

Facility Name: **Rayonier, Inc.- Lumber City Planer Mill**
 City: Lumber City
 County: Telfair
 AIRS #: 04-13-271-00004

Application #: TV-13177
 Date SIP Application Received: Not Applicable
 Date Title V Application Received: July 17, 2001 and updated February 19, 2002
 Date of Draft Permit:
 Permit No: 2421-271-0004-V-01-1

Program	Review Engineers	Review Managers
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Introduction

This narrative is being provided to assist the reader in understanding the content of the attached SIP permit to construct and/or draft/proposed operating permit amendment. Complex issues and unusual items are explained herein simpler terms and/or greater detail than is sometimes possible in the actual permit. This permit amendment is being issued pursuant to: (1) Georgia Air Quality Act, O.C.G.A § 12-9-1, et seq. (2) Georgia Rules for Air Quality Control, Chapter 391-3-1, and (3) Title V of the Clean Air Act Amendments of 1990. Section 391-3-1-.03(10) of the Georgia Rules for Air Quality Control incorporates requirements of Part 70 of Chapter I of Title 40 of the Code of Federal Regulations promulgated pursuant to the Federal Clean Air Act. The primary purpose of this permit amendment is to identify state and federal air requirements applicable to the modification/construction to be performed at **Rayonier, Inc. - Lumber City Planer Mill** and to provide practical methods for determining compliance with these requirements. The following narrative is designed to accompany the draft permit amendment and is presented in the same general order as the permit amendment. It initially describes the facility receiving the permit amendment, the applicable requirements and their significance, and the methods for determining compliance with those applicable requirements. This narrative is intended as an adjunct for the reviewer and to provide information only. It has no legal standing. Any revisions made to the permit amendment in response to comments received during the public participation and EPA review process will be described in an addendum to this narrative.

I. Facility Description

A. Existing Permits

Table 1: Current Title V Permit and Amendments

Permit/Amendment Number	Date of Issuance	Comments	
		Yes	No
2421-271-0004-V-01-0	May 17, 2000	√	

Table 2: Comments on Specific Permits

Permit Number	Comments
2421-271-0004-V-01-0	Initial Title V Permit

1. PSD/NSR

According to the review conducted for the initial Title V permit No. 2421-271-0004-V-01-0, this facility is currently classified as a PSD major source, because it has potential emissions of CO and VOCs greater than 250 tons per year. This type of facility is not one of the 28 named source categories under PSD. It is also the case that this facility is actually a PSD source for PM emissions, having gone through a PSD review for the boiler in 1978.

In 1978, the initial air quality permit was issued for this facility, which is referred to as a planer mill. After reviewing a PSD application, the Division issued a Preliminary Determination for the construction of the boiler. The review process considered only PM emissions since this was the only pollutant that would be emitted at a rate exceeding 250 tons per year (uncontrolled) from the boiler. However, after EPA Region 4 reviewed the PSD Preliminary Determination, their comment requested that EPD examine more closely the emissions of combustion gases including hydrocarbons (aka VOCs), nitrogen oxides (NO_x), carbon monoxide (CO) and sulfur dioxide (SO₂). The Division determined that potential emissions were about 31.4 TPY of SO₂, 42 TPY of CO, 210 TPY of NO_x, and 42 TPY of VOCs. The final determination was that no controls would be required for the emission of these other pollutants. The Division issued a final PSD permit (2421-134-9765-C) on November 1, 1978 to St. Regis Paper Company.

In 1978, Rayonier, Inc. purchased the Lumber City Planer Mill. Since a change in name or ownership does not affect the PSD status of a plant, this plant remained a major source under PSD.

In 1997, an application was received for two new kilns. During the permit review, the existing PSD major source permit was inadvertently ignored by both the company and the Division. Under the assumption that the plant was minor for PSD, Rayonier's application did not request a PSD permit nor did it request that the emissions from the new kilns be limited under the significance level for NO_x (40 tons per year), but assumed that the modifications could emit up to 250 tpy without being major for PSD. However, to assure that the existing boiler was a minor source of carbon monoxide, a CO limit of 57.1 lb/hr was put into Permit No. 2421-134-11322 for the new kilns.

When the initial Title V permit was issued on May 17, 2001, it included that CO avoidance limit but it also added a 20 MMBF/year production limit for the new kilns (No. 4 and No. 5), in Condition 3.2.2. The explanation for this can be found in Supplement A of the Title V narrative. This contains calculations showing that the VOC potential (using a factor of 4 pounds VOC per MMBF), prior to the destruction of Old Kiln No. 4, was 272 tons per year so that it was an existing major source. Therefore, the permit writer determined that the 1997 modification (the addition of Kilns No. 4 and 5) would have been subject to PSD if the emissions increase was allowed to be 40 tpy VOCs or more. [Note: This made the boiler CO limit of 250 tpy irrelevant; however the CO limit remained in the permit.]

The Condition 3.2.2 production limit has protected PSD. However, that production limit now has become problematic for Rayonier; they need a higher allowable production. Kiln No. 5 was never constructed, so New Kiln No. 4 is able to have the entire 20 MMBF/year allowable. However, with a change in the economy, the only kiln which Rayonier is able to operate now (being more efficient than the others) is Kiln No. 4. They need to be able to operate in more than 20 MMBF/year.

This amendment then acknowledges that the existing source (prior to Kilns 4 and 5) was a true major source for CO, thus allowing us to remove the irrelevant 57.1 lb/hour CO limit. To assure that the newest kiln is not a major modification, their allowable is limited to the amount calculated by doing a netting exercise (due to the burning down of old kiln No. 1) plus 39.9 tpy. The total VOC allowable for the new kiln(s) is calculated to be equivalent to 35.6 million board feet. Since Kiln No. 5 was not built and Kiln No. 4 is renamed as Kiln No. 1, this permit amendment sets the new allowable of Kiln No. 1 to 35.6 million board feet.

Condition 3.2.1 is removed:

~~3.2.1 The Permittee shall not discharge, or cause the discharge, into the atmosphere, from wood-fired boiler PB01, carbon monoxide in excess of 57.1 pounds per hour.
[PSD Avoidance 391 3-1-.03 (2)]~~

Condition No. 3.2.2 had read:

3.2.2 The Permittee shall not dry green wood in amounts equal to or exceeding twenty (20) million green board feet of wood in kiln DK04 and DK05, combined, during any twelve consecutive months.

It is changed to

3.2.2 The Permittee shall not dry green wood in amounts equal to or exceeding 35.6 million green board feet of wood in lumber kiln DK01, during any twelve consecutive months.

2. Title V Major Source Status by Pollutant

Table 3: Title V Major Source Status

Pollutant	Is the Pollutant Emitted?	If emitted, what is the facility's Title V status for the Pollutant?		
		Major Source Status	Major Source Requesting SM Status	Non-Major Source Status
PM	√	√		
PM ₁₀	√			√
SO ₂	√			√
VOC	√	√		
NO _x	√			√
CO	√	√		
TRS	√			√
H ₂ S	√			√
Individual HAP	√			√
Total HAPs	√			√

II. Proposed Modification

A. Description of Modification

Rayonier, Inc. has requested the following modifications to its Title V Permit for the Lumber City Planer Mill:

1. To remove Kiln No. 5 (Source Code DK05) from the Permit

As indicated in their air quality application, the initial Title V permit allows Kilns No. 4 and 5 to dry no more than 20 million board-feet per year. Since Kiln No. 5 was never constructed, it will be removed from the permit and the allowable production limit can apply to Kiln No. 4 alone. In order to make the kiln identification numbers consistent with those used by Rayonier, Kiln No.4 (Source Code DK04) will be re-numbered on the permit as Kiln No. 1 (Source Code DK01), old Kiln No. 1 having burned down.

This modification therefore involves be no physical changes. Kiln No. 5 (Source Code DK05) has been removed from the process description and all conditions containing this kiln have been changed to delete this kiln. The references to Kiln No. 4 have been changed to specify Kiln No. 1.

2. To remove the upper limit(s) of gas stream pressure drop and the flow rate of scrubbing liquid of the wet scrubber (Source Code SC01) controlling boiler emissions

As indicated in their air quality application, the upper ranges for wet scrubber excursions are: (a) for pressure drop, 9 inches of water and (b) for flow rate, 120% of the value established during a successful compliance test. Rayonier argues that these upper reportable limits are unnecessary since, in general, higher scrubbant flow rates and higher pressure drops result in better control by the scrubber. EPD

agrees that a higher pressure drop does not reduce capture efficiency, so the upper limit for pressure drop requirement is being removed from Condition 5.2.6c.ii. EPD also agrees that higher scrubbing water flow rates increase the liquid-to-gas ratio which generally improves capture efficiency, although we note that very high liquid-to-gas ratios can have an adverse impact on PM emissions. [The average droplet size will increase and eventually water droplets will be blown out of the scrubber which can carry PM.] Therefore, the upper limit is increased from 120% to 140% for excursion purposes in Condition 5.2.6c.i. Since the values for the lower and upper limits have already been established, which are 134 gallons per minute (gpm) and 235 gpm, these will be put into Condition 5.2.6c.i. of this amendment.

3. To remove the required CO monitoring of the boiler stack

The Permittee has indicated that it still believes that CO emissions from the boiler do not exceed 250 tons per year, as indicated in the original PSD Preliminary Determination. However, recent testing has shown that emissions from the boiler do occasionally exceed that emission rate on a short-term basis. In order to allow Rayonier to continue to operate under the carbon monoxide PSD-avoidance condition, the Division had insisted that Rayonier either show that they are well under 57 pounds per hour, by a performance test, or show that emissions do not exceed 250 tpy using a CO CEMS. Since the facility cannot justify the expense of a continuous emission monitor, and since the facility is already a PSD source (due to the PSD permit issued in 1978), they have requested that EPD modify the permit to reflect that the facility is a major source for CO. There is no longer any need to demonstrate the boiler emits less than 250 tons per year of CO.

The conditions related to the CO monitoring of the boiler are therefore removed as per details given in "Supplement A."

4. To increase the allowable throughput of the new kiln

In part, new kilns 4 and 5 were intended to replace capacity lost when old Kiln No. 1 burned down on January 19, 1993; therefore it is reasonable to expect that a netting exercise (assuming there were no other increases or decreases) will increase the allowable emissions. After doing such an exercise, Rayonier informed the Division that the throughput limit of 20 million board feet of wood drying in kilns DK04 and DK05 should be increased to 43.25 million board feet per year for kiln No. 4 (now to be numbered as DK01).

The Division conducted its own netting exercise, which is detailed in Supplement B, and determined that, while there was a reduction of VOCs due to the kiln that burned down, the reduction was smaller than calculated by Rayonier. Our calculation showed a reduction of 31.47 tons per year; that would allow an additional increase of only 15.74 million board feet (MMBF) above the 19.95 million allowed by 39.9 tpy. The total allowed increase is calculated to be 35.685 MMBF/year. Therefore, Condition 3.2.2 has been revised to limit the plant to drying no more than 35.6 MMBF of green wood in Kiln DK01 during any twelve consecutive months.

A. Emissions Change

As indicated above, the increased allowable for the newest kiln is 31.47 tons per year above that already allowed by the Title V permit for Kilns 4 and 5.

Table 4: Emissions Change Due to Modification

Pollutant	Is the Pollutant Emitted?	Net Actual Emissions Increase (Decrease) (tpy)	Net Potential Emissions Increase (Decrease) (tpy)
PM	Yes	No	No
PM ₁₀	Yes	No	No
SO ₂	Yes	No	No
VOC	Yes	31.47	0.0
NO _x	Yes	No	No
CO	Yes	No	No
TRS	Yes	No	No
H ₂ S	Yes	No	No
Individual HAP	Yes	No	No
Total HAPs	Yes	No	No

B. PSD/NSR Applicability

A permit amendment issued on Dec 9, 1997 allowed the construction of two new kilns for the replacement of one lumber drying kiln, which was destroyed by fire in January 1995. In order for the modification to be minor for PSD, the permit included a limit on Carbon Monoxide from the boiler and VOCs from the new kilns. Title V Permit No. 2421-271-0004-V-01-0 dated May 17, 2000 included the CO emissions limit as well as a production limit on the two new kilns of 20 MMBF/year (to keep that modification under 40 tpy).

I note that the PSD-avoidance condition for the new kilns which was put in the Title V permit actually freed the facility from being limited to 250 TPY of CO from the boiler. However, that removal of the CO limit was not done at that time. The addition of the new kilns will continue to be PSD-avoidance but that PSD-avoidance strategy has been changed.

III. Facility Wide Requirements

A. Emission and Operating Caps:

None Applicable.

B. Applicable Rules and Regulations

None Applicable.

C. Compliance Status

Section 11.10 of the application form has not been submitted. However, the facility failed to meet various monitoring, record keeping, and reporting requirements designed to ensure that PM, CO, and VOC emissions were maintained at permitted PSD-avoidance levels. Consent Order EPD-AQC-1963 was issued on September 14, 2001 to resolve these noncompliance issues.

The facility has complied with this Consent Order as follows:

1. Pay the sum of \$12,100

Response: The sum has been paid.

2. Perform netting analysis to determine the allowable emissions from the drying kiln installed in 1997 by October 1, 2001.

Response: The netting analysis was submitted and was reviewed in this narrative.

3. By no later than September 1, 2001, begin monitoring the pressure drop across the boiler multiclone system once each day and report if the pressure drop exceeds two inches of water column. Semiannual reporting of excursions was required.

Response: Condition 5.2.3 requires monitoring the pressure drop and that it be recorded. Data shall be recorded daily, during the maximum reading during a drying cycle shall be recorded. Condition 5.2.6c.ii. requires semi-annual reporting when the pressure drop across the multiclone exceeds 2 inches of water when measured in accordance with Condition 5.2.3a.

4. By no later than October 1, 2001, test PM from the boiler at low-fire operating conditions.

Response: The test was carried out on September 28, 2001 and showed compliance with the PM emissions limit while staying within the scrubber monitoring parameters.

5. Test PM from the boiler at least once per year.

Response: Condition 4.2.1 requires PM testing annually. If the results show PM emissions less than 50% of the allowable, the Permittee may request that testing only be required every 24 months.

6. By September 1, 2001, submit excursion summary forms to the Division showing excursions during calendar year 2000.

Response: The forms were submitted and approved by the Division.

D. Operational Flexibility

Not Applicable.

E. Permit Conditions

None Applicable.

IV. Regulated Equipment Requirements**A. Brief Process Description**

The facility receives green lumber as the raw material, and this lumber is dried in one of four indirect steam heated kilns (DK01, DK02, DK03, and DK04). The dried lumber is shaped in Planer Mills PM01 and PM02 and is then bundled for shipment. Heat energy for the kilns is supplied by a wood-fired boiler (PB01) which is controlled by a multiclone (MC01) and wet tower scrubber (SC01). Shavings from the planer mill are either sold or are used as fuel for PB01.

B. Equipment List for the Process

Emission Units		Specific Limitations/Requirements		Air Pollution Control Devices	
ID No.	Description	Applicable Requirements/Standards	Corresponding Permit Conditions	ID No.	Description
DKGP	Equipment Group for indirect steam heated kilns DK01, DK02, DK03, and DK04	391-3-1.02(2)(b) and (e)	3.2.2, 3.4.1, 3.4.2, 6.2.2, 6.2.3, 6.2.4	None	None
PMGP	Equipment Group for planer mills PM01 and PM02 and hog PM03	391-3-1.02(2)(b) and (e)	3.4.1, 3.4.2, 5.2.7, 6.2.1	BH01	Baghouse
PB01	Wood-fired boiler	391-3-1.02(2)(d) and (g)	3.4.3, 3.4.4, 3.4.5, 4.2.1, 4.2.2, 5.2.1, 5.2.2, 5.2.5, 5.2.6, 5.3.5, 6.2.1	MC01, SC01	Multiclone, Wet Scrubber
VFDG	Vehicular traffic fugitives from paved surfaces	391-3-1.02(2)(n)	5.3.4	None	None

*The equipment list contains the new and/or modified equipment.

C. Equipment & Rule Applicability**Equipment Group DKGP - Indirect Steam Heated Lumber Kilns**

Rayonier has been permitted to operate five indirect steam heated lumber kilns that comprise Equipment Group DKGP. Kiln No. 5 was never constructed and thus the group consists only of four drying kilns (DK01 through DK04). The kilns are subject to the allowable PM emission rate of Georgia Rule 391-3-1-.02(2)(e)1.(i), as follows:

For process input weight rate up to and including 30 tons per hour:
 $E = 4.1P^{0.67}$;

For process input weight rate above 30 tons per hour:
 $E = 55P^{0.11} - 40$

Where E equals the allowable PM emission rate in pounds per hour and P equals the maximum dry process weight input rate for the five kilns combined.

Equipment Group DKGP is also subject to Georgia Rule for Air Quality Control 391-3-1-.02(2)(b). Georgia Rule (b) applies to all sources that are subject to at least one other emission limitation and are not subject to any other more stringent opacity standard. Georgia Rule (b) limits visible emissions to forty (40) percent opacity.

Emission and Operating Caps –

As indicated in Supplement A, the drying capacity of kiln No.1 (DK01) will be capped at 35.6 MMBF/yr to keep the VOC emission increase, due to modification (originally permitted in 1997) to less than 71.47 tpy VOCs.

Wood-fired boiler PB01 and Equipment Group PMGP:

There will be no change in the applicability of rules and regulations to the wood-fired boiler and planing mill group.

D. Compliance Status

See Section III.C.

E. Operational Flexibility

Not Applicable.

F. Permit Conditions

Condition 3.2.1 was deleted since the facility no longer needs to show it is a synthetic minor source for CO emissions from the boiler.

Condition 3.2.2 was modified to incorporate the removal of Kiln No. 5 from the permit and to include the new throughput limit for kiln No. 1 (source code DK01).

V. Testing Requirements (with Associated Record Keeping and Reporting)

A. Individual Equipment:

Since Title V permits now always require periodic testing of wood-fired boilers, such a requirement is added to the permit. The boiler will be required to be tested at 12-month intervals (or 24-month intervals if testing shows emissions 50% or less than the allowable) to ensure that the emissions remain within the applicable Rule(d) limits. Therefore, the following specific testing requirements conditions are added in the modification.

a. Specific test requirements

4.2.1 The Permittee shall conduct Particulate Matter (PM) tests on the emissions from Boiler PB01 at 12-month intervals. Should the PM emissions from the boiler be fifty (50) percent or less of the applicable emissions limitations, contained in Condition 3.4.1, the Permittee may request that testing may be conducted at 24-month intervals. The results of the performance test(s) shall be submitted to the Division within 30 days of the completion of testing.
[391-3-1-.02(6)(b) 1(i)]

4.2.2 The Permittee may be required to perform additional performance testing if the fuel used in Boiler PB01 is changed. The results of the performance test(s) shall be submitted to the Division within 30 days of the completion of testing.
[391-3-1-.02(6)(b) 1(i)]

B. Equipment Groups (all subject to the same test requirements):

None Applicable.

VI. Monitoring Requirements (with Associated Record Keeping and Reporting)**A. Individual Equipment:****a. Specific monitoring requirements**

Conditions 5.2.3 and 5.2.4, requiring the Permittee to monitor CO emissions, are deleted since the facility no longer contains a CO emissions limit.

New Condition 5.2.3 is added to require pressure drop monitoring and record keeping for multiclone pressure drop, as per the Consent Order.

Condition 5.2.6 (b) and (c) are modified to incorporate the changes. Kiln DK05 is deleted from Condition (b)i and the limit on the amount of wood to be dried in Kiln DK01 (which had been referred to as Kiln DK04) is revised from 20 to 35.6 million board feet per year. Condition 5.2.6 (c)iii, which defined a reportable excursion of boiler CO emissions, is deleted. The definition of a pressure drop excursion (two inches of water) for the multiclone is added as new Condition 5.2.6(c)iii, as per the Consent Order.

b. Record keeping for monitoring:

The following condition is added for data record keeping (it is now a standard condition):

5.3.5 The Permittee shall, in accordance with the requirements of Conditions No. 5.3.3, 6.1.1, 6.2.1, and 6.2.2 of the permit, maintain records of all data and information required by Conditions No. 5.2.1, 5.2.3, and 5.2.5. Reports shall be

submitted in accordance with the requirements of Condition 6.1.3 and 6.2.4 of this permit.

[391-3-1-.02(6)(b) 1 and 40 CFR 70.6(a)(3)(i)]

B. Equipment Groups (all subject to the same monitoring requirements):

None Applicable.

VII. Other Record Keeping and Reporting Requirements

None Applicable.

VIII. Specific Requirements

- A. Operational Flexibility:** None Applicable.
- B. Alternative Requirements:** None Applicable.
- C. Insignificant Activities:** None Applicable.
- D. Temporary Sources:** None Applicable.
- E. Short-Term Activities:** None Applicable.
- F. Compliance Schedule/Progress Reports:** See Section III.C.
- G. Emissions Trading:** Not Applicable.
- H. Acid Rain Requirements:** None Applicable.
- I. Prevention of Accidental Releases:** None Applicable.
- J. Stratospheric Ozone Protection Requirements:** None Applicable.
- K. Pollution Prevention:** None Applicable.
- L. Specific Conditions:** None Applicable.

SUPPLEMENT A

Prior to June 6, 1975 (PSD Rules Effective)

The plant was operational before this date. However, no equipment list is available so potential emissions cannot be determined at the time the PSD rules came into effect.

PSD permit (2421-134-9765-C) Issued on November 1, 1978 to St. Regis Paper

Based upon a PSD application, a PSD permit was issued for a new wood-fired boiler. BACT was determined to be a scrubber to control PM. BACT was not set for other pollutants.

As of April 1986

The facility consisted of four indirect fired lumber kilns and one wood-waste fired boiler controlled by a wet scrubber. The facility was assumed to be a PSD minor source based on the then-available CO emission factor for wood-waste combustion and without considering VOC emissions from the kilns.

As of 1995-1997

As indicated by the Permittee, Kiln DK04 (Kiln No. 1) was destroyed by fire on January 19, 1995. Rayonier decided to replace this destroyed kiln with two smaller kilns, replacement kiln No. 4 and new kiln No.5.

As of 2000

While issuing TV Permit No. 2421-271-004-01-0 dated May 17, 2000, the issue regarding “whether the facility is a major source under PSD rules at the time of the kiln replacement” was considered. The review memo concluded:

Since the facility potential to emit VOCs was never limited by permit condition, the 1996-97 potential VOC emissions of 272 tpy make this a major PSD source before kiln No. 4 burned down. Also the most up-to-date information on kilns No. 1, 2, and 3 (which are still operating) indicates that these 3 kilns alone have (and had) the potential to emit VOCs exceeding 250 tons per year.

The Title V Permit was issued including a PSD avoidance limit of 20 million board feet drying of green wood in Kilns No. 4 and No.5.

Kilns: The air pollutant of concern being emitted from the kiln drying process is VOC. The potential VOC emissions from the kilns were calculated based on the capacity of the kilns provided by the facility and a VOC emission factor of 4 lbs VOC/MBF (as opposed to the factor 3.15 lb/hr used by the applicant). The EPD files and the Title V permit application were used to determine the capacity of each kiln. Table A-1 shows the kiln production capacity and potential VOC emissions from the plant prior to the destruction of old Kiln No. 4. This table was included in the narrative for the initial TV permit for this plant.

Table A-1: Kiln Production Capacity and VOC Emissions prior to Destruction of Kiln No.4

Kiln	Capacity Data from Applicant (MMBF/yr)		VOC Potential Emissions TPY	
	1996-1997	1999-2000	1996-1997	1999-2000
#1	46	61	92	122
#2	30	43	60	86
#3	30	43	60	86
#4 (Old Kiln No. 4 Destroyed in Fire)	30	30	60	60
#4 (New Kiln No. 4 Installed in 1997)	24	31	-	-
#5 (Not installed)	24	31	-	-
Total	-	-	272	354

As of 2002

The updated application for this amendment, and other letters including a letter dated February 19, 2002 submitted by the facility, included the board feet of lumber dried in the plant each year since 1993 is reported as below:

Year:	1994	1995	1996	1997	1998	1999	2000	2001
MMBF/year:	72	100	90	110	117	104	22	21

A netting procedure can be used to generate additional allowable VOC emissions based upon the time period of 5 years prior to the permitting of the new kiln. The applicant did calculations based upon the average of two highest years prior to the modification, years 1995-1996. Averaging that, they show that 95 MMBF of lumber was dried per year. Using 3.15 lb of VOC per 1000BF, that is a total of 149.63 TPY. They then assumed that 22.55% of the VOC emissions had been emitted by the burned-down kiln.

However, this is incorrect on two points. EPD uses an emission factor higher than 3.15, usually 4 lb/BF for lumber mills. Without any valid reasons to show that the emissions are less by this facility, the Permittee cannot apply lower emission factor. Also, the reduction level should be based on the last 2 years of actual data prior to the burned out date which is March 1998 and not the two years proceeding the date of modification.

Therefore EPD also did a netting exercise. The only increase or decrease found for that period (1992-1996) was the cessation of the operation of the kiln that was destroyed in January 1995. Rayonier had informed EPD that they do not have data on the production rate from any particular kiln since data was only kept for the plant-wide. In order to try to estimate the production through the removed kiln, it was decided to apportion the plant-wide production to each kiln. The "past actual" emission rate should be based upon the two years of actual production just prior to the destruction of that kiln (or a more representative period). Since the kiln was destroyed in early 1995, that would indicate that the presumed period to calculate past-actual from would be 1993-1994.

Regarding the production information in the table above, the only information that can be used is the production during the year 1994. However, since the years after 1994 were all above 72, it can be presumed that the production in year 1993 was unlikely to be below 72 MMBF. Therefore, we take the total for 1994 to be the average of 1993-1994. Using emission factor of 4 lb/MBF, the past-actual VOC emissions are calculated to be 144 TPY as calculations show below:

$$72 \text{ MMBF/yr} * 4,000 \text{ lb VOC/MMBF} * 1 \text{ ton}/2000 \text{ lb} = 144 \text{ tons VOC/year}$$

Since Kiln No. 1, which was burned, represented 22.55% of the capacity of the plant at that time, the increase allowed by netting is 22.55% of 144 tpy, which is 31.47 tpy. Therefore, the new kiln is allowed 31.47 tpy plus 39.9 tpy for a total of 71.37 tpy VOCs. Using the factor of 4 lb/MBF, the production allowed for Kiln No. 1 is then allowed to be up to 35,685,000 BF per year (rounding off, that is 35.6 MMBF/year).

SUPPLEMENT B**BOILER EMISSIONS**

Emissions of particulate Matter: The following is a summary of test results, which have been completed recently:

Source Tested	Test Date	Operating Capacity	Scrubber		Actual PM (lb/MMbtu)	Limit PM (lb/MMBtu)
			dP (H ₂ O)	V (g.p.m.)		
Boiler (PB01)	3/1/01	31.98 MMBtu/hr	6.7	168	0.287	0.280
Boiler (PB01)	5/23/01	71.0 MMBtu/hr	-	-	0.0692	0.188
Boiler (PB01)	9/28/01	26.0 MMBtu/hr	5.2-6	180	0.194	0.31

Note: The most recent testing was performed in an attempt to redefine excursions based on scrubber pressure drop while in an idle mode. However, the testing does not appear to offer credibility for changing the existing range, which is 5 to 9 inches.

Emissions of CO: Rayonier performed several tests on their existing boiler and the test results indicated that emissions of CO are increasing. The test results dated October 2, 1997 indicated an emission rate of 0.3994 lb/MMBtu (indicating a pte of at least 30.28 lb/hr and 132.6 TPY). The March 1, 2001 testing shows that the emission rate was 73.0 pound per hour (indicating a pte of 319.74 PTY). Consent Order EPD-AQC-1963 was issued on September 14, 2001 to address the violation. A limit of 57.1 lb/hr for CO had been set in a previous permit to keep the CO emissions below 250 tons per 12 months for PSD avoidance as per Condition 3.2.1 of the TV Permit No. 2421-271-0004-V-01-0 dated May 17, 2000. However, a review of the permit history shows that the boiler was originally permitted according to the PSD regulations, which accounted for CO emissions and did not limit the CO emissions. Hence, not only was the CO limit not effective for keeping CO below 250 tpy, the CO limit was improper since facility should not have been limited out of PSD. The CO PSD-avoidance limit is therefore removed from the permit.

Addendum to Narrative

The public comment period ended on July 7, 2002. No comments were received from the public or EPA; no changes made to the permit as a result.