceability Protocol for Assay and Certification of Gaseous Calibration Standards: Procedure G1 (September 1997)

ANALYZED CYLINDER


Components	Certified Concentration	Analytical Accuracy**
Nitric Oxide	44.5 ppm	+/-1%
Carbon Monoxide	48.3 ppm	+/-1%
Balance - Nitrogen	Trace Gas - Nitrogen Dioxide	< 0.1 ppm

REFERENCE STANDARD

Type/SRM Sample #	Cylinder #	Concentration
GMIS (Traceable to SRM # 1683b)	CC50340	50.1 ppm NO/N2
GMIS (Traceable to SRM # 1678c)	CC41286	50.64 ppm CO/N2

INSTRUMENTATION

Instrument/Model/Serial #	Last Date Calibrated	Analytical Method
KVB Analect EN-844	10/01/04	Fourier Transform Infrared
Rosemount 880A CO 00172	10/05/04	Non-dispersive Infrared

Analyst:  Jeremy Kenworthy

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CERTIFICATE OF ANALYSIS: EPA PROTOCOL GAS MIXTURE

Customer:	National Welders, Durham, NC	Reference #	88-90594
NSG PO#	4377631	Certification Date:	05/10/04
Customer PO#		Expiration Date:	05/10/06
Cylinder #	CC114333	Pressure, psig*	2000

ANALYTICAL INFORMATION

METHOD: This standard was analyzed according to EPA Traceability Protocol for Assay and Certification of Gaseous Calibration Standards: Procedure G1 (September 1997)

ANALYZED CYLINDER

<u>Components</u>	<u>Certified Concentration</u>	<u>Analytical Accuracy**</u>
Carbon Monoxide	96.8 ppm	+/-1%
Nitric Oxide	94.4 ppm	+/-1%
Balance - Nitrogen	Trace Gas - Nitrogen Dioxide	< 0.1 ppm

REFERENCE STANDARD

<u>Type/SRM Sample #</u>	<u>Cylinder #</u>	<u>Concentration</u>
GMIS (Traceable to SRM # 1679c)	CC64442	98.3 ppm CO/N2
GMIS (Traceable to SRM # 1684b)	CC64261	99.85 ppm NO/N2

INSTRUMENTATION

<u>Instrument/Model/Serial #</u>	<u>Last Date Calibrated</u>	<u>Analytical Method</u>
Rosemount 880A CO 00172	04/22/04	Non-dispersive Infrared
KVB Analect EN-844	05/03/04	Fourier Transform Infrared

Analyst: Jeremy Kenworthy Jeremy Kenworthy

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CERTIFICATE OF ANALYSIS: EPA PROTOCOL GAS MIXTURE

Customer:	National Welders, Raleigh, NC	Reference #	88-87924
NSG PO#	4179631	Certification Date:	12/09/03
Customer PO#		Expiration Date:	12/09/03
Cylinder #	CC47297	Pressure, psig*	2000

ANALYTICAL INFORMATION

METHOD: This standard was analyzed according to EPA Traceability Protocol for Assay and certification of Gaseous Calibration Standards: Procedure G-1: September 1997.

ANALYZED CYLINDER

Components	Certified Concentration	Analytical Accuracy**
Nitric Oxide	44.4 ppm	+/-1%
Carbon Monoxide	45.6 ppm	+/-1%
Balance - Nitrogen	Trace Gas - Nitrogen Dioxide	< 0.1 ppm

REFERENCE STANDARD

Type/SRM Sample #	Cylinder #	Concentration
GMIS (Traceable to SRM # 1683b)	CC67255	49.53 ppm NO/N2
GMIS (Traceable to SRM # 1678c)	CC41286	50.64 ppm CO/N2

INSTRUMENTATION

Instrument/Model/Serial #	Last Date Calibrated	Analytical Method
TECO 42CHL NOX CHL-63965-341	11/14/03	Chemiluminescence
Rosemount 880A CO 00172	11/21/03	Non-dispersive Infrared

Analyst: Jeremy Kenworthy Jeremy Kenworthy

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CERTIFICATE OF ANALYSIS: EPA PROTOCOL GAS MIXTURE

Customer:	National Welders, Durham, NC	Reference #	88-96748
NSG PO#	4850658	Certification Date:	04/05/05
Customer PO#		Expiration Date:	04/05/08
Cylinder #	CC62939	Pressure, psig*	2000

ANALYTICAL INFORMATION

METHOD: This standard was analyzed according to EPA Traceability Protocol for Assay and Certification of Gaseous Calibration Standards: Procedure G1 (September 1997)

ANALYZED CYLINDER

<u>Components</u>	<u>Certified Concentration</u>	<u>Analytical Accuracy**</u>
Oxygen	20.0 %	+/-1%
Balance - Nitrogen		

REFERENCE STANDARD

<u>Type/SRM Sample #</u>	<u>Cylinder #</u>	<u>Concentration</u>
GMIS (Traceable to SRM # 2659a)	CC66774	24.77 % O2/N2

INSTRUMENTATION

<u>Instrument/Model/Serial #</u>	<u>Last Date Calibrated</u>	<u>Analytical Method</u>
Horiba MPA - 510 O2 41499150042	03/17/05	Paramagnetic

Analyst: Nicole Ishak Nicole Ishak

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CERTIFICATE OF ANALYSIS: EPA PROTOCOL GAS MIXTURE

Customer:	National Welders, Durham, NC	Reference #	88-91271
NSG PO#	4436836	Certification Date:	06/21/04
Customer PO#		Expiration Date:	06/21/07
Cylinder #	CC35809	Pressure, psig*	2000

ANALYTICAL INFORMATION

METHOD: This standard was analyzed according to EPA Traceability Protocol for Assay and Certification of Gaseous Calibration Standards: Procedure G1 (September 1997)

ANALYZED CYLINDER

<u>Components</u>	<u>Certified Concentration</u>	<u>Analytical Accuracy**</u>
Oxygen	20.0%	+/-1%
Carbon Dioxide	18.18%	+/-1%
Balance - Nitrogen		

REFERENCE STANDARD

<u>Type/SRM Sample #</u>	<u>Cylinder #</u>	<u>Concentration</u>
GMIS (Traceable to SRM # 2659a)	CC64388	24.74 % O2/N2
GMIS (Traceable to SRM # 1675b)	CC146489	20.22 % CO2/N2

INSTRUMENTATION

<u>Instrument/Model/Serial #</u>	<u>Last Date Calibrated</u>	<u>Analytical Method</u>
Horiba MPA - 510 O2 41499150042	06/09/04	Paramagnetic
Horiba VIA-510 CO2 42399380022	06/04/04	Non-dispersive Infrared

Analyst: Richard Sykes Richard Sykes

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CERTIFICATE OF ANALYSIS: EPA PROTOCOL GAS MIXTURE

Customer: National Welders, Durham, NC Reference # 88-91270
NSG PO# 4436836 Certification Date: 06/21/04
Customer PO# Expiration Date: 06/21/07
Cylinder # CC47306 Pressure, psig* 2000

ANALYTICAL INFORMATION

METHOD: This standard was analyzed according to EPA Traceability Protocol for Assay and Certification of Gaseous Calibration Standards: Procedure G1 (September 1997)

ANALYZED CYLINDER

<u>Components</u>	<u>Certified Concentration</u>	<u>Analytical Accuracy**</u>
Oxygen	12.41%	+/-1%
Carbon Dioxide	9.09%	+/-1%
Balance - Nitrogen		

REFERENCE STANDARD

<u>Type/SRM Sample #</u>	<u>Cylinder #</u>	<u>Concentration</u>
GMIS (Traceable to SRM # 2659a)	CC64388	24.74 % O2/N2
GMIS (Traceable to SRM # 1674b)	CC52150	9.93 % CO2/N2

INSTRUMENTATION

<u>Instrument/Model/Serial #</u>	<u>Last Date Calibrated</u>	<u>Analytical Method</u>
Horiba MPA - 510 O2 41499150042	06/09/04	Paramagnetic
Horiba VIA-510 CO2 42399380022	06/04/04	Non-dispersive Infrared

Analyst: Richard Sykes Richard Sykes

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APPENDIX C
PROCESS DATA

Environmental Advisory Committee Checklist

Meeting Date ~~12/10/04~~ 10/28/05

		Yes	No
Alley, Gene	277-3433		X
Caples, David	261-1137		X
Colburn, Elle 1541 Inverness ¹²⁰	261-6945	X	
Dahlgren, Charles	277-2692		X
Duncan, Regina	261-3248		X
Duncan, Todd	548-0162	X	
Kathy Russell	261-5713		
Kinner, Derek	261-7606 ext 106		
? Kirkland-Brown, Maybelle	277-3285		
? Leeper, Danny	277-7331	X	
Main, Orrin	277-3576	X	
Mearns, Bob	277-7305		
Parnell, Michael	261-3696	X	
Rogers, Bob	277-3725	X	
Sabadie, Patrick	261-6639		X
Scanlan, Phil	491-8852	X	
Smith, Mayo	261-5586		X
Sparkman, Wade	277-7284	X	
Van Horn, Michael	261-9763		X
Whitaker, Melba	261-3841	X	

Kelli

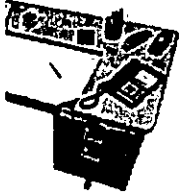
msg 277-7334

cancelled

** msg*

- John Mandrick*
- ✓ Jack Perrett
 - ✓ Dave Tudor
 - ✓ Dick Hopper
 - Stephanie Woodward ???
 - ✓ Tricia Harrell
 - ✓ Mike Bell
 - Bill Crews*

- X
- X
- X
- X
- X
- X
- X



Dick Hopper/RayFB/Rayonier

To Tricia.Harrell@rayonier.com

cc

10/26/2005 07:57 AM

bcc

Subject Fw: Sept 28 Community Environmental Advisory Committee Mtg.

Don't you provide an agenda for the attendees? Please see Dave & Jack for their slides. Jack and CA will need to look at the #6 PB slides I have well before Friday.

Thanks,

Dick

Richard W. [Dick] Hopper
Manager, Environmental Operations
Rayonier Fernandina Mill
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--- Forwarded by Dick Hopper/RayFB/Rayonier on 10/26/2005 07:56 AM ---



David Tudor/RayFB/Rayonier

To jack.perrett@rayonier.com, dick.hopper@rayonier.com

cc

10/25/2005 03:36 PM

Subject Sept 28 Community Environmental Advisory Committee Mtg.

Jack and Dick,
Here is a very preliminary agenda with some ideas of presentations
Dave

- Welcome and Introductions Tudor
- Recent Environmental/Safety Compliance History Hopper
- Mill Business Status Recent Business Developments Perrett
Market changes: Nachez, Cosmopolis, Brazil, So Africa. & market share
- Consumptive Use Permit Tudor
allocation, usage, well field management, conservation projects, coop with Smurfit on Aquifer Stress Test Bill Crews on Smurfit Permit
- Title V Permit Tudor
status, CAM plan monitoring
- No. 6 boiler Permit Application Hopper
equipment changes needed for production increase local impacts due to production increase. location & configuration & control equipment fuel and emissions comparison to existing

Lunch

Recovery Boiler Compliance Test

Date: 8-Jun-05

Run: # 1

Time	Start of Test		End of Test		Difference	%of hour
	hour	min	hour	min		
Time	9	02	10	02	60	1
"B" Liquor Flow, gallons	25747.5		36240.6		10493.1	10493.1 gph
Liquor Flow, gpm meter	176		174		175	10500 gph
Liquor Temperature, deg F	193		194		193.5	
Liquor Hydrometer Reading	1.25		1.245		1.2475	
Liquor solids, % OD	59		58.3		58.65	
No. of Liquor guns	10		10		10	
No. of oil guns	0		0		0	
No. of oil guns @ pressure	0		0		0	
Steam load, lbs/hr chart x 1000	372		376		374	
Steam Flow Integrator x 1000, lb	935.5		1309.7		374200	374200 lb/hr
Steam Temperature, deg F	875		876		875.5	
Steam Pressure, psi	992		993		992.5	
SO2, ppm	147.969		242.566		195.2675	

Liquor Flow Calculation	(gph)(8.345)(sp.gr.)(%OD)	64109.77 lb/hr
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Integrator Calculation: TSP Mass Emission Rate results: 12.37 lb/hr

(End of test value - Start of test value)(60 min./hr / Test time, min.) = Units/hr

Recovery Boiler Compliance Test

Date: 8-Jun-05

Run: # 2

Time	Start of Test		End of Test		Difference	%of hour	
	hour	min	hour	min			
Time	11	06	12	11	65	0.923077	
"B" Liquor Flow, gallons	49546.6		58766		9219.4	8510.215	gph
Liquor Flow, gpm meter	175		175		175	10500	gph
Liquor Temperature, deg F	194		194		194		
Liquor Hydrometer Reading	1.26		1.255		1.2575		
Liquor solids, % OD	60.9		60.1		60.5		
No. of Liquor guns	10		10		10		
No. of oil guns	0		0		0		
No. of oil guns @ pressure	0		0		0		
Steam load, lbs/hr chart x 1000	379		378		378.5		
Steam Flow Integrator x 1000, lb	1787.3		2122.1		334800	309046.2	lb/hr
Steam Temperature, deg F	876		876		876		
Steam Pressure, psi	993		996		994.5		
SO2, ppm	117.874		113.084		115.479		

Liquor Flow Calculation	(gph)(8.345)(sp.gr.)(%OD)	66662.10 lb/hr
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Integrator Calculation: TSP Mass Emission Rate results: 28.72 lb/hr

(End of test value - Start of test value)(60 min./hr / Test time, min.) = Units/hr

Recovery Boiler Compliance Test

Date: 8-Jun-05

Run: # 3

	Start of Test		End of Test		Difference	% of hour
	hour	min	hour	min		
Time	12	48	13	49	61	0.983607
"B" Liquor Flow, gallons	65760.8		75671		9910.2	9747.738 gph
Liquor Flow, gpm meter	175		172		173.5	10410 gph
Liquor Temperature, deg F	194		194		194	
Liquor Hydrometer Reading	1.255		1.255		1.255	
Liquor solids, % OD	60.1		60.1		60.1	
No. of Liquor guns	10		10		10	
No. of oil guns	0		0		0	
No. of oil guns @ pressure	0		0		0	
Steam load, lbs/hr chart x 1000	376		373		374.5	
Steam Flow Integrator x 1000, lb	2376.2		2734.6		358400	352524.6 lb/hr
Steam Temperature, deg F	873		869		871	
Steam Pressure, psi	987		987		987	
SO2, ppm	22.804		23.672		23.238	

Liquor Flow Calculation	(gph)(8.345)(sp.gr.)(%OD)	61354.78 lb/hr
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Integrator Calculation: TSP Mass Emission Rate results: 24.48 lb/hr

(End of test value - Start of test value)(60 min./hr / Test time, min.) = Units/hr

Sulfite Recovery Boiler Scrubber Stack Test Analysis

for 8-Jun-05

Steam Output from the Sulfite Recovery Boiler

Run	Steam Production [1000 lb./hr. of 1000 BTU/lb. Steam]
Number	Sulfite Recovery Boiler
1	374
2	309
3	353
Average	345

Oil Input to Boiler					Liquor Input to Boiler		Test Result
Sulfite Recovery Boiler							Particulate
Run	Gal. Oil	Test Min.	BTU/gal	MMBTU/hr	Gal.	Liquor Flow	(per Stack test)
Number				from Oil	Liquor	lbs/hr.	lbs/hr.
1	0	60	158,104	0	10493	64,110	12.4
2	0	65	158,104	0	8510	66,662	28.7
3	0	61	158,104	0	9748	61,355	24.5
Average	0	62	158,104	0	9,584	64,042	21.9
Permit Maximum [lbs/hr. SSL]					70,000		Permit Maximum (particulate) 43.18 lbs/hr.
Recovery Boiler Actual Total % of Capacity =					91%		Permit Maximum (particulate) 43.18 lbs/hr.
Standard Operating Max					63,000		Permit Limit 2.5 PM lb/ADTUP
Percent of Standard Operating Max					102%		Test Value 0.80 PM lb/ADTUP

	Test Value	21.9	PM lb/hr
	Test Value	0.80	PM lb/ADTUP
	Permit Limit	2.5	PM lb/ADTUP
		64,042	lb SSSL/hr
Entry from		27	ADTUP/hr
previous operating years Data	lb SSSL/ADTUP	2,330	

Power Boilers Scrubber Test

Power Boiler Scrubber "B"
 Date 08-Jul-05
 Run # B # 1 (no/oil)

Boiler No. 3

	Start of Test		End of Test		Totals	Time
	hours	min	hours	min	min	corrected
Time	9	00	10	00	60	1
Steam Flow Integrator (x 1000)	206		309.5		103500	103500 lb/hr
Steam Temperature (° F)	778.5		748.1		763.3	
Drum Pressure (psig.)	532.7		520.8		526.75	
Oil Flow Intergrator (bbl.)	4.6		4.6		0	0 gal/hr
Steam Flow (lb/hr x 1000)	106.9		114.1		110500	
Oil Flow (gpm)	0		0		0	
Bark Integrator	85.5		118.7		33.2	33 wet/tons/hr
Bark to Boiler: Num.(s) <u>2</u> And / or <u>3</u>						
Scrubber "B" pH	8.1		8.1		8.1	

Power Boilers Scrubber Test

Power Boiler Scrubber **"B"**
 Date 08-Jul-05
 Run # B # 2 (no/oil)

Boiler No. 3

	Start of Test		End of Test		Totals	Time
	hours	min	hours	min	min	corrected
Time	10	23	11	23	60	1
Steam Flow Integrator (x 1000)	348.2		448.2		100000	100000 lb/hr
Steam Temperature (° F)	784.6		734.1		759.35	
Drum Pressure (psig.)	550.8		458.2		504.5	
Oil Flow Intergrator (bbl.)	4.6		4.7		0.1	4.2 gal/hr
Steam Flow (lb/hr x 1000)	104		55.6		79800	
Oil Flow (gpm)	0		0		0	
Bark Integrator	133.6		170.1		36.5	37 wet/tons/hr
Bark to Boiler: Num.(s) <u>2</u> And / or <u>3</u>						
Scrubber "B" pH	8.1		8.3		8.2	

Power Boilers Scrubber Test

Power Boiler Scrubber "B"
 Date 08-Jul-05
 Run # B # 3 (no/oil)

Boiler No. 3

	<u>Start of Test</u>		<u>End of Test</u>		<u>Totals</u>	<u>Time</u>
	hours	min	hours	min	min	<u>corrected</u>
<i>Time</i>	11	38	12	39	61	0.98361
Steam Flow Integrator (x 1000)	469.1		574.2		105100	103377 lb/hr
Steam Temperature (° F)	774.2		766.9		770.55	
Drum Pressure (psig.)	555.1		546.9		551	
Oil Flow Intergrator (bbl.)	6.8		7.5		0.7	28.918 gal/hr
Steam Flow (lb/hr x 1000)	106		98.7		102350	
Oil Flow (gpm)	0		0		0	
Bark Integrator	180.5		215.3		34.8	34 wet/tons/hr
Bark to Boiler:	Num.(s)	<u>2</u>	<u>3</u>			
Scrubber "B" pH	8.0		8.1		8.05	

"B" SCRUBBER STACK TEST ANALYSIS

for 8-Jul-05

Steam Output from No. 3 Power Boiler

Run Number	Steam Production [1000 lb./hr. of 1000 BTU/lb. Steam]
1	104

Average 104

Capacity 135

B Scrubber Actual Total % of Capacity = 77%

Oil Input to Boiler

Power Boiler No. 3				
Run Number	Gal. Oil	Test Min.	BTU/gal	MMBTU/hr from Oil
1	0	60	158,104	0
Average				
	0	60	158,104	0
Permit Maximum on Oil		[mmBtu/hr]	207	
Permit Maximum on Bark		[mmBtu/hr]	245	

Allowable Particulate Emissions Calculation

Test total BTU Input from Oil for B Scrubber	0	MM BTU/hr.	
Maximum Steam Output from 3 PB	135,000	lb./hr. [1000 BTU Steam]	
Test Operating Rate	77%		
Test Steam Output Rate	103,500	lb./hr. [135,000 x test operating rate]	
Boiler Efficiency on Oil	65%		
Test Steam from Oil	0	lb./hr. [total input from oil x Eff. on oil]	
Test Steam from Bark [by difference]	103,500	lb./hr.	
Boiler Efficiency on Bark	55%		Permit Max.
Test Heat Input from Bark	188	mmBTU/hr.	245
Emissions Factor for Bark	0.207	lb. PM/MMBTU	
Emissions Factor for Oil	0.086	lb. PM/MMBTU	
Allowable Emissions from Bark	50.6	lb. PM/hr [emissions factor x heat input]	50.6 #3Bark Only
Allowable Emissions from Oil	0.0	lb. PM/hr [emissions factor x heat input]	16.7 #3 Oil Only
Total Allowable Emissions for B Scrubber	50.6	lb. PM/hr.	(Including Oil Emissions)
Total Allowable Emissions for B Scrubber	50.6	lb. PM/hr.	(By Oil Emissions Factor or Permit)
Actual emissions for B Scrubber	8-Jul-05 Test	na	lb. PM/hr.

"B" SCRUBBER STACK TEST ANALYSIS

for 8-Jul-05

Steam Output from No. 3 Power Boiler

Run Number	Steam Production [1000 lb./hr. of 1000 BTU/lb. Steam]
2	100

Average 100

Capacity 135

B Scrubber Actual Total % of Capacity = 74%

Oil Input to Boiler

Power Boiler No. 3				
Run Number	Gal. Oil	Test Min.	BTU/gal	MMBTU/hr from Oil
2	4.2	60	158,104	1
Average				
	4	60	158,104	1
Permit Maximum on Oil			[mmBtu/hr]	207
Permit Maximum on Bark			[mmBtu/hr]	245

Allowable Particulate Emissions Calculation

Test total BTU Input from Oil for B Scrubber	1	MM BTU/hr.	
Maximum Steam Output from 3 PB	135,000	lb./hr. [1000 BTU Steam]	
Test Operating Rate	74%		
Test Steam Output Rate	100,000	lb./hr. [135,000 x test operating rate]	
Boiler Efficiency on Oil	65%		
Test Steam from Oil	432	lb./hr. [total input from oil x Eff. on oil]	
Test Steam from Bark [by difference]	99,568	lb./hr.	
Boiler Efficiency on Bark	55%		Permit Max.
Test Heat Input from Bark	181	mmBTU/hr.	245
Emissions Factor for Bark	0.207	lb. PM/MMBTU	
Emissions Factor for Oil	0.086	lb. PM/MMBTU	
Allowable Emissions from Bark	37.5	lb. PM/hr [emissions factor x heat input]	50.6 #3Bark Only
Allowable Emissions from Oil	0.1	lb. PM/hr [emissions factor x heat input]	16.7 #3 Oil Only
Total Allowable Emissions for B Scrubber	37.5	lb. PM/hr.	(Including Oil Emissions)
Total Allowable Emissions for B Scrubber	37.5	lb. PM/hr.	(By Oil Emissions Factor or Permit)
Actual emissions for B Scrubber	8-Jul-05 Test	na	lb. PM/hr.

"B" SCRUBBER STACK TEST ANALYSIS

for 8-Jul-05

Steam Output from No. 3 Power Boiler

Run Number	Steam Production [1000 lb./hr. of 1000 BTU/lb. Steam] Power Boiler No. 3
3	103

Average 103

Capacity 135

B Scrubber Actual Total % of Capacity = 77%

Oil Input to Boiler

Power Boiler No. 3				
Run Number	Gal. Oil	Test Min.	BTU/gal	MMBTU/hr from Oil
3	29	61	158,104	5
Average				
	29	61	158,104	5
Permit Maximum on Oil		[mmBtu/hr]	207	
Permit Maximum on Bark		[mmBtu/hr]	245	

Allowable Particulate Emissions Calculation

Test total BTU Input from Oil for B Scrubber	5	MM BTU/hr.	
Maximum Steam Output from 3 PB	135,000	lb./hr. [1000 BTU Steam]	
Test Operating Rate	77%		
Test Steam Output Rate	103,377	lb./hr. [135,000 x test operating rate]	
Boiler Efficiency on Oil	65%		
Test Steam from Oil	2,972	lb./hr. [total input from oil x Eff. on oil]	
Test Steam from Bark [by difference]	100,405	lb./hr.	
Boiler Efficiency on Bark	55%	Permit Max.	
Test Heat Input from Bark	183	mmBTU/hr.	245
Emissions Factor for Bark	0.207	lb. PM/MMBTU	
Emissions Factor for Oil	0.086	lb. PM/MMBTU	
Allowable Emissions from Bark	37.8	lb. PM/hr [emissions factor x heat input]	50.6 #3Bark Only
Allowable Emissions from Oil	0.4	lb. PM/hr [emissions factor x heat input]	16.7 #3 Oil Only
Total Allowable Emissions for B Scrubber	38.2	lb. PM/hr.	(Including Oil Emissions)
Total Allowable Emissions for B Scrubber	38.2	lb. PM/hr.	(By Oil Emissions Factor or Permit)
Actual emissions for B Scrubber	8-Jul-05 Test	na	lb. PM/hr.

"B" SCRUBBER STACK TEST ANALYSIS

for 8-Jul-05

Steam Output from No. 3 Power Boiler

Run Number	Power Boiler No. 3	Steam Production [1000 lb./hr. of 1000 BTU/lb. Steam]
1	104	
2	100	
3	103	
Average	102	
Capacity	135	

B Scrubber Actual Total % of Capacity = 76%

Oil Input to Boiler

Power Boiler No. 3					Test Result per Stack test
Run Number	Gal. Oil	Test Min.	BTU/gal	MMBTU/hr from Oil	
1	0	60	158,104	0	na
2	4.2	60	158,104	1	na
3	29.4	61	158,104	5	na
Average	11	60	158,104	2	na
Permit Maximum	[mmBtu/hr]			207	

Allowable Particulate Emissions Calculation

Test total BTU Input from Oil for B Scrubber	2	MM BTU/hr.	
Maximum Steam Output from 3 PB	135,000	lb./hr. [1000 BTU Steam]	
Test Operating Rate	76%		
Test Steam Output Rate	102,292	lb./hr. [135,000 x test operating rate]	
Boiler Efficiency on Oil	65%		
Test Steam from Oil	1,134	lb./hr. [total input from oil x Eff. on oil]	
Test Steam from Bark [by difference]	101,158	lb./hr.	
Boiler Efficiency on Bark	55%	Permit Max.	
Test Heat Input from Bark	184	mmBTU/hr	245
Emissions Factor for Bark	0.207	lb. PM/MMBTU	Permit Maximum
Emissions Factor for Oil	0.086	lb. PM/MMBTU	
Allowable Emissions from Bark	38.1	lb. PM/hr [emissions factor x heat input]	50.6
Allowable Emissions from Oil	0.2	lb. PM/hr [emissions factor x heat input]	16.7
Total Allowable Emissions for B Scrubber	38.2	lb. PM/hr.	(Including Oil Emissions)
Total Allowable Emissions for B Scrubber	38.2	lb. PM/hr.	(By Oil Emissions Factor or Permit)
Actual emissions for B Scrubber	8-Jul-05 Test	na	lb. PM/hr.

Power Boilers Scrubber Test

Power Boiler Scrubber **"B"**
 Date 08-Jul-05
 Run # B # 1 (w/oil)

Boiler No. 3

	<u>Start of Test</u>	<u>End of Test</u>	<u>Totals</u>	<u>Time</u>	
	hours min	hours min	min	corrected	
<u>Time</u>	13 58	14 58	60	1	
Steam Flow Integrator (x 1000)	712.3	836.3	124000	124000	lb/hr
Steam Temperature (° F)	746.1	740.7	743.4		
Drum Pressure (psig.)	562.7	545.6	554.15		
Oil Flow Intergrator (bbl.)	22.7	41.4	18.7	785.4	gal/hr
Steam Flow (lb/hr x 1000)	109.8	124.8	117300		
Oil Flow (gpm)	13.4	13.5	13.45		
Bark Integrator	251.5	274.2	22.7	23	wet/tons/hr
Bark to Boiler: Num.(s) <u>2</u> And / or <u>3</u>					
Scrubber "B" pH	7.3	6.4	6.9		

Power Boilers Scrubber Test

Power Boiler Scrubber **"B"**
 Date 08-Jul-05
 Run # B # 2 (w/oil)

Boiler No. 3

	<u>Start of Test</u>		<u>End of Test</u>		<u>Totals</u>	<u>Time</u>
	hours	min	hours	min	min	corrected
Time	15	09	16	11	62	0.96774
Steam Flow Integrator (x 1000)	858.4		989.1		130700	126484 lb/hr
Steam Temperature (° F)	729.8		741.9		735.85	
Drum Pressure (psig.)	521.3		564.9		543.1	
Oil Flow Intergrator (bbl.)	44.6		64.1		19.5	792.581 gal/hr
Steam Flow (lb/hr x 1000)	141.4		112.4		126900	
Oil Flow (gpm)	13		13.2		13.1	
Bark Integrator	278		300.6		22.6	22 wet/tons/hr
Bark to Boiler: Num.(s) <u>2</u> And / or <u>3</u>						
Scrubber "B" pH	6.3		6.1		6.2	

"B" SCRUBBER STACK TEST ANALYSIS

for 8-Jul-05

Steam Output from No. 3 Power Boiler

Run Number	Steam Production [1000 lb./hr. of 1000 BTU/lb. Steam] Power Boiler No. 3
1	124

Average 124

Capacity 135

B Scrubber Actual Total % of Capacity = 92%

Oil Input to Boiler

Power Boiler No. 3				
Run Number	Gal. Oil	Test Min.	BTU/gal	MMBTU/hr from Oil
1	785.4	60	158,104	124
<hr/>				
Average	785	60	158,104	124
<hr/>				
Permit Maximum on Oil	[mmBtu/hr]			207
Permit Maximum on Bark	[mmBtu/hr]			245

Allowable Particulate Emissions Calculation

Test total BTU Input from Oil for B Scrubber	124	MM BTU/hr.	
Maximum Steam Output from 3 PB	135,000	lb./hr. [1000 BTU Steam]	
Test Operating Rate	92%		
Test Steam Output Rate	124,000	lb./hr. [135,000 x test operating rate]	
Boiler Efficiency on Oil	65%		
Test Steam from Oil	80,714	lb./hr. [total input from oil x Eff. on oil]	
Test Steam from Bark [by difference]	43,286	lb./hr.	
Boiler Efficiency on Bark	55%		
Test Heat Input from Bark	79	mmBTU/hr.	Permit Max. 245
Emissions Factor for Bark	0.207	lb. PM/MMBTU	
Emissions Factor for Oil	0.086	lb. PM/MMBTU	
Allowable Emissions from Bark	16.3	lb. PM/hr [emissions factor x heat input]	Permit Maximum 50.6 #3Bark Only
Allowable Emissions from Oil	10.7	lb. PM/hr [emissions factor x heat input]	16.7 #3 Oil Only
Total Allowable Emissions for B Scrubber	27.0	lb. PM/hr.	(Including Oil Emissions)
Total Allowable Emissions for B Scrubber	27.0	lb. PM/hr.	(By Oil Emissions Factor or Permit)
Actual emissions for B Scrubber	8-Jul-05 Test	na	lb. PM/hr.

"B" SCRUBBER STACK TEST ANALYSIS

for 8-Jul-05

Steam Output from No. 3 Power Boiler

Run Number	Steam Production [1000 lb./hr. of 1000 BTU/lb. Steam] Power Boiler No. 3
2	126

Average 126

Capacity 135

B Scrubber Actual Total % of Capacity = 94%

Oil Input to Boiler

Power Boiler No. 3				
Run Number	Gal. Oil	Test Min.	BTU/gal	MMBTU/hr from Oil
2	819	62	158,104	125
Average				
	819	62	158,104	125
Permit Maximum on Oil			[mmBtu/hr]	207
Permit Maximum on Bark			[mmBtu/hr]	245

Allowable Particulate Emissions Calculation

Test total BTU Input from Oil for B Scrubber	125	MM BTU/hr.	
Maximum Steam Output from 3 PB	135,000	lb./hr. [1000 BTU Steam]	
Test Operating Rate	94%		
Test Steam Output Rate	126,484	lb./hr. [135,000 x test operating rate]	
Boiler Efficiency on Oil	65%		
Test Steam from Oil	81,452	lb./hr. [total input from oil x Eff. on oil]	
Test Steam from Bark [by difference]	45,032	lb./hr.	
Boiler Efficiency on Bark	55%	Permit Max.	
Test Heat Input from Bark	82	mmBTU/hr.	245
Emissions Factor for Bark	0.207	lb. PM/MMBTU	
Emissions Factor for Oil	0.086	lb. PM/MMBTU	
Allowable Emissions from Bark	16.9	lb. PM/hr [emissions factor x heat input]	50.6 #3Bark Only
Allowable Emissions from Oil	10.8	lb. PM/hr [emissions factor x heat input]	16.7 #3 Oil Only
Total Allowable Emissions for B Scrubber	27.7	lb. PM/hr.	(Including Oil Emissions)
Total Allowable Emissions for B Scrubber	27.7	lb. PM/hr.	(By Oil Emissions Factor or Permit)
Actual emissions for B Scrubber	8-Jul-05 Test	0.0	lb. PM/hr.

"B" SCRUBBER STACK TEST ANALYSIS

for 8-Jul-05

Steam Output from No. 3 Power Boiler

Run Number	Steam Production [1000 lb./hr. of 1000 BTU/lb. Steam]
1	124
2	126

Average 125
Capacity 135

B Scrubber Actual Total % of Capacity = 93%

Oil Input to Boiler

Power Boiler No. 3					Test Result per Stack test
Run Number	Gal. Oil	Test Min.	BTU/gal	MMBTU/hr from Oil	
1	785.4	60	158,104	124	na
2	819	62	158,104	125	
Average	802	61	158,104	125	na
Permit Maximum	[mmBtu/hr]			207	

Allowable Particulate Emissions Calculation

Test total BTU Input from Oil for B Scrubber	125	MM BTU/hr.	
Maximum Steam Output from 3 PB	135,000	lb./hr. [1000 BTU Steam]	
Test Operating Rate	93%		
Test Steam Output Rate	125,242	lb./hr. [135,000 x test operating rate]	
Boiler Efficiency on Oil	65%		
Test Steam from Oil	81,083	lb./hr. [total input from oil x Eff. on oil]	
Test Steam from Bark [by difference]	44,159	lb./hr.	
Boiler Efficiency on Bark	55%		
Test Heat Input from Bark	80	mmBTU/hr	245 Permit Max.
Emissions Factor for Bark	0.207	lb. PM/MMBTU	50.6 Permit Maximum
Emissions Factor for Oil	0.086	lb. PM/MMBTU	
Allowable Emissions from Bark	16.6	lb. PM/hr [emissions factor x heat input]	16.7
Allowable Emissions from Oil	10.7	lb. PM/hr [emissions factor x heat input]	
Total Allowable Emissions for B Scrubber	27.3	lb. PM/hr.	(Including Oil Emissions)
Total Allowable Emissions for B Scrubber	27.3	lb. PM/hr.	(By Oil Emissions Factor or Permit)
Actual emissions for B Scrubber 8-Jul-05 Test	na	lb. PM/hr.	

Power Boilers Scrubber Test

Power Boiler Scrubber **"B"**
 Date 14-Jul-05
 Run # B # 1

Boiler No. 3

	<u>Start of Test</u>	<u>End of Test</u>	<u>Totals</u>	<u>Time</u>
	hours min	hours min	min	corrected
<u>Time</u>	9 01	10 01	60	1
Steam Flow Integrator (x 1000)	273.7	389.8	116100	116100 lb/hr
Steam Temperature (° F)	768.4	751.2	759.8	
Drum Pressure (psig.)	534.8	532.9	533.85	
Oil Flow Intergrator (bbl.)	43.7	65	21.3	894.6 gal/hr
Steam Flow (lb/hr x 1000)	127.8	120	123900	
Oil Flow (gpm)	14.8	14.7	14.75	
Bark Integrator	35	48.1	13.1	13 wet/tons/hr
Bark to Boiler: Num.(s) <u>3</u> And / or <u> </u>				
Scrubber "B" pH	5.0	5.0	5.0	

Power Boilers Scrubber Test

Power Boiler Scrubber **"B"**
 Date 14-Jul-05
 Run # B # 2 0

Boiler No. 3

	Start of Test		End of Test		Totals	Time
	hours	min	hours	min	min	corrected
Time	10	18	11	19	61	0.98361
Steam Flow Integrator (x 1000)	427.6		551		123400	121377 lb/hr
Steam Temperature (° F)	753.5		770		761.75	
Drum Pressure (psig.)	414		528.1		471.05	
Oil Flow Intergrator (bbl.)	70.7		92.6		21.9	904.721 gal/hr
Steam Flow (lb/hr x 1000)	140.5		110.6		125550	
Oil Flow (gpm)	14.7		15.9		15.3	
Bark Integrator	50.9		63.7		12.8	13 wet/tons/hr
Bark to Boiler: Num.(s) <u>3</u> And / or <u> </u>						
Scrubber "B" pH	5.0		5.1		5.1	

Power Boilers Scrubber Test

Power Boiler Scrubber **"B"**
 Date 14-Jul-05
 Run # B # 3 0

Boiler No. 3

	<u>Start of Test</u>		<u>End of Test</u>		<u>Totals</u>	<u>Time</u>
	hours	min	hours	min	min	<u>corrected</u>
<i>Time</i>	11	38	12	39	61	0.98361
Steam Flow Integrator (x 1000)	589.1		720.5		131400	129246 lb/hr
Steam Temperature (° F)	765.1		763.8		764.45	
Drum Pressure (psig.)	511.9		501.9		506.9	
Oil Flow Intergrator (bbl.)	98.6		120.9		22.3	921.246 gal/hr
Steam Flow (lb/hr x 1000)	128.4		124.2		126300	
Oil Flow (gpm)	15.5		15.5		15.5	
Bark Integrator	69.4		80.2		10.8	11 wet/tons/hr
<i>Bark to Boiler:</i> Num.(s) <u>3</u> And / or <u> </u>						
Scrubber "B" pH	5.0		5.0		5.00	

"B" SCRUBBER STACK TEST ANALYSIS

for 14-Jul-05

Steam Output from No. 3 Power Boiler

Run Number	Steam Production [1000 lb./hr. of 1000 BTU/lb. Steam] Power Boiler No. 3
1	116

Average 116

Capacity 135

B Scrubber Actual Total % of Capacity = 86%

Oil Input to Boiler

Power Boiler No. 3				
Run Number	Gal. Oil	Test Min.	BTU/gal	MMBTU/hr from Oil
1	894.6	60	163,105	146
Average				
	895	60	163,105	146
Permit Maximum on Oil [mmBtu/hr]			207	
Permit Maximum on Bark [mmBtu/hr]			245	

Allowable Particulate Emissions Calculation

Test total BTU Input from Oil for B Scrubber	146	MM BTU/hr.	
Maximum Steam Output from 3 PB	135,000	lb./hr. [1000 BTU Steam]	
Test Operating Rate	86%		
Test Steam Output Rate	116,100	lb./hr. [135,000 x test operating rate]	
Boiler Efficiency on Oil	65%		
Test Steam from Oil	94,844	lb./hr. [total input from oil x Eff. on oil]	
Test Steam from Bark [by difference]	21,256	lb./hr.	
Boiler Efficiency on Bark	55%		Permit Max.
Test Heat Input from Bark	39	mmBTU/hr.	245
Emissions Factor for Bark	0.207	lb. PM/MMBTU	
Emissions Factor for Oil	0.086	lb. PM/MMBTU	
Allowable Emissions from Bark	8.0	lb. PM/hr [emissions factor x heat input]	50.6 #3Bark Only
Allowable Emissions from Oil	12.5	lb. PM/hr [emissions factor x heat input]	16.7 #3 Oil Only
Total Allowable Emissions for B Scrubber	20.5	lb. PM/hr.	(Including Oil Emissions)
Total Allowable Emissions for B Scrubber	20.5	lb. PM/hr.	(By Oil Emissions Factor or Permit)
Actual emissions for B Scrubber 14-Jul-05 Test	na	lb. PM/hr.	

"B" SCRUBBER STACK TEST ANALYSIS

for 14-Jul-05

Steam Output from No. 3 Power Boiler

Run Number	Steam Production [1000 lb./hr. of 1000 BTU/lb. Steam]
2	121

Average 121

Capacity 135

B Scrubber Actual Total % of Capacity = 90%

Oil Input to Boiler

Power Boiler No. 3				
Run Number	Gal. Oil	Test Min.	BTU/gal	MMBTU/hr from Oil
2	919.8	61	163,105	148
Average 920 61 163,105 148				
Permit Maximum on Oil			[mmBtu/hr]	207
Permit Maximum on Bark			[mmBtu/hr]	245

Allowable Particulate Emissions Calculation

Test total BTU Input from Oil for B Scrubber	148	MM BTU/hr.	
Maximum Steam Output from 3 PB	135,000	lb./hr. [1000 BTU Steam]	
Test Operating Rate	90%		
Test Steam Output Rate	121,377	lb./hr. [135,000 x test operating rate]	
Boiler Efficiency on Oil	65%		
Test Steam from Oil	95,917	lb./hr. [total input from oil x Eff. on oil]	
Test Steam from Bark [by difference]	25,460	lb./hr.	
Boiler Efficiency on Bark	55%		
Test Heat Input from Bark	46	mmBTU/hr.	245 Permit Max.
Emissions Factor for Bark	0.207	lb. PM/MMBTU	
Emissions Factor for Oil	0.086	lb. PM/MMBTU	
Allowable Emissions from Bark	9.6	lb. PM/hr [emissions factor x heat input]	50.6 Permit Maximum #3Bark Only
Allowable Emissions from Oil	12.7	lb. PM/hr [emissions factor x heat input]	16.7 #3 Oil Only
Total Allowable Emissions for B Scrubber	22.3	lb. PM/hr.	(Including Oil Emissions)
Total Allowable Emissions for B Scrubber	22.3	lb. PM/hr.	(By Oil Emissions Factor or Permit)
Actual emissions for B Scrubber	14-Jul-05 Test	na	lb. PM/hr.

"B" SCRUBBER STACK TEST ANALYSIS

for 14-Jul-05

Steam Output from No. 3 Power Boiler

Run Number	Steam Production [1000 lb./hr. of 1000 BTU/lb. Steam]
3	129

Average 129

Capacity 135

B Scrubber Actual Total % of Capacity =

96%

Oil Input to Boiler

Power Boiler No. 3				
Run Number	Gal. Oil	Test Min.	BTU/gal	MMBTU/hr from Oil
3	937	61	163,105	150
<hr/>				
Average	937	61	163,105	150
<hr/>				
Permit Maximum on Oil			[mmBtu/hr]	207
Permit Maximum on Bark			[mmBtu/hr]	245

Allowable Particulate Emissions Calculation

Test total BTU Input from Oil for B Scrubber	150	MM BTU/hr.	
Maximum Steam Output from 3 PB	135,000	lb./hr. [1000 BTU Steam]	
Test Operating Rate	96%		
Test Steam Output Rate	129,246	lb./hr. [135,000 x test operating rate]	
Boiler Efficiency on Oil	65%		
Test Steam from Oil	97,669	lb./hr. [total input from oil x Eff. on oil]	
Test Steam from Bark [by difference]	31,577	lb./hr.	
Boiler Efficiency on Bark	55%		Permit Max.
Test Heat Input from Bark	57	mmBTU/hr.	245
Emissions Factor for Bark	0.207	lb. PM/MMBTU	
Emissions Factor for Oil	0.086	lb. PM/MMBTU	
Allowable Emissions from Bark	11.9	lb. PM/hr [emissions factor x heat input]	50.6 #3Bark Only
Allowable Emissions from Oil	12.9	lb. PM/hr [emissions factor x heat input]	16.7 #3 Oil Only
Total Allowable Emissions for B Scrubber	24.8	lb. PM/hr.	(Including Oil Emissions)
Total Allowable Emissions for B Scrubber	24.8	lb. PM/hr.	(By Oil Emissions Factor or Permit)
Actual emissions for B Scrubber	14-Jul-05 Test	na	lb. PM/hr.

"B" SCRUBBER STACK TEST ANALYSIS

for 14-Jul-05

Steam Output from No. 3 Power Boiler

Run Number	Steam Production [1000 lb./hr. of 1000 BTU/lb. Steam] Power Boiler No. 3
1	116
2	121
3	129
Average	122
Capacity	135

B Scrubber Actual Total % of Capacity = 91%

Oil Input to Boiler

Power Boiler No. 3					Test Result per Stack test
Run Number	Gal. Oil	Test Min.	BTU/gal	MMBTU/hr from Oil	
1	894.6	60	163,105	146	na
2	919.8	61	163,105	148	na
3	936.6	61	163,105	150	na
Average	917	61	163,105	148	na
Permit Maximum	[mmBtu/hr]			207	

Allowable Particulate Emissions Calculation

Test total BTU Input from Oil for B Scrubber	148	MM BTU/hr.	
Maximum Steam Output from 3 PB	135,000	lb./hr. [1000 BTU Steam]	
Test Operating Rate	91%		
Test Steam Output Rate	122,241	lb./hr. [135,000 x test operating rate]	
Boiler Efficiency on Oil	65%		
Test Steam from Oil	96,143	lb./hr. [total input from oil x Eff. on oil]	
Test Steam from Bark [by difference]	26,098	lb./hr.	
Boiler Efficiency on Bark	55%	Permit Max.	
Test Heat Input from Bark	47	mmBTU/hr	245
Emissions Factor for Bark	0.207	lb. PM/MMBTU	Permit Maximum
Emissions Factor for Oil	0.086	lb. PM/MMBTU	
Allowable Emissions from Bark	9.8	lb. PM/hr [emissions factor x heat input]	50.6
Allowable Emissions from Oil	12.7	lb. PM/hr [emissions factor x heat input]	16.7
Total Allowable Emissions for B Scrubber	22.5	lb. PM/hr.	(Including Oil Emissions)
Total Allowable Emissions for B Scrubber	22.5	lb. PM/hr.	(By Oil Emissions Factor or Permit)
Actual emissions for B Scrubber	14-Jul-05 Test	na	lb. PM/hr.

APPENDIX D
PROJECT PARTICIPANTS

PROJECT PARTICIPANTS

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